Estonian National Development Plan for the Implementation of the EU Structural Funds

SINGLE PROGRAMMING DOCUMENT

2004–2006

RAK
Eesti Riiklik Arengukava

Toetab Euroopa Liit

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INTRODUCTION

Regional policies of the EU are based on Title XVII – Economic and Social Cohesion – of the Treaty establishing the European Community.

Article 158 of the Treaty states: "In order to promote its overall harmonious development, the Community shall develop and pursue its actions leading to the strengthening of its economic and social cohesion. In particular, the Community shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions or islands, including rural areas".

Estonia will have the opportunity to take part in EU regional policy and to receive considerable financial assistance from the EU budget. Assistance will be provided by the following EU Structural Funds:

- The European Regional Development Fund (ERDF)
- The European Social Fund (ESF)
- The Guidance Section of the European Agricultural Guidance and Guarantee Fund (EAGGF Guidance Section)
- The Financial Instrument for Fisheries Guidance (FIFG)

Countries with development disparities are also supplied with assistance through the Cohesion Fund, which supports environmental projects and trans-European transport network projects.

In accordance with the criteria established in Council Regulation (EC) No 1260/1999 of June 21, 1999, which lays down the general provisions of Structural Funds, Estonia is a region covered by Objective 1. Objective 1 is described as "promoting the development and structural adjustment of regions whose development is lagging behind" and provides the largest support rates. To become eligible for assistance, each member state must present respective programming documents that cover a period of several years and are to be approved by the Commission. It must also devise administrative structures and procedures necessary for the implementation of the proposed programme(s). "Estonian National Development Plan for the Implementation of the EU Structural Funds – Single Programming Document 2004-2006" (hereafter referred to as SPD) will serve as a basis for the common activities of Estonia and the EU in promoting Estonia's social and economic development.

SUMMARY

1. SOCIO-ECONOMIC SITUATION

Estonia is one of the smallest countries in Europe, both in area (45,200 km^2) and population (1.36 million – 2002). The population density is rather sparse, as 69% of the population lives in towns. Forests and marshes cover more than 60% of the territory.

Economy

A stable ***macroeconomic*** framework was developed after Estonia regained its independence in 1991. In the transition period, Estonia proceeded along the following economic and political principles:

- Currency Board system
- Balanced government budget
- Liberal foreign trade policy combined with the maintenance of a favourable investment climate

The stable macro-economic framework, rapid privatisation and other market economy reforms have led to a favourable economic environment in Estonia. In the 1995–2001 period, the average growth rate of GDP was 5% per annum. GDP per capita in Estonia increased in 1995-2002 —from 32% to 42% — in comparison with the respective EU indicator. Economic growth will result primarily from rapid growth in exports to industrial countries and will be supported by the flow of foreign investment. Direct investments at present are mostly of Swedish and Finnish origin (65 %), while ¾ of Estonia's exports and 2/3 of its imports are to and from the EU. The main structural changes in Estonia have been a decrease in the importance of agriculture and of the former Soviet industries, while rapid development has taken place in a number of new industries and in the service sector.

The relative share of the ***primary sector*** in GDP has dropped to 5.8% (2001). The situation is most complicated in agriculture. Over the 1991-2000 period, the total number of the employed in the primary sector decreased threefold, while the total output of agricultural production dropped 1.6-fold. The ability of producers to make investments aimed at modernizing agriculture and increasing labour productivity is extremely limited. Efficient and sustainable forest management is hampered by the fragmentation of private forests, as well as by the lack of forestry-related skills and knowledge on the part of the forest owners. Fishing fleet need to be cut down if fish stocks are to be preserved and those fishermen still plying their trade are to remain in business. The preservation of viable population in rural areas and the protection of valuable landscapes is impossible without stronger support for local economy. The main alternative for creating jobs and combating unemployment in rural areas is rural diversification in both agricultural and non-agricultural areas.

Industry provides approximately one fourth of Estonia's total value added and industry's share in employment rates also accounts for more than one fourth (2001). While the production growth of Estonian industry has been the fastest among the candidate countries, the productivity of labour is rather low (26% of the respective EU indicator). A number of factors contribute to this, the main one being related to the production of electrical energy by means of oil shale (in 2001 - 91% of the electricity). Oil shale is a fuel high in ash and sulphur content and of low calorific value. Efficiency in the mining and processing of oil shale and in the production of electricity is considerably lower than these processes in other fossil fuels. Moreover, their impact on the environment is more serious, since the technology and equipment used in oil shale power stations are outdated. The processing industry makes up a large share of the traditional branches of the economy and is heavily dependent on external developments. This is characteristic of a small country with an open economy. The most important branches are food, timber, machinery, equipment and light industry. Industry relies upon exports (approximately 50% of total production) and approximately 50% of the present export of goods is through sub-contracting for contemporary machinery and equipment, mostly managed by subsidiaries of large Nordic corporations. So far, the main problem has been the low value added content of Estonian exports. Expansion of industry is hampered by the lack of qualified labor. Development alternatives for electrical power generation would rely on the modernization of combustion technologies, a combined generation of electricity and heat and a more extensive utilization of renewable sources of energy. Wherever better relations emerge between research and development activities and industry, new branches of industry may emerge in Estonia.

The relative share of ***service sector*** in employment and GDP is respectively 60.1% and 65.5 % (2001). In the 1996-2000 period, the productivity of the service sector increased by one third, while the export of services increased threefold. The trade balance deficit was balanced by the export of transport and travel services. The main deficien-

cies in the road system are attributable to insufficient levels of capital investment and the low number of modern highways in the system. Road construction techniques are outdated. The main problems for railroads are the restricted capacity of border stations and the technological depreciation of railway infrastructures and rolling stock. Nevertheless, the infrastructure of distant communication services is relatively well developed. Among the transition countries, Estonia is one of the most successful users of ICT applications. In Estonia, tourism has emerged as one of the more important branches of the economy. In assessing direct indicators, the relative share of foreign tourism in GDP comes to 10% and the indicator may even total 15% if one considers the indirect impacts. The actual growth of tourism is slowing down.

There are several ways for securing the further development of market services. The main tasks in improving transport infrastructures are the construction and technical modernization of roads, railroads and waterways and the elimination of "bottlenecks". Implementing IT can proceed because of the relatively high level of existing technical infrastructure and society's favourable attitude towards new technology. The number of user-friendly applications accessible to the general population should be increased, encouraging an improvement in people's skills. The main resources for improvements in tourism are better marketing, making new products available and lengthening the tourist season. The achievement of these goals are, above all, related to directing the flow of tourism away from the capital city and to pointing out the architectural treasures, traditions-based cultural life and the clean natural environment in the rest of Estonia.

Entrepreneurship has been the main source for positive economic development. Nevertheless, several problems should be mentioned here. The employment in enterprises has failed to increase in the 1994-2000 period. The number of people involved in enterprises is twice as low as the number in the EU. The scarcity of people in private business can be seen as one of the reasons for regional disparities. Developments are seen mostly in small and medium-sized enterprises, which amount to 99% of the total number of enterprises and provide 2/3 of employment in the business sector. The public sector can contribute to the development of business by eliminating certain restrictions (insufficient availability of capital and labor, limited skills and knowledge, a legal framework that is too complicated, etc.).

The weakness of ***research and development activities and innovation*** can be seen as one of the main drawbacks in the Estonian economy. Total expenditures made on referred activities only amount to 0.7% of GDP in Estonia (in EU, 1.9%). Such disparities are caused mainly by the small contribution made by the private sector (only 30% of total costs). This is related to the limited scope of development activities in enterprises. The public sector can contribute to the research and development activities and innovation by a partial management of business risks and by establishing cooperation structures for research and business.

People

Estonia's ***population*** is decreasing and getting older, mostly because of low birth rates. Looking into the future, we can see that population growth is not going to be sustainable because of today's low birth rates. ***The level of education*** is relatively high. In 1999 the number of people with at least secondary education between ages 25-59 was 88%, hence higher than the respective average EU indicator. In the 1993-2001 period, the number of students more than doubled, while the number of students in vocational education institutions increased by one quarter. Nevertheless, several problems should be noted in the relations between education and the labour market. The number of students dropping out of schools in general education is growing, and the dropouts lack the skills needed to enter the labour market. The reputation of vocational education is still low in Estonia. The number of young professors with a good level of education is limited; young people lack opportunities for in-service practice; and facilities for study are declining. Natural and technical sciences are not included as specialties in most universities. As for life-long learning, there is no state-organised system for the professional training of people participating actively in the labour market.

On the labour market, the number of employed people has gone down in Estonia over the transition period, while the number of inactive and unemployed people has increased. In 2001 the labour market situation was less favourable here than in the EU. The employment rates were lower – 61.0% (EU 64.1%) while the unemployment rates were higher – 11.8% (EU 7.4%)[1]. Numbers for long-term unemployment and youth unemployment are also considerably higher. There is a large disparity in the unemployment rates of Estonians (10.4%) and non-Estonians (16.9%). On the Estonian labour market, the main risk groups are young people, those unemployed because of a lower level of education, the long-term unemployed, disabled people, people who have reached pre-retirement age and people not speaking Estonian language. Some indicators provide grounds to assume that gender inequality on the labour market is lower than the EU average. Unemployment rates among men are slightly higher than among

women. State labour market policies have been insufficiently funded and remain passive. The state can contribute to increasing employment by facilitating entrepreneurship, improving vocational education and in-service training and implementing extensive labour market measures that follow the European employment policy guidelines.

Although ***health care costs*** as a share of GDP have been increasing over the last several years (5.5% - 2001) and are already comparable to the respective indicator in Ireland, limited resources have resulted in the money spent on health care per capita (based on purchase power parity) being almost three times lower than the EU average. Presently, Estonia does not even provide for the depreciation costs of hospitals, to say nothing of improving the material basis of hospitals. The material capital held by the system is deteriorating rapidly. Improving the hospital network, developing human resources and putting funds to more efficient use — these are all essential for securing a high-quality and well-balanced health care system.

In 2002, 25% of all population and 33.7% of all children were living below the absolute ***poverty*** level. The main risk groups were, and are, families with children, retired people, unemployed and employees with low incomes. Unemployment is the most important poverty risk. A more efficient support system alone is not sufficient for the alleviation of poverty and social seclusion. A complex approach involving a variety of spheres is needed, including employment, education, IT systems, regional development, health care and social security.

The main shortcomings in ***administrative capacity*** are caused by the poor co-ordination of public services, lack of promotion in common values, shattered policy development and a limited strategic planning that crosses beyond the borders of different spheres. Assessment of the expected impact of legislation and implemented policies is being carried out insufficiently, and the implementation of sector policies at regional and local levels is insufficiently developed. One of the main opportunities for enhancing administrative capacity at all the levels is promoting learning opportunities in public administration and improving the efficiency of the public services training system.

Natural Environment and Environmental Infrastructures

In comparison to several central EU countries, ***biodiversity*** has survived relatively well in Estonia. Different types of protected habitats amount to more than 10% of the territory of the country. The consumption of water in households (per inhabitant) is three times smaller than in the EU. The main problems involved in potable water are the lack of natural good-quality drinking water and the fact that in some areas pollution and out-dated water supply systems exist. While in Estonia the amount of untreated wastewater (2.6%) is smaller than the average indicator in the EU (19%), the quality of the cleaning process is insufficient in some cases.

In comparison with the EU average, the amounts of CO_2 and SO_2, emitted into the ***atmosphere*** in Estonia, are respectively two and six times that of the respective amounts in EU. The main sources of air pollution via SO_2 and PM are energy production, heat production and the oil shale chemistry enterprises in Ida-Virumaa. The energy sector is the source of 91.8% of the total amount of CO_2 emitted. A major share of ***waste generation*** (90%) is also attributable to oil shale mining, the oil shale chemical industry and oil shale energetics. Municipal waste makes up 3% in the total amount of waste. Where the collection of waste has been transferred to private hands over the last decade, the respective systems have developed fast. The renovation of municipal waste management systems has started and a national scheme for the collection of hazardous waste has been set in motion. So far, three landfills that meet EU requirements have been opened.

Past pollution is related to the territories of the former Soviet Union and includes military facilities, industrial enterprises, power stations, mining areas, railways, concrete factories and liquid fuel terminals. Past pollution poses a threat for the health of population and prevents use of the contaminated areas. So far, the elimination of past pollution has been insufficient.

Estonia has dealt with all the environmental problems listed above, relying heavily upon the EU and other foreign assistance. In future, more attention should be paid to the prevention of problems in addition to the liquidation of immediate damage to the environment and investment into environmental technologies. Implementation of the existing programme for the elimination of air pollution, which complies with directives aimed at large combustion plants, should be continued, since the plan provides for technological measures and for improving the quality of fuels. Combining the generation of heat and electricity and utilising renewable sources of energy should be implemented on a larger scale.

Local and Regional Development

Existing ***local infrastructures*** fail to meet the functional requirements of today. Since the buildings and facilities have lost their original function, their value has changed or decreased. The technical systems and technical infra-

structures in common use in such buildings and facilities are often out-dated. They are therefore being mismanaged and do not meet contemporary technical, environmental or health-care requirements. They are in urgent need of modernisation. In the beginning of 2001, only 27% of school cafeterias in Estonia and 33% of dining halls in pre-school institutions devoted to child care met food hygiene requirements. Only 20 child-care institutions at present meet the fire safety requirements in force. Economic opportunities for investments were very scarce in the period between 1990 and 1995. In relation to the current budget, investments into developing and maintaining local infrastructures are relatively large (approximately 20%), but the budgets are rather rigid, and it is not possible to increase the relative share of investments. Aside from providing basic services, the local governments have limited funds for ***local development efforts.***

Main disparities strike the eye when comparing the capital city region (Tallinn and Harju County) and other parts of Estonia. The GDP per capita in Harju County is approximately 51% of the EU average, while the indicator in other counties stays between 22-25%. The most successful are Tartu and Pärnu counties with their strong town centres. The situation is the most unfavourable in counties located on the eastern border (with the exception of Tartu County). Despite the general privileged position of towns, a concentration of economically disadvantaged inhabitants in certain urban areas has brought about run-down conditions in those areas. The populations in Northern Tallinn and towns in Ida-Virumaa (Narva, Kohtla-Järve, Sillamäe) have plummeted by 25%. These areas are characterised by high unemployment, crime, HIV and drug addiction.

Investment by local governments, aimed at the elimination of restrictions on infrastructure, should be increased in order to speed up and unify local development. At the same time, regional specialization and maximum usage of existing local advantages in economic development should be stimulated. Regional needs and principles of national spatial planning should be considered to a larger extent in managing sector policies (above all, business, tourism and transport policies) for balancing regional development.

Development Prospects

Estonia's ***mid-term economic growth forecasts*** are based upon the assumption that the world economy — and above all the European growth cycle — will not go into decline and there will be no major negative shocks. Estonia hopes for a recovering (for 2003 – 4.5% forecasted) annual growth of 5.6-6%, along with the recovery of foreign demand. The growth is supported by a stable macro-economic environment. Over the longer period, both the effect of investments from Structural Funds and the external structural reforms are going to become more evident. Unemployment-rate dynamics show a reversed U-curve that is characteristic of transition economies and indicate the end of transition period. Unemployment rates should drop to roughly 9%. The current account deficit that increased at 12.3% of GDP in 2002 will decrease slowly.

Global trends must be considered when devising economic policies that support favourable economic growth. The most important trends are globalization, the information technology revolution and transition to development that preserves the environment. Human resource development is one of the most important factors to remember when securing a favourable position for ourselves in a globalised world and in the international division of labour. Estonia's population is going to decrease and become older as time goes on, therefore the skills of all employable people should be developed to the utmost so that they might find suitable employment. Active participation in regionalisation is one of the opportunities for securing Estonia's competitiveness in the global economy. EU enlargement facilitates integration in the Baltic Sea region, where the population exceeds 100 million people. EU membership is going to provide Estonia with a more secure international position. Being a part of the EU will enable us to take part in economic relations between EU and Russia and in the EU's Nordic region. Estonia has gained a favourable position thanks to the implementation of ICT, but this position can only be maintained through expedient politics. A greater health and environmental awareness of the population, increased demands for "green" agricultural products and increasing tourism will help to enlarge those of Estonia's development prospects that are related to nature. As for Estonia's energy sector, the time has come to pay more attention to the implementation of alternative sources of energy and technologies that cause less pollution.

In general, ***accession to the EU*** should lead to the acceleration of Estonia's social and economic development. Nevertheless, the total impact of integration will depend on those economic-political choices that will have the greatest effect on this country. Complete opening up of market for agricultural products of the EU means increased marketing opportunities for agriculture and the agricultural food processing industry, accompanied by increased income. The EU common agricultural and rural development policies and fisheries policy are going to strengthen the economic basis of rural life considerably. Adopting EU standards will open the market of industrial products. Integration with European research and innovation activities will increase the number of alternatives for techno-

logical development. After Estonia becomes one of the EU member states, its fame and trustworthiness is going to increase, resulting in the expansion of foreign trade relations. On the other hand, opening the common labour market may speed up the brain drain and encourage young people to leave. Membership in the EU will be accompanied by a convergence in prices, and the cost advantages in global competition are going to decrease. Stopping of ***tax-free*** trade on the board planes and ships may result in a considerable rise in the price of travel and accommodation services, resulting in a decline in foreign tourism, tourism-related income and employment.

2. STRATEGIC BASIS

The most important strengths of Estonia are its stable macro-economic framework and a labour force that is capable of learning and attaches high value to education. The main weaknesses are the lack of preparation and flexibility of the labour force, the failure to meet labour market requirements and (partly attributable to human resource quality) insufficient long-term competitiveness of the business sector. The most important opportunities are the enlargement of markets and new technologies, while the main threat can be seen in the decline of cost-based competitive advantages.

This allows concluding that ***the strategy's prime objective should be taking advantage of the learning capacities of the human participants, making use of the opportunities arising out of new technology, and expanding markets through the promotion of innovations in the business sector. And at the same time, anticipating the crises inevitable in the loss of cost-based competitive advantages.***

Estonia's economic policy and those of the EU that support national policies both serve a common overall objective to be achieved in Estonia: ***a fast, socially and regionally balanced sustainable economic development.***

Four programme priorities matching the areas are defined. They are categorised under the following titles:

- Human Resource Development
- Competitiveness of Enterprises
- Agriculture, Fisheries and Rural Development
- Infrastructure and Local Development

These four priorities are supported by a fifth priority – Technical Assistance.

Alongside the specific objectives to be achieved through the implementation of separate priorities, environmental and regional development, information society development, and promotion of gender mainstreaming objectives are followed in the Programme on a horizontal basis.

The ***Human Resource Development priority*** will focus on bringing the education (above all, vocational and applied higher education) into better conformity with contemporary labour market requirements. Improvements in the general education sphere will aim at better preparations for work and at decreasing the number of students who drop out of school prematurely. Modernizing education and enhancing the life-long learning system will provide better prerequisites and terms for life-long learning. Enterprises are stimulated to invest into human resources, as this will help them to increase their productivity and development potential, as well as to employ Estonia's existing research base more effectively. The priority will help to promote the entrepreneurs' transition to business and enhance their skills and knowledge. Active labour market policy measures are used to re-train the unemployed and bring them back into the labour force. Support for local initiative and social activeness will ensure social inclusion at a wider level. The priority also promotes administrative capabilities by training officials and civil servants, thus promoting smoother cooperation between the public and private sectors in economic development.

The implementation of the ***Competitiveness of Enterprises priority*** will focus on the promotion of research and development activities and innovation. This sphere is expected to contribute through applied research and the rapid growth of product and technology development initiatives. Material and organizational bases will be established and private investments into R&D activities will be stimulated in order to increase systematic cooperation between R&D institutions and enterprises. Support for quality promotion is expected to raise the competitiveness of products and services. Facilitating the establishment of and encouraging small and medium-sized enterprises is the key element in business development. Activity related to this is one of the main tools for the implementation of a national employment strategy. As for tourism, the main focus will be on improving the overall development in this sector – creating awareness of Estonia as a country of destination, and improving information systems. Support for tourism will help to develop tourism products that are more complex and attractive and are going to attract the tourist into areas located away from the capital city.

With *Agriculture , Fisheries and Rural Development priority,* Estonia is going to make use of the opportunities provided by the Community's common agricultural and rural development and fisheries policies, applying for a participation share as large as possible in the EU agricultural production and fish products market. Strengthening the economic basis of rural development will focus on increasing the competitiveness of the food chain as a whole – from the farm to the consumer – by providing support to the investment projects. Marketing is supported to facilitate the access to the markets. Besides modernising traditional agriculture, the priority will contribute to the following: diversification of agricultural production, development of product quality, convergence with environmental demands, development of a sustainable forestry, creation of new non-agricultural enterprises and employment in the countryside. The priority criteria for developing alternative economic activities is the creation of new jobs to provide employment for people leaving, or about to leave, agriculture, and the utilization of such local resources as rural tourism, handicraft, etc. Aside from direct investments into production, the priority will support the modernization of agriculture and forestry by maintaining depreciated amelioration systems. Specialised counseling and advisory services, aimed at improving the skills and knowledge of the work force in agricultural and forestry enterprises, will be set up within the framework of this measure. Support will be given to the restoration or construction of buildings intended for public use, as well as to the development and implementation of local partnership-based pilot development strategies (the SPD has integrated the measures applicable within the LEADER initiative). This support will make the living environment in villages more attractive, contribute to local initiative and increase the viability of rural areas.

In fisheries, the aim is to downsize those fleets with excessive fishing capacities. The focus is on investments necessary to bring all the links in the fish-handling chain (vessels, ports, industries) into conformity with food safety, occupational safety and environment protection requirements. Support is also given to establishment of fish and crayfish farms to compensate for the decrease in fishing capacities and to diversify the economic basis of rural life. Fish products' marketing is upheld to facilitate access to the markets.

Compared to the priorities described above, the Infrastructure and Local Development priority is mostly of a supportive nature. The role of the priority in the transport and environment sector is to support the measures taken under the Cohesion Fund. Common coordination principles are given in *the Single Strategy for the management of the Structural Funds and the Cohesion Fund in Transport and Environment Sector.*

Investments are to be made into the vocational education and applied higher education infrastructures to support the schooling of the labour force and provide for contemporary learning requirements. Main emphasis will be on the development of regional vocational training centers. Modernization will be started on a hospital network that at the moment is economically inefficient and does not meet contemporary needs. Elaboration and implementation of the ICT solutions available for the public is a first priority for Estonia if we want to keep on moving towards becoming an information society. Within the framework of this priority it is necessary to devise flexible tools for getting rid of the "bottlenecks" attributable to infrastructures, since their existence in many places can scuttle the efforts made on the national level to develop business or human resources. A local development measure has been devised to involve rural municipalities and towns in the implementation of this programme and to put to maximum use the resources available on the local level. Local projects need to be based on local initiatives and preference should be given to activities based on wide-based partnership. To avoid the inefficient use of resources, the implementation of the local development measure is going to be linked to local development plans and the relevant monitoring mechanisms.

3. PRIORITIES

The Human Resource Development priority will be co-financed by the European Social Fund (ESF). It will be implemented through the following four measures:

Measure 1.1: Educational System Supporting the Flexibility and Employability of the Labour Force and Providing Opportunities of Lifelong Learning for all

Measure 1.2: Human Resource Development Increasing the Competitiveness of Enterprises

Measure 1.3: Inclusive Labour Market

Measure 1.4: Enhancing Administrative Capacity

The Competitiveness of Enterprises priority will be co-financed by the European Regional Development Fund (ERDF) and will be implemented through the following four measures:

Measure 2.1: Business Development

Measure 2.2: Business Infrastructure Development

Measure 2.3: Promotion of Research, Technology Development and Innovation

Measure 2.4: Tourism Development

The Agriculture, Fisheries and Rural Development priority will be co-financed by the Guidance section of the European Agricultural Guarantee and Guidance Fund (EAGGF) and the Financial Instrument for Fisheries Guidance (FIFG). It will be implemented through the following twelve measures:

Measure 3.1: Investment into Agricultural Holdings

Measure 3.2: Investment Support for Improving Processing and Marketing of Agricultural Products

Measure 3.3: Diversification of Economic Activities in Rural Areas

Measure 3.4: Integrated Land Improvement

Measure 3.5: Renovation and Development of Villages

Measure 3.6: Local Initiative based Development Projects – LEADER

Measure 3.7: Forestry

Measure 3.8: Support for Setting up and Provision of Farm Advisory and Extension Services

Measure 3.9: Regulation of the Fishing Capacity of the Fishing Fleet

Measure 3.10: Modernisation and Renewal of the Fishing Fleet

Measure 3.11: Investment Support Measures for Fisheries Production Chain

Measure 3.12: Other Fisheries Related Measures

The Infrastructure and Local Development priority is co-financed under the European Regional Development Fund (ERDF) and will be implemented through the following six measures:

Measure 4.1: Development of Transport Infrastructure

Measure 4.2: Development of Environmental Infrastructure

Measure 4.3: Modernisation of Infrastructure for Vocational and Higher Education

Measure 4.4: Reorganisation of Hospital Network

Measure 4.5: Information Society Development

Measure 4.6: Local Socio-Economic Development

The Technical Assistance priority will be co-financed from all the Structural Funds in proportion to their contribution to SPD. The priority will be implemented through the following two measures:

Measure 5.1: Programme Management and Implementation

Measure 5.2: Information Dissemination, Publicity and Computerization

4. CONSISTENCY OF THE STRATEGY WITH COMMUNITY AND NATIONAL POLICIES

The consistency of the strategy with the following guidelines and policies is discussed:

- Guidelines of the Commission for programmes in the period 2000-2006
- Community Initiatives
- Environmental policy
- Employment and Social Inclusion
- Information Society
- Equal Opportunities
- Common Agricultural Policy and European Forestry Strategy
- Common Fisheries Policy
- Competition Policy
- Domestic Regional Development Policy

5. FINANCING

Financing for SDP

(thousand euros – current prices)

Priority	Total eligible expenditures	EU contribution
Human Resource Development	99,291	76,120
Competitiveness of Enterprises	97,584	73,188
Agriculture, Fisheries and Rural Development	108,886	69,267
Infrastructure and Local Development	181,853	138,151
Technical Assistance	19,516	14,637
In total	**507,130**	**371,363**

Distribution of the EU assistance by funds

(thousand euros – current prices)

EU Structural Funds in total	ERDF	ESF	EAGGF	FIFG
371,363	225,976	76,120	56,798	12,469
100%	60.9%	20.5%	15.3%	3.4%

6. EX ANTE EVALUATION OF THE MACRO-ECONOMIC IMPACTS OF THE PROGRAMME

Macro-econometric model HERMIN, devised for Estonia, was used for the ex ante evaluation of macro-economic impacts.

To start with, "baseline simulation" for the development of Estonian economy for the years 2001-2015 was prepared, showing a situation where none of the expenditures specified in the Programme and also from the Cohesion Fund were made. A second simulation was then carried out with the programme and Cohesion fund expenditures, under explicit assumptions regarding their yearly absorption up to 2008. Assumption is also made that these expenditures will terminate afterwards in order to allow for a better indentification of the continuing supply-side effects. The results demonstrate that the implementation of the Programme and Cohesion Fund projects is going to have a substantial effect on Estonia's economic development. The results for the demand-side and supply-side effects taken together show an increase in the real GDP level compared to the baseline scenario that peaks in 2007 and still amounts to 4.79% in 2008 while the unemployment rate will have dropped by 1.2 percentage points. The estimated impact on the level of real manufacturing output is 7.8%. Implementation of the Programme is going to decrease the public sector borrowing requirements while at the same time increasing temporarily the trade balance deficit as a consequence of higher demand before it decreases due to improved competitiveness.

A similar pattern of initial increases and then decreases is followed by consumer prices and wages. From 2008, unit labour costs are reduced compared to the baseline scenario, as a result of improved competitiveness.

7. IMPLEMENTATION

The ***Managing Authority, Paying Authority and Auditing Authority*** of the Single Programming Document will be the Ministry of Finance. The Ministry of Finance ensures the separation of responsibilities within the Ministry.

The tasks of Managing Authority, Paying Authority and Auditing Authority are carried out in co-operation with ***Intermediate bodies at priority or/and measure level*** (appointed line ministries), and ***Final Beneficiaries*** (appointed state agencies and foundations acting under state control). ***Final Recipients*** of aid are governmental organisations, municipalities, NGO-s, entrepreneurs.

The ***SPD Monitoring Committee*** will be set up. The members of the Monitoring Committee shall be representatives of the Intermediate Bodies, as well as socio-economic partners. In addition, ***Priority Working Groups*** shall be set up for following the progress of priorities and discussing the implementation rules.

Ministry of Finance as Managing Authority will set up a Structural Funds Information System.

0. ON THE ELABORATION OF THE NATIONAL DEVELOPMENT PLAN – SINGLE PROGRAMMING DOCUMENT

0.1. GENERAL ORGANIZATION

The general responsibility for the elaboration of the Programme lied with the Ministry of Finance. Other ministries involved were responsible for the description of the situation, planning of priorities and measures to be taken within their administration area. The Minister of Finance issued decree No 417 on 08.08.2001 to form a Methodological Working Group (SPD Working Group) responsible for the elaboration of the Programme, to be managed by the Ministry of Finance. The SPD Working Group included representatives from the following government ministries: Ministry of Education and Research, Ministry of Economic Affairs and Communications, Ministry of Social Affairs, Ministry of the Environment, Ministry of Agriculture and Ministry of Internal Affairs. According to decree No 419 by the Minister of Finance issued on 15.08.2002, representatives from the Ministry of Cultural Affairs and the Office of the Minister for Population and Ethnic Affairs were appointed as new members of the Programme working group. Since September 2002, a representative from the Bank of Estonia presented at the meetings of the working group, by invitation of the Ministry of Finance.

The task of SPD Working Group was to prepare, supplement and make any necessary changes to the guidelines for drafting the SPD, and to solve any problems raised in the course of elaboration of the Programme. Working group meetings took place once a month as a rule. The SPD working group reports on the progress made in the elaboration of the Programme to the Management Working Group for the preparation of managing EU Structural Funds and Cohesion Fund (set up in the decree of the Minister of Finance, 08.08.2001).

The authorities for the co-ordination of Programme development at a political level have been granted to a commission of ministers, formed to standardise the work done in the area of project applications submitted to the European Union Phare programme by the ministries. The decree of the Government of the Republic, "Formation of the Commission of Ministers" (No 309-K of 14.05.2002), authorised the said commission to submit proposals concerning the SPD to the Minister of Finance. The decree also allowed the commission to endorse drafts of the decisions concerning the Programme that have been submitted to the Government of the Republic.

Separate Priority Working Groups were formed to design priorities for the Programme. All the representatives of the ministries and institutions involved in the implementation of the priorities were included in the working groups. These were as follows:

- Human Resource Development Priority Working Group – chaired by the Ministry of Social Affairs
- Competitiveness of Enterprises Priority Working Group– chaired by the Ministry of Economic Affairs and Communications
- Rural Development and Agriculture Priority Working Group – chaired by the Ministry of Agriculture
- Infrastructure and Local Development Priority Working Group – chaired by the Ministry of Finance

The ministries involved set up additional working groups for effective elaboration of the measures, where necessary.

The Ministry of Finance was in charge of co-ordinating the activities of the SPD Working Group, the Priority Working Groups, the Budget Steering Group in the Ministry of Finance, and the Management Working Group for the preparation of managing EU Structural Funds and Cohesion Fund.

From May 2002 to May 2003, the Ministry of Finance and the SPD Working Group as well as the Priority Working Groups received counselling regarding the framework of the Phare Special Preparatory Programme for EU Structural Funds. The consultant was Mr. Eero Aarnio of Finland, the manager of the Finnish South-Savo Regional Development Agency.

0.2. CONSULTATIONS WITH PARTNERS AND PUBLIC INFORMING

According to the general Structural Funds Regulation 1260/1999, Article 8, the Ministry of Finance, acting as the Managing Authority, is to consult with various partners, including those in the social and economic fields. For this purpose, a list of all the co-operation partners to be involved in the elaboration of the Programme was devised in October 2001. Partners nominated by the ministries formed the basis for the list. The list of co-operation partners

was steadily supplemented as the Programme was drawn up, and by November 22, 2002, 103 partners had joined the consultation process (see Annex 8).

Socio-economic partners involved in the preparation of the Programme can be categorised into three groups: representatives from local and county governments, from professional associations and from NGOs and foundations. The Ministry of Cultural Affairs, the State Chancellery's Office of the Prime Minister, the Office for the Minister of Population and Ethnic Affairs, the Office for the Minister of Regional Affairs, universities, etc. were also involved in the process.

The Ministry of Finance consulted with the partners about issues concerning the objectives and priorities of the Programme in October 2001. The outline for the basic strategy of the SPD was sent to the partners for comments on February 22, 2002. During the consultation process lasting slightly longer than a month, the Ministry of Finance received opinions and recommendations from more than 100 institutions and organisations. The total number of comments and proposals received amounted to 200, and quite a large number of them were taken into consideration in drafting the document. The consolidated table, accompanied by proposals and the information on acceptance thereof, was made available on the web-site of the Ministry of Finance.

The second round for social partners to express opinions and make proposals was opened on November 18, 2002, and for the first time the full draft SPD was made available for comments. It remained open for consultations until December 18, 2002.

Simultaneously with gathering recommendations for making amendments to the full version of the Programme in November and December, special events were organised to introduce the Programme at the local level, i.e. in counties. The aim of the information campaign "Implementing the EU Structural Funds in Estonia" was to provide people with a better understanding of the Structural Funds and the Programme itself. A total of 16 events took place in one month and lectures were given both in Tallinn and in counties throughout the country. The number of participants totalled roughly one thousand.

The ministries gathered the opinions and proposals from the official co-operation partners and submitted them to the Ministry of Finance. Approximately 220 comments and recommendations were received from 39 partners (incl. 10 municipalities and county governments). The most active partners were the Estonian Chamber of Environmental Associations, the Ida-Viru county government, the Union of Estonian Associations of Local Authorities, the Estonian Association of Small and Medium-Sized Enterprises and the Estonian Association of Information Technology.

About one half of the recommendations submitted were taken into consideration in drafting the final version of the programming document. Information concerning the amendments made in the final document was added to the web-site of the Ministry of Finance.

In May – December 2002, a number of events took place related to the discussion of the Programme's strategy, objectives and measures. Partners from institutions other than the ministries (representatives of environmental organisations, universities, the Delegation of the European Commission in Estonia, etc.) also took part in the events. In addition to general consultation rounds, the ministries also asked their socio-economic partners to give further insights to the Programme issues whenever the parties' interests were touched. Just to mention one of the most large-scale discussions, "The role of the NDP in Human Resource Development in Estonia in 2003-2006", took place on September 11, 2002. Representatives of about 40 organisations took part in the event.

0.3. EX ANTE EVALUATION

General Ex Ante Evaluation of the Programme

In the beginning of 2002, the Ministry of Finance initiated an ex ante evaluation of the strategic basis for the Estonian SPD. This was carried out by Professor Urmas Varblane of the University of Tartu. Although the ex ante evaluation did not comply with all ex ante evaluation requirements, established by the EU Structural Funds rules for evaluation, a number of valuable suggestions were received. Approximately one half of the 190 comments and recommendations made were taken into consideration as the draft was devised. However, several recommendations were not possible to use until the measures had been elaborated. Information about the comments made by the evaluator and the consideration thereof was made available on the web-site of the Ministry of Finance in May.

Ex ante evaluation for the full version of the Programme started in August 2002 within the framework of SPP+ Twinning Project. It was possible to make use of the experience of Finnish experts (the group was chaired by Professor Kari Itkonen) for the technical evaluation of the Programme. The expert group of the Tallinn Technical University

(chaired by Professor Vello Vensel) performed the ex ante evaluation. As the evaluation did not start until the final stage of the programming, the ex ante evaluators were able to influence only the final version of the SPD. The aim of the ex ante evaluation, therefore, was to contribute to the quality of the final version of the Programme. Presentation and discussion of the Programme's ex ante evaluation report took place on December 11, 2002.

Information concerning the ex ante evaluation report and information on the extent to which the suggestions made in the course of evaluation were taken into consideration were made available on the web-site of the Ministry of Finance.

On request of the Commission the ex ante evaluators added certain thematic evaluations into the final report in May 2003.

Strategic Environmental Assessment

During the ex ante evaluation process, the strategic environmental impacts of the SPD were analysed and discussed. The process was in accordance with the Environmental Impact Assessment and Environmental Auditing Act that requests a strategic assessment of environmental impacts (SEA) during the elaboration of national development plans. Only licensed environmental experts can perform the assessment.

The strategic assessment of the environmental impacts of the Programme was funded by the Regional Environmental Centre for Central and Eastern Europe Foundation REC Estonia, and REC expert Jiri Dusik organised the activities. AS Maves won the public competition for the assessment.

The process of evaluating the strategic environmental impacts started with the introduction and public discussion of the programme for SEA on March 26, 2002. Approximately 40 comments and suggestions were made for the blueprint of the programme. All the suggestions for amendments to programme for the SEA were made available on the website of the Ministry of Finance. In April, AS Maves introduced the specified work programme for the SEA of the SPD.

During the first stage of the assessment, the experts submitted their comments on the analytical part of the Programme. These were discussed with the representatives of the ministries responsible for drafting of certain chapters. In the interim SEA report, submitted on June 3, main conclusions concerning the environmental aspects related to the strategic basis of the SPD were presented. Here, some amendments made into the analytical part dealing with environmental issues (past pollution, issues related to transport) should be noted.

During the second stage, the SPD measures were designed simultaneously with the assessment of their environmental impacts. A major share of the recommendations made is reflected in the Programme.

On November 7, 2002, a workshop took place on environmental objectives and indicators. Participants were various organisations and the general public. On December 3, a discussion was held on the evaluation of SPD measures and on the organisation of the implementation of SPD. Representatives of all the stakeholders took part.

A public debate about the SEA of SPD was organised on January 13, 2003. AS Maves submitted the final SEA report to the Ministry of Finance on February 13, 2003, and the final report was approved by the Ministry of Environment on March 5, 2003.

A summary of the SPD ex ante evaluation report and of the SEA report is given in Annex 4 and 5.

1. SOCIO-ECONOMIC SITUATION

1.1. BASIC FACTS ABOUT ESTONIA

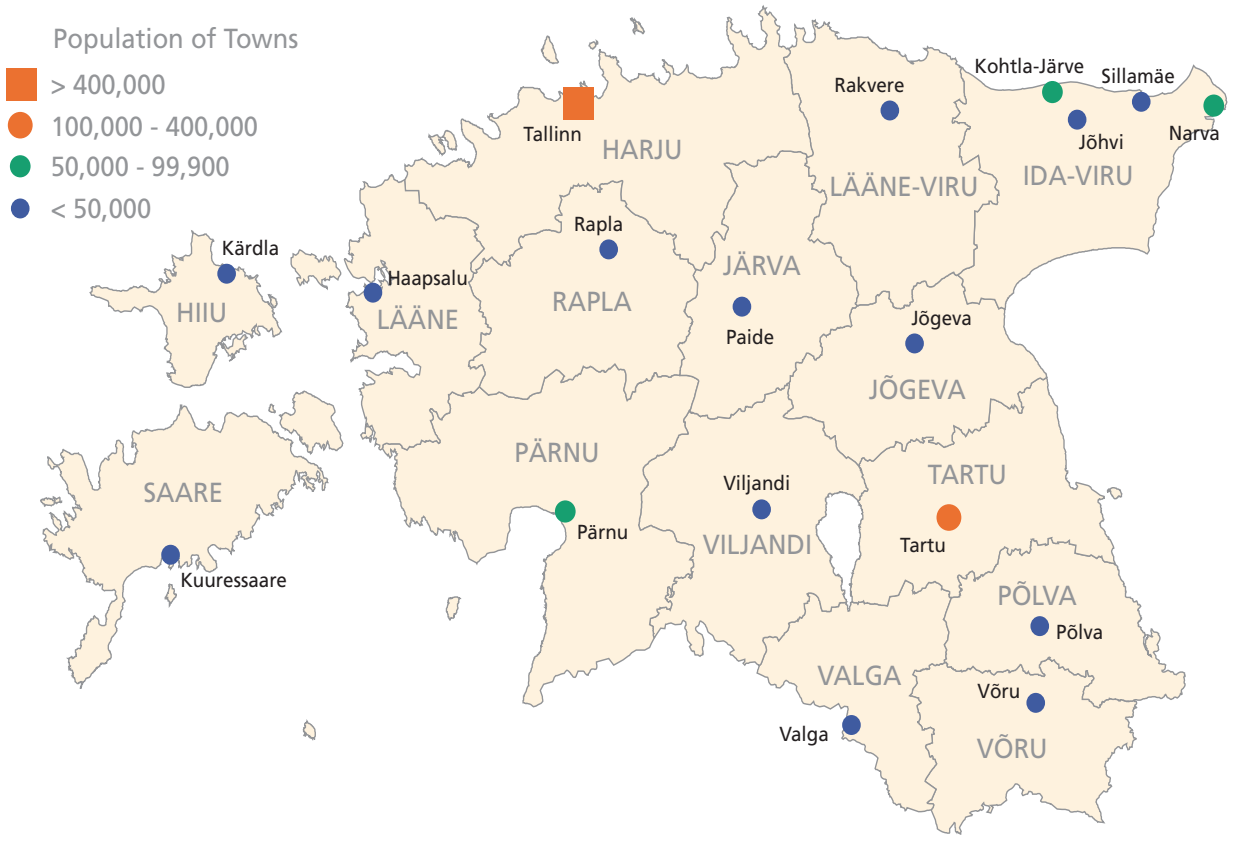
Estonia is located on the eastern coast of the Baltic Sea. The western and northern overseas neighbours of Estonia are, respectively, Sweden and Finland. In the east, Estonia shares its border with the Russian Federation; in the south, with Latvia. Geographically, it has both certain disadvantages and advantages. On the one hand, it is situated on the periphery of the European Union and therefore somewhat at a distance from the economic nucleus of the European mainland. On the other, it is close enough to the more developed EU member states to act as a convenient transit corridor for trade between Western Europe and Russia.

Being 45,200 km² in area, Estonia is one of the smallest countries in Europe. The distance between the eastern and western borders is approximately 370 km and between the northern and southern borders approximately 240 km. The population is 1.361 million people, 67.9 % of them being of Estonian nationality (according to the census of 2000).

The natural landscape is relatively flat, well forested and having a temperate, marine climate. Compared to Europe in general, the population density of Estonia is very sparse, the average density being 30 inhabitants/km². In some rural areas it can be as low as 10 inhabitants/km². More than 60% of the territory is covered with forests and marshes.

Figure 1

Counties and bigger towns of Estonia



Politically, Estonia is a parliamentary republic. 11 ministries and boards and inspectorates in respective administrative areas implement the executive power.

There are 15 counties in Estonia. Counties are national administrative units, chaired by a County Governor appointed by the central Government. Local government has one level and it is made up of 241 towns and rural municipalities with a self-governing status.The counties, towns and rural municipalities are all relatively small. In most counties, the population is between 30,000 and 190,000 inhabitants. Urban dwellers make up 67.4% of the population (2002). The largest towns are Tallinn, Tartu, Narva, Kohtla-Järve and Pärnu. The average population of rural municipalities is a couple of thousand people.

Table 1

Estonia and the European Union – comparison of main indicators

Indicator	Unit	Estonia	EU
Population (01.01.2001)	Million People	1.367	377.508
Population	% to EU 15	0.4	100
Territory	Th km^2	45	3 191
Territory	% compared to EU 15	1.4	100
Population density in 2000	Inhabitants/ km^2	30	118
Population density	% compared to EU 15	25	100
GDP 2001	Billion Euro	6.2	8814.8
GDP per capita in 2001	Purchase power standards (PPS) % compared to EU 15 [1]	40.1	100
Unemployment rate 2000	%	13.8	7.8
Average expected lifespan 1999	**Years**		
men		65.4	74.9
women		76.1	81.2
Infant mortality rate, 2000	Deaths under 1 year of age per 1000 live births	8.4	4.9
People with high school education in 1999	% of population aged 25-59 (in Estonia, 25-64)	84	62

[1] *PPS – purchasing power standard. The unit calculated by Eurostat in line with the purchase power parities (PPP) that eliminates the price differences between countries and shows the real value of euro. PPP expresses the real purchase power of the national currency and is different from the official currency exchange rate.*

Sources: Statistical Office of Estonia, Eurostat

Compared to EU, the total economic output of Estonia is very small. When comparing the economic development level of Estonia to the countries of Central and Eastern Europe, Estonia can be said to have average indicators. However, compared to the average indicators of EU, Estonia's GDP per capita in 2001 was only 40.1% (the average of the 10 candidate countries to join EU was 45%).

The competitiveness of the Estonian economy is considered to be relatively high. The IMD World Competitiveness Yearbook 2002 and the World Economic Forum Competitiveness Report 2002 have ranked Estonia as the 21st and 26th respectively among the countries rated. The liberal economic environment and relatively low level of corruption have had a favourable effect on competitiveness. Estonia ranks 6th to 8th in the world according to the Heritage Foundation's index of liberal economies. According to Transparency International's corruption awareness index, Estonia ranks 29th in the world.

The UNDP Human Development Report for the year 2000, which includes all the countries of the world, defines Estonia as a country with a high human development level on a line with its consolidated human development index. This is probably due to the rapid growth of Estonia's GDP during the second half of the 1990s and the solid level of formal education traditional in this country. At the same time, the average expected lifespan, providing a general picture of the living conditions of the population, is one of the lowest in Europe, being 7-10 years shorter than in EU member states. The most important problems are unemployment, poverty and social exclusion.

1.2. ECONOMIC SITUATION IN GENERAL

1.2.1. MACRO-ECONOMIC ASSESSMENT

Gross Domestic Product

During the transition period, Estonia has proceeded in accordance with the following economic and political principles:

- Currency Board system,
- balanced government budget and
- liberal foreign trade policy combined with the maintenance of a favourable investment climate.

A stable macro-economic framework, together with rapid privatisation and other market economy reforms, have produced a favourable economic environment in Estonia and aided the country in its progress towards closing the gap between itself and the developed industrial countries. The result is a healthy market economy being prepared for the competition requirements of the EU.

The shock of the transition to a new economic system caused a steep decline in the gross domestic product (GDP) from 1991 to 1994. During this period the Government liberalised trade and prices, and several important companies were privatised. At the same time it implemented the currency reform, creating the Currency Board system. The situation stabilised at the beginning of 1994, and the growing efficiency and stability of the macro-economy created a favourable environment for the economic growth that took place over the next few years.

In 1995 the Estonian economy emerged from a decline, and from 1995 to 2002, the average growth rate of GDP was 5.2% per annum (see Table 2 and Figure 2), considerably exceeding the economic growth in the EU, which was an average of 2.3% in 1995–2002. From the point of view of the purchase power of Estonian consumers, the GDP per capita in Estonia in the 1995-2002 period increased by nine percentage points – from 32.9% to 41.8% compared to the EU indicator. In 1999 the Estonian economy went back into a decline. The recession was partly caused by an external event, the economic crisis in Russia, and partly resulting from the unsound consumption and investment decisions made by various economic agents. The upswing in the economy in 2000 was, first of all, the result of restructuring and a more effective utilisation of available resources. Despite a cooling in the world economy and a decrease in economic growth experienced by various economic partners, rapid growth continued in 2001 and 2002.

Table 2

Gross Domestic Product in 1997–2002

	1997	1998	1999	2000	2001	2002
GDP, real growth, %	9.8	4.6	-0.6	7.3	6.5	6.0
GDP, mln euros	4,093.2	4,699.9	4,878.2	5,584.5	6,256.6	6,903.9
Mean annual population	1,399,535	1,386,156	1,375,654	1,369,515	1,364,101	1,358,644
GDP per capita, euros	2,924.7	3,390.6	3,546.1	4077.7	4,586.6	5,081.5
GDP per capita in PPS (EU-15=100) [1)]	37.8	39.6	38.4	40.1	40.1	41.8

[1)] PPS – purchasing power standard. The unit calculated by Eurostat in line with the purchase power parities (PPP) that eliminates the price differences between different countries and shows the real value of the euro.

PPP expresses the real purchase power of the national currency and is different from the official currency exchange rate.

Source: Statistical Office of Estonia, Eurostat

Estonian economy has made noticeable gains on that of the industrial countries. In the 1990s, the common characteristic of the structural change has been a decrease in the importance of agriculture and post-soviet industries, together with a rapid surge in the service sector and in a number of other new industries (Figure 3 and Table 3). By 2002, the importance of the primary sector in the GDP had dropped to 5.4%, while the importance of the tertiary sector has increased to 68.2%.

Table 3

Structure of Gross Domestic Product in 1997–2002

(as percentage of GDP)

	1997	1998	1999	2000	2001	2002
Agriculture [1)]	7.9	7.2	6.6	6.1	5.6	5.4
Industry	19.5	18.9	17.6	19.1	19.4	19.6
Construction	6.3	6.7	6	6.1	6.2	6.6
Services	66.3	67.3	69.8	68.5	68.6	68.2

[1)] with hunting, forestry and fisheries

Source: Statistical Office of Estonia

Figure 2

Gross Domestic Product

(bln euros; changes in percentage)

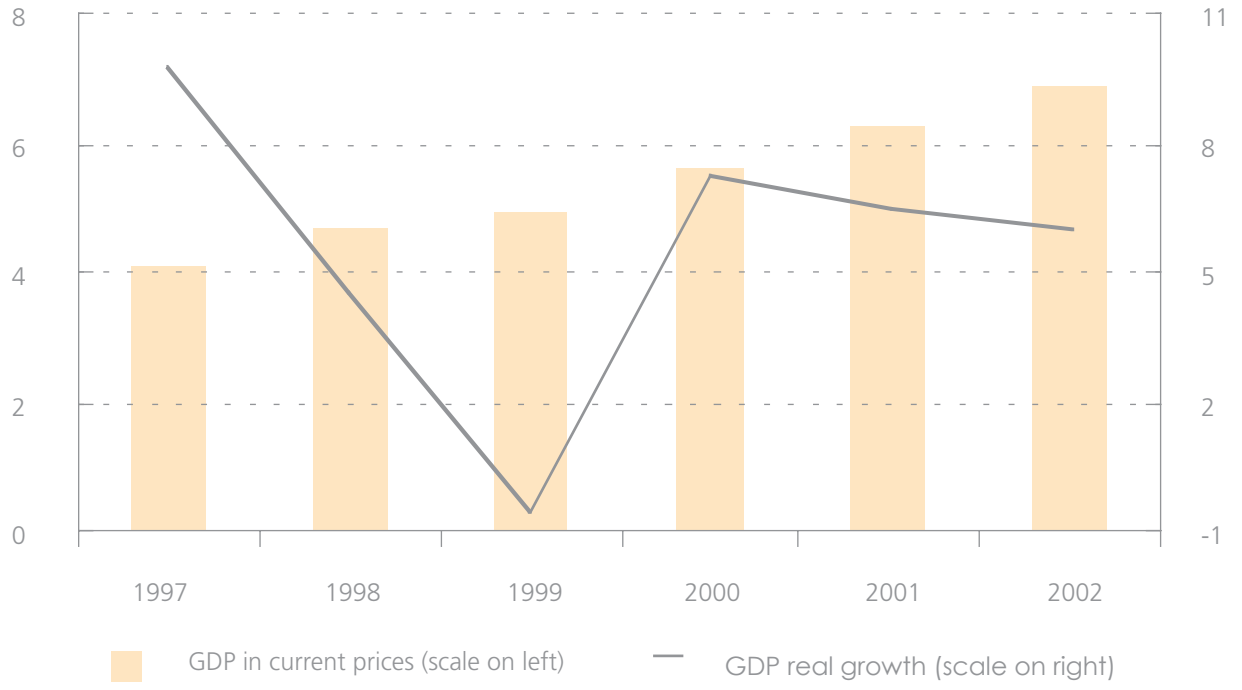
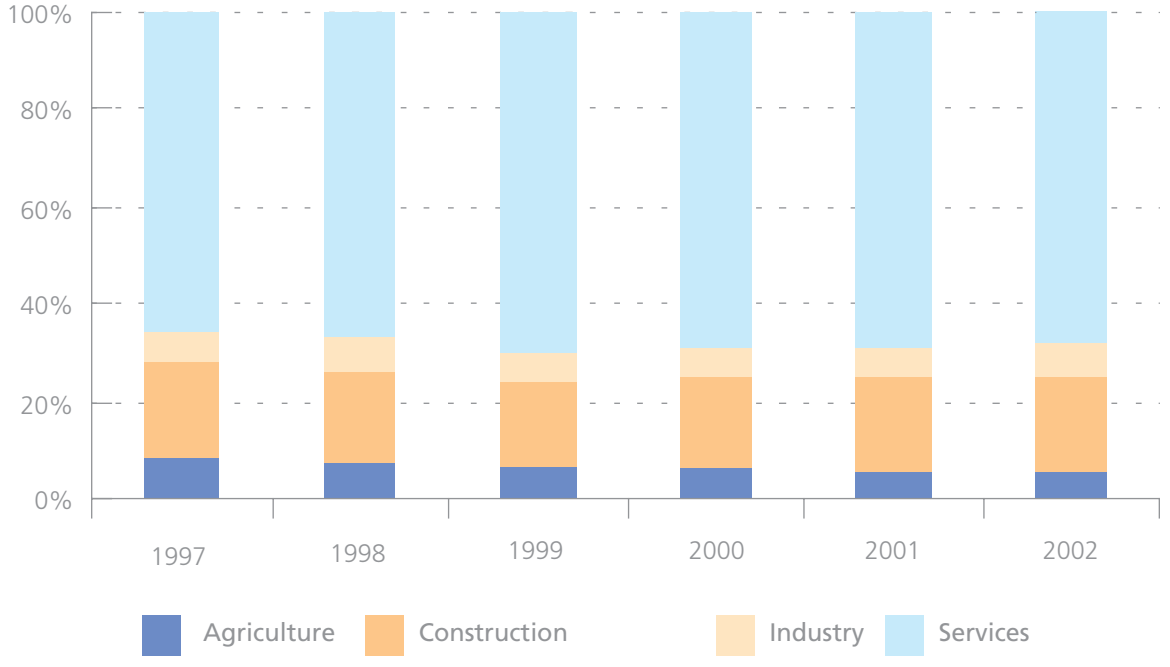


Figure 3

Structure of Gross Domestic Product

(percentage)



Inflation

During the first half of 1992 the price liberalization, accompanied by the lack of control over the financial aggregates, caused the process of hyperinflation. The implementation of the Currency Board system and strict budget policy soon helped to stabilise prices. Although the inflation rate continued to drop in the 1995-1998 period, it was still high (Table 4).

The increase in prices slowed down considerably at the end of 1998; in 1999, the economy adjusted to the consequences of the crisis. In 1999, the increase in consumer prices dropped to the lowest level during the period of independence (3.3%). In 2000, as the domestic and foreign demand became active again, inflation sped up and this trend continued throughout the first half of 2001. The acceleration of inflation was a result of higher oil prices and a depreciating euro but also of domestic inflationary pressures. Higher food prices and administered – particularly electricity – price hikes also contributed to the acceleration of inflation which peaked at some 7% in the first half of 2001. Inflationary pressures receded afterwards. CPI inflation decelerated to 3.6% in 2002 and further temporarily fell in the 1st half of 2003 due to declining import prices and one-off factors such as lower food prices.

Thanks to the choices that were made in monetary and financial policy at the beginning of the transition period, prices have stabilised in Estonia and interest rates have dropped. To date, the price level in Estonia is only 50% of that of the Western Europe, and even lower when it comes to the cost of services. The process of convergence will therefore continue for years.

Table 4

Inflation in 1997–2002

(Changes compared to previous year are expressed as a percentage)

	1997	1998	1999	2000	2001	2002
Consumer price index	11.2	8.2	3.3	4.0	5.8	3.6
Goods	8.5	6.2	0.3	3.3	4.9	1.9
Services	14.2	12.7	9.7	5.4	7.6	6.8
Liberal prices	9.8	6.4	0.8	2.7	5.9	2.8
Prices regulated at administrative level	13.5	13.4	10.1	7.3	5.5	5.4
Producer price index of industrial production	8.8	4.2	-1.2	4.9	4.4	

Source: Statistical Office of Estonia

Foreign Trade and Balance of Payments

Economic growth in Estonia results primarily from the rapid export growth to industrial countries, supported by foreign investment inflow. Estonia is a country open to foreign trade. In 2002, the foreign trade volume (goods and services) amounted to 177.7% of GDP. In 1995–2002, export, expressed in current prices and fixed prices, has increased by 2.1 and 1.0 times respectively (Table 5). After 2000 where growth in exports and imports reached around 28%, the global economic slowdown led to a strong deceleration in Estonia's export growth. In 2002 the growth of foreign trade fastened again due to the faster growth of Estonian main trading partners and quick growth of domestic demand.

Table 5

Foreign trade in 1997–2002

(mln euros)

	1997	1998	1999	2000	2001	2002
Export of goods and services	3,209.2	3,744.6	3,767.4	5,230.0	5,594.4	5,811.5
Import of goods and services	3,683.4	4,235.2	4,007.4	5,458.1	5,826.0	6,458.9
Foreign trade balance	-474.2	-490.6	-240.0	-228.1	-231.6	-647.4
Foreign trade balance as % of GDP	-11.6	-10.4	-4.9	-4.1	-3.7	-9.4
Current account	-499.2	-432.1	-230.6	-325.5	-376.4	-845.9
Current account as % of GDP	-12.1	-9.2	-4.7	-5.8	-6	-12.3

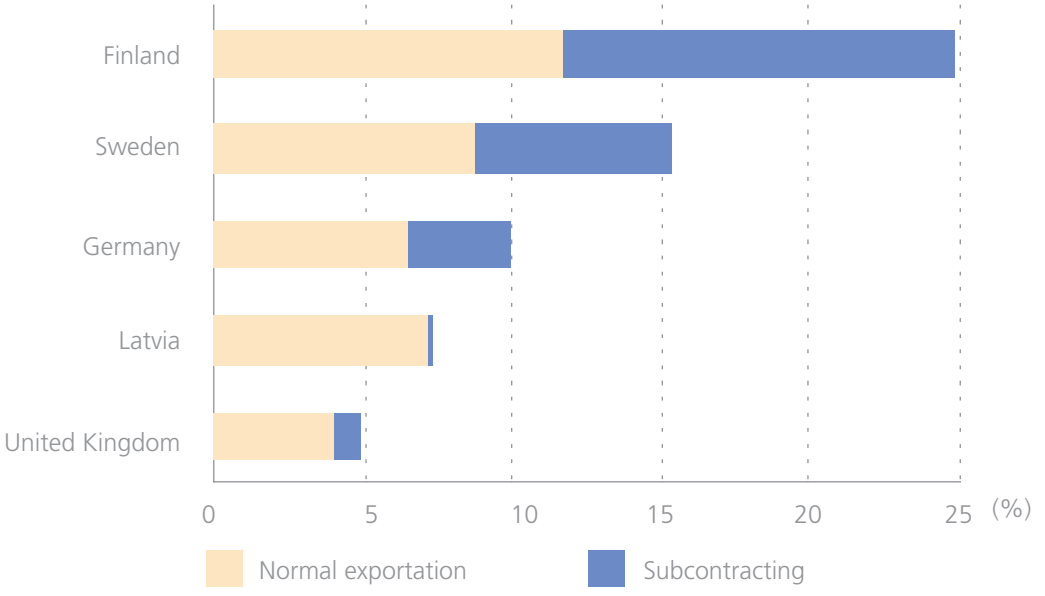
Source: Bank of Estonia, Statistical Office of Estonia

Throughout the transition period, foreign trade of Estonia has been reoriented to the European Union. Up to 1998, Russia was one of the main trading partners of Estonia, with the share of exports to Russia making up 10-15% of the total export volume. After the crisis in Russia and the devaluation of the rouble, Russia's importance as a trading partner dropped significantly. Exports to the European Union now accounts for approximately 70% of the total export volume of Estonia, while the imports from EU makes up to 60-70% of the total import volume. Estonia's main trading partners are Finland, Sweden and Germany (see Figures 4 and 5).

Figure 4

Export destination countries in 2002

(percentage)

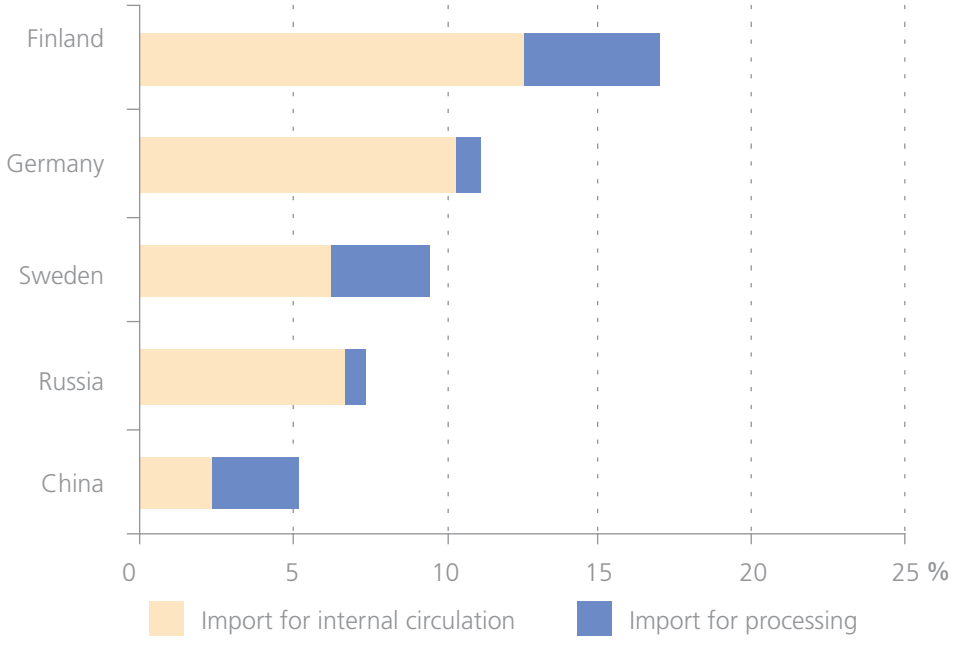


Source: Statistical Office of Estonia

Figure 5

Countries of origin for Imports in 2002

(percentage)



Source: Statistical Office of Estonia

Export has shifted towards electronics, timber and textile products with higher value added. In 2002, approximately 19% of the total export volume of Estonia was made up of sub-contracting for the most up-to-date machinery and equipment. Most of the production is carried on by subsidiaries of big Nordic corporations, supported by foreign investments.

The modernisation of production technologies has been one of the pre-requisites for rapid growth in exports. This has brought along a high volume in imports of machinery and equipment that is almost identical to the foreign capital inflow. In Estonia, import volumes have been exceeding exports on constant basis (Figure 6). So far, low content of value added has been one of the main problems of exports in Estonia.

Figure 6

Foreign trade, 1997-2002

(mln euros)

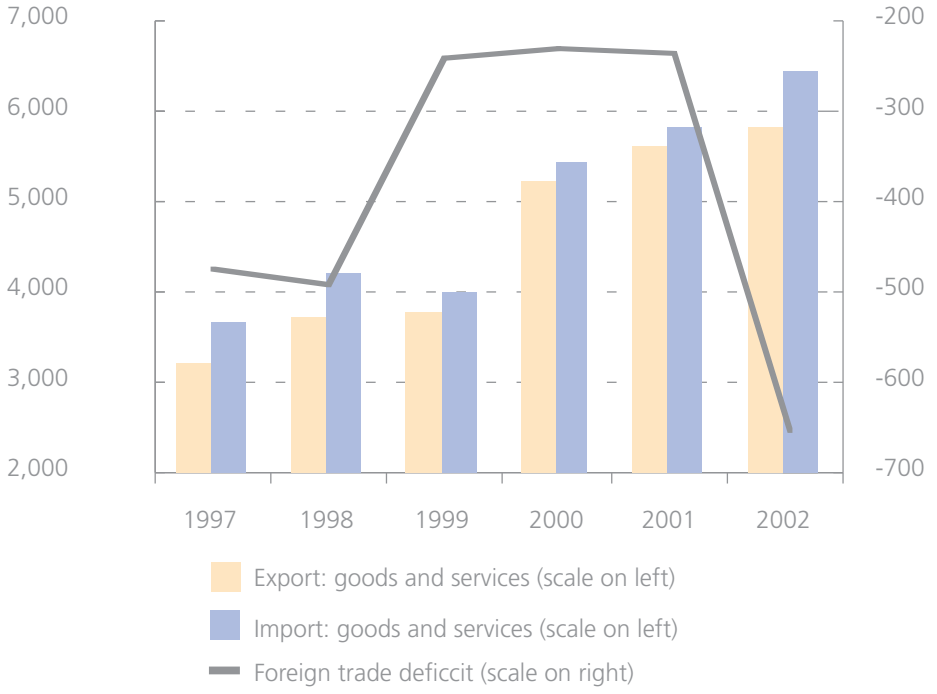
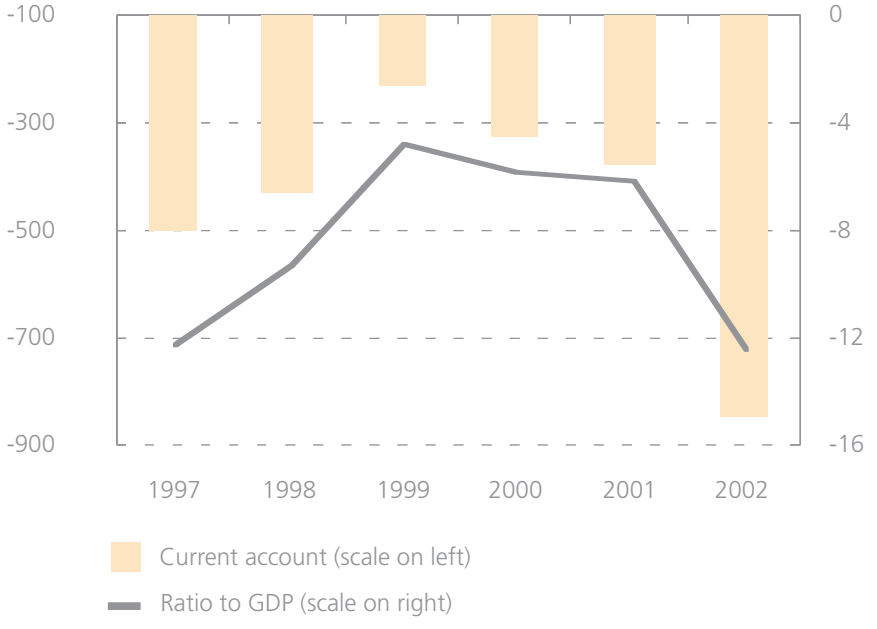


Figure 7

Current account, 1997-2002

(mln euros, as a percentage of GDP)



The deficit of the trade balance was on the increase in Estonia until 1997, being 24.4% of GDP. After that the export of goods grew more rapidly than the import of goods. This was mostly due to supply-side improvements and a moderate decline in the demand for investment. By 2001 the deficit of the trade balance had therefore dropped to 14.1% of GDP. In 2002, the trade deficit grew again to 16.9% of GDP as a result of a mismatch between domestic and foreign demand reflected by robust imports and sluggish exports as well as worsened terms of trade.

Although the surplus of services balance has helped to relieve the balance of trade and services to a certain extent, the current account of the balance of payments in Estonia has been in deficit since 1994 (Figure 7). Such a deficit reflects a transition economy that is characterised by relatively low income and savings levels and a great need for investment and foreign capital inflow.

Estonia differs from a number of other countries in a strict budgetary policy and a favourable economic situation that helped to finance the deficit of the current account of the balance of payments by different capital flows, thus preventing an increase in the loan burden. The current account deficit has been financed by high levels of FDI in most years over the last decade (except in 1996-97 and 2002), keeping external debt at a relatively modest level. In 2002 and the first half of 2003, FDI coverage declined as the current account deficit increased. This resulted in an increase in gross external debt to 65% of GDP from 59.3% in 2001.The privatisation process, facilitating foreign investment inflow, combined with a generally favourable investment climate, have provided Estonia with a foreign investment inflow level that is one of the highest among countries with transition economies. The total of foreign investments made in Estonia at the end of 2002 was 4.0 billion euros. Direct investments are mostly of Swedish (41%) and Finnish (27.3%) origin. The continued foreign investment inflow depends largely on Estonia's capacity to provide sufficiently highly qualified labour force.

Employment

In 1991 the population of Estonia started to decline. Since then, the number of inhabitants has fallen by approximately 6%. The process has been supported by negative natural growth and by emigration. This is also the reason for a decrease in the labour force. At the same time, employment has dropped considerably faster, mainly because of the rationalisation process and the changes that have taken place in the structure of the economy. From the 800,000 employed at the beginning of the 1990s the number of working people had dropped to 570,000 in 2000. In 2001 the number of employed people started to increase again and reached the total of 585,600 in 2002.

The unemployment rate, approximately 10% in the middle of the 1990s, went up rapidly after the economic crisis in Russia in 1999 (Table 6). After that the labour market had to adjust to the changed economic situation, as the economic decline forced companies to change their employment policies. Employees were forced to cut down expenditures, many companies went out of business and the number of unemployed people increased by almost one and a half times. Since 2001 the number of unemployed has decreased rapidly because of restored economic growth. The total unemployed came to 67,200 in 2002, being 10.3% of the total labour force.

Table 6

Labour market in 1997–2002[1)]

	1997	1998	1999	2000	2001	2002
Labour force [1]	1,055.8	1,051.1	1,046.8	1,046.5	1,047.2	1,047.2
Labour force	683.0	672.6	659.8	662.4	660.8	652.8
Employed	617.2	606.5	579.3	572.5	577.7	585.6
Unemployed	65.8	66.1	80.5	89.9	83.1	67.2
Not active	372.8	378.5	387.0	384.1	386.4	394.4
Unemployment rate, as % of labour force	9.6	9.8	12.2	13.6	12.6	10.3
Monthly gross wages, euros	228.4	263.6 (257.0 [2])	283.8 [2]	313.6 [2]	352.2 [2]	392.7[2]
Real growth of wages, %	7.6	6.0	4.8	6.3	6.2	7.7
Real growth of productivity, %	10.2	6.5	4.0	8.6	5.5	4.4

[1)] aged 15–74;
[2)] Average monthly gross wages, health insurance benefits are not included.

Source: Statistical Office of Estonia

The main problem experienced by the Estonian labour market is the non-conformity of labour demand and supply: lack of qualified labour and high unemployment are present simultaneously. Long-term unemployment and unemployment among the young people are also high and still increasing. A stable and favourable investment and economic climate is expected to diminish the unemployment rates and bring along the more extensive use of labour in the long run.

Budget

Since the beginning of the transition period, Estonia has observed a strict fiscal policy. As the local government budgets have a deficit on constant basis, the central government has had to adjust to balancing the general government budget (Table 7, Figures 8 and 9). The Constitution of the Republic of Estonia establishes the requirement for balanced income and expenditures in the national budget. The conservative approach of the central government is caused mainly by the restriction, established by the Currency Committee system, preventing the central bank from crediting the government. Foreign finance is mostly limited to investments.

Table 7

General government financial indicators in 1997–2002

(percentage of GDP)

	1997	1998	1999	2000	2001	2002
General government sector in total						
Revenues	42.6	40.2	38.9	37.9	38.2	40.4
Expenditures	40.4	40.5	43.5	38.9	37.8	39.2
Budget deficit/surplus	**2.2**	**-0.3**	**-4.6**	**-1.0**	**0.4**	**1.2**
Of which:						
Central government						
Revenues	22.8	21.0	20.7	20.3	20.4	21.6
Expenditures	20.9	21.4	23.4	21.1	20.1	21.0
Budget deficit/surplus	**1.9**	**-0.4**	**-2.7**	**-0.8**	**0.3**	**0.6**
Social insurance funds						
Revenues	14.0	14.3	12.2	12.2	12.0	12.6
Expenditures	13.5	14.6	13.6	12.1	11.3	11.3
Budget deficit/surplus	**0.5**	**0.3**	**-1.4**	**0.1**	**0.7**	**1.3**
Local governments						
Revenues	8.4	8.6	8.6	7.6	9.4	9.9
Expenditures	8.6	8.8	9.1	7.9	10.0	10.6
Budget deficit/surplus	**-0.2**	**-0.2**	**-0.5**	**-0.3**	**-0.6**	**-0.7**

Source: Ministry of Finance, Statistical Office of Estonia

Figure 8

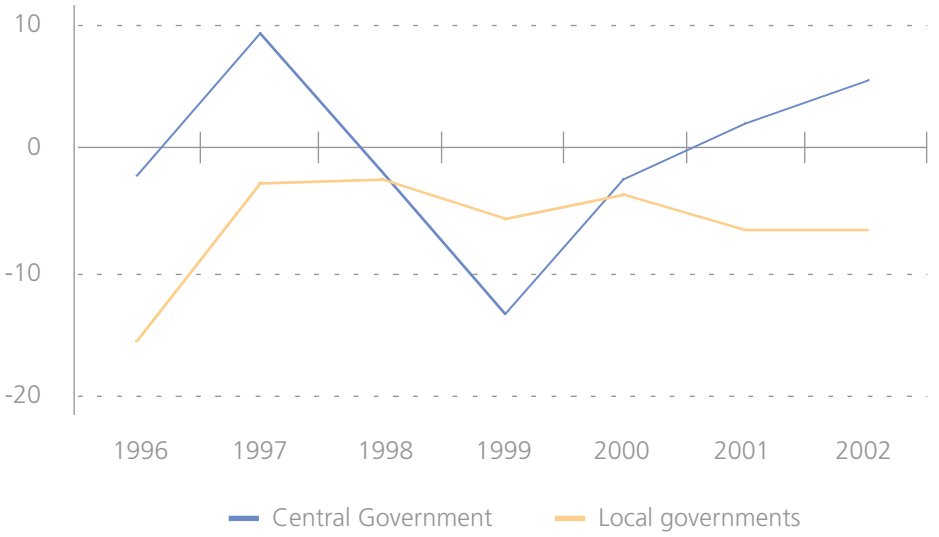
General government financial indicators, 1996-2003

(bln euros; percentage of GDP)

Figure 9

Budget balance, 1996-2002

(percentage of revenues)



While in the 1995–1996 period the general government budget was in deficit (mostly due to problems with taxation, big investments in infrastructure and great loan burdens of local governments), the trend changed during the 2nd half of 1997 (see Figure 9). A budget surplus was caused by increased tax intake, initiated by economic growth. Some time later the government implemented a strict savings policy that was in force until June, 1998. Rapid growth of the economy and improved tax intake also supported the conservative budget policy. All these measures resulted in a budget with surplus and the establishment of a Stabilisation Fund.

After a budget surplus equivalent to 2% of GDP in 1997, the general government registered a deficit of 0.3% of GDP in 1998 as a result of the impact of the economic slowdown on revenue collection and slippages on the expenditure side. The fiscal position further deteriorated in early 1999 as expenditures were substantially increased. The new government reversed this expansionary fiscal impulse through expenditure reduction from the 2nd half of 1999. The deficit in 1999 amounted to 4.6% of GDP, largely financed through the use of the proceeds from privatisation. In 2000, the economic growth was restored and the general government budget deficit dropped below 1% of GDP again. In 2001, fiscal discipline and better than expected growth performance led to a budget surplus of 0.3% of GDP which further increased to 0.9% of GDP in 2002.

Financial Sector

Since the implementation of Estonia's national currency – the kroon – Estonia has been using the Currency Board System at a fixed exchange rate, meaning that the cash circling in the economy is completely covered by the foreign currency reserves of the central bank.

After the implementation of the strict monitoring requirements and norms in 1995, major changes took place in the banking sector. This resulted in a consolidation cycle as banks were privatised, and the development of the sector followed. The financial crises of 1997-98 created problems for the banks, followed by mergers of some of the larger banks and bankruptcies in the weaker financial institutions.

Gaining strategic participation in larger financial institutions established the basis for the increased credibility of the banking sector and strengthened their financial structure. Increases in capital inflow and number of deposits provided for the rapid growth of cash aggregates. Demand for loans was restored as interest rates dropped.

By now the banking sector as a whole is under the control of foreign capital. The development that has taken place over the last couple of years has been considerable: the balance sheet assets of banks went from 56% in 1998 up to 76% of the GDP by the end of 2002. The larger banks have established good ratings under the management of large investors, thus enabling to lower the risk premiums and bring interests down to exceptionally low levels.

Economic Policy

Since 1999, the main objective of Estonian economic policy has been a sustainable growth in the economy that is balanced both socially and regionally. The economic policy supports increased productivity, therefore diminishing gaps in the development between Estonia and the EU.

Both during the preparation for EU accession and after the accession, these objectives were and will be met by the continued implementation of those economic and political principles that have proved to be conducive to providing a favourable and stable economic environment:

- Financial policy: Estonia will remain committed to the Currency Board system and fixed exchange rate between the kroon and the euro until gaining a full membership of European Monetary System.
- Fiscal policy: the Government will continue to observe the principle of the balanced budget.
- Foreign trade policy: step-by-step implementation of common EU trade policy.

The stable and favourable economic environment will continue to attract foreign investments. Therefore, a simple tax system with a broad tax base should be embodied.

1.2.2. RURAL ECONOMY AND RURAL DEVELOPMENT

Agriculture

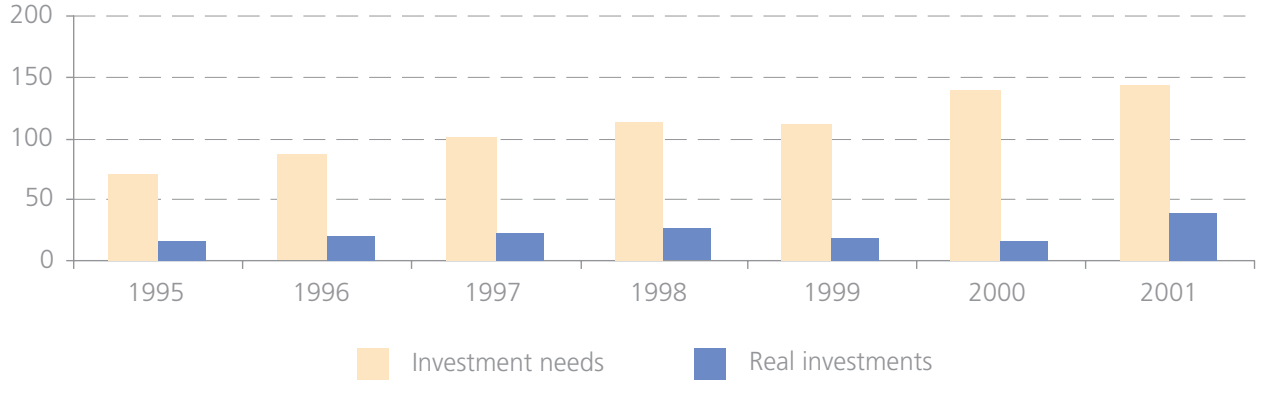
Agriculture is an important economic sector. It supplies the population with domestic foodstuffs, provides employment in rural areas and is important for the conservation of land and the environment. It is also the economic sector that has undergone the greatest changes throughout the transition period in Estonia. In the beginning of the 1990s, agricultural policy changed abruptly, going from highly subsidised agricultural production to agricultural production with no subsidies backed by liberal price development policies. The restructuring of agriculture has been made more difficult by the loss of former Soviet markets — formerly the outlet for approximately one half of the production volumes — but also because of the rapid rise in the costs of production. The problem was aggravated by unfair competition in the beginning of the 1990s, when Estonia opened its markets and applied a liberal trade policy while its main trade partners continued to subsidise their exports. In addition, Estonia had no access to the EU market.

Unfair conditions such as these damaged the competitiveness of agricultural sector and cut off the means for making investments. This decreased competitiveness even more, while hampering Estonia's capacity for sustainable development. The residual value of existing assets started to drop rapidly. Only a relatively limited number of new owners of land and production facilities, being a subject to the property and land reforms that took place in the beginning of 1990s, have been able to start agricultural production that is viable in these new conditions. Because of the essential structural changes and re-orientation in the new economic situation approximately 25% of the arable land was out of use by the year 2001. The employment in the agricultural sector and the share of value added of the agricultural production in the GDP has decreased. The buying prices for agricultural production have also dropped, so it is difficult to accumulate capital in sufficient amounts to bring production facilities into conformity with modern production and environmental protection requirements (see Figure 10).

Figure 10

Real investments and investment needs in agriculture in 1995-2001

(mln euro)



Source: Ministry of Agriculture, Statistical Office of Estonia

In the following, more detailed data about investment needs are given. In the beginning of 2000 a survey was done by ERIA (Estonian Research Institute of Agriculture) to find out the situation of fixed assets in the agricultural sector. The survey showed that the expenses related to the usage of agricultural machines on the production of agricultural products are relatively big, hence one of the possibilities to decrease the cost prices of products is to reduce the machine work expenses.

According to the survey, agricultural machines are very old in Estonia. Since 1991 purchase of new agricultural machines has decreased drastically. Because of that the age of agricultural fixed assets is growing very rapidly.

In the beginning of 1990s the investments to the agricultural sector were very low and started to grow a little faster in the middle of 1990s and in 2000-2001. Because of the more or less stabile procurement prices of agricultural products in 1996-1997 also the investments to agricultural units increased noticeably. But taking into account the technological and age structure of agricultural fixed assets in Estonia, then we can unfortunately admit that in 1995-1998 there were still invested 3.2 times less each year than was needed and in 1999 even 4.3 times less than needed.

During the period of 1995-1998 the investments into agricultural machinery and equipment increased in total only thanks to the well-working limited liability companies and big farms, who could buy most modern agricultural machines. In Table 8 investments of agricultural enterprises in the period 1996-2001 are presented.

Table 8

Investments of agricultural enterprises, 1996-2001

(mln euro)

	1996	1997	1998	1999	2000	2001
Investments	10.8	16.5	10.2	10.9	21.4	40.7

Source: Statistical Office of Estonia

It is important to mention that investments were very low in period 1998-1999 when Estonian agricultural sector was influenced by many negative factors (so called Russian crises and drought in 1998, and too wet weather in 1999).

According to the research of ERIA the total investment needs for period 2000-2006 is 976 million euro - 139 million euro per year. (See also Table 9).

Table 9

Investment needs to agricultural sector in 2000-2006

(million euro)

Activity	Needs
1. Dairy production farms	195
2. Calves and heifers production farms	24
3. Pig production farms	32
4. Poultry production farms	22
5. Other animal (sheep, fur-bearing animals) production farms	12
6. Machinery and storage's in plant production	415
7. Horticulture and apiculture	31
8. Other buildings and constructions (wells, workrooms etc.)	89
9. Land improvement structures	155
TOTAL	976
Investment needs per year	139

Source: Estonian Research Institute for Agriculture, 2000

When comparing the agricultural investments into fixed assets in Estonia with the comparable data in EU (see the following table), we see that the corresponding rates in Estonia are in average 2-3 times lower.

Table 10

Agricultural investments to fix assets, in comparison to value added of agriculture

(%)

	1990	1995	1999	2000
Denmark	22.4	22.6		
Sweden	30.9	44.3		
Finland	40.9	55.8		
France	17.2	23.8		
UK	23.0	26.1		
Estonia		11.0	10.4	8.9

By the end of 1990s there were two basic groups of agricultural producers in Estonia: the larger producers who create the major share of agricultural produce sold, and smaller households that use a substantial share of their agricultural production for their livelihood.

Experience has shown that larger holdings show an economically more efficient production, so that they should be able to make some investments on account of their own assets – for example, investments aimed at improving the quality of their production. However, due to the scarcity of investments that have been made during the recent decade, the whole sector is in need of assistance in order to modernise its production.

Agricultural reforms have been hampered by a rapid decline of the ***importance*** and ***gross output*** of this sector (Table 11), whereas the process was the fastest during the first half of the 1990s. Between 1993 and 2001, the value added in agriculture and hunting decreased 39.4%. The employment in agriculture in 2001 was 4 times less than in 1992. By the year 2001, the share of agriculture in employment had fallen to 5% and to 3.7% of GDP.

Table 11

Agricultural indicators in 1992-2001

	1992	1993	1996	1997	1998	1999	2000	2001
Value added in agriculture and hunting at constant prices of year 2000 (mln euro)	…*	256.20	200.22	193.61	186.00	171.36	171.49	155.50
Share of agriculture and hunting in GDP (%)	11.7	9.3	5.2	4.3	3.8	3.6	3.7	3.7
Employment in agriculture and hunting (th)	114.6	91.9	52.1	44.8	43.5	38.2	32.4	28.4
Share in employment (%)	15.0	13.0	8.1	6.9	6.9	6.2	5.0	5.0
General export of agricultural products (mln euro)	62.23	159.72	206.02	216.54	220.44	168.80	203.87	296.11
Share of general export of agricultural products in total export (%)	17.5	23.5	15.1	11.5	9.8	7.5	5.9	8.0

**data are missing/not reliable*

Source: Statistical Office of Estonia

In 2000, the gross agricultural output amounted to 388.2 million euro, of which 58% was the gross output in animal production and 42% the gross output in crop production.

Structure of agricultural land by land size in Estonia is quite similar to the respective structure in the EU. In 2002, an average EU farmer used 18,4 ha of agricultural land; an average Estonian farmer used 12,7 ha of land or less by 5,7 ha. Farmers who have more than 100 ha use a majority of agricultural land in both the EU and Estonia, and percentage of farmers using less than 2 ha of land is relatively small in both cases. The largest differences in the Estonian production structure when compared to the EU are in the groups of producers using 50/100 ha of land: in the EU such farmers use 20%, in Estonia only about 8% of all agricultural land. Smaller producers have a relatively higher share in land use in Estonia: farmers who use up to 20 ha of agricultural land use nearly 30% and 19% of all agricultural land in Estonia and the EU, respectively (see Table 12).

Table 12

Structure of agricultural land by land size, Estonia and EU

(%)

	Less than 2 ha	2<5 ha	5<10 ha	10<20 ha	20<30 ha	30<50 ha	50<100 ha	Over 100 ha
Estonia	2,8	6,0	8,7	12,3	7,0	7,4	7,6	48,2
EU	1,7	3,7	5,1	8,3	7,3	12,4	20,0	41,3

Source: 1997 EU census data, 2001 Estonian census data; Grüne Bericht 2001 agricultural census

The main output of ***crop production*** is in fodder crops, mainly grass and fodder grain (Table 13). Grain for human consumption and the cultivation of potatoes also take up a considerable share of land. In 2001, cereals made up about 26% of the total crop production. Since the end of the 1990s, the area used for oil crops and berry cultivation has also increased considerably.

Table 13

Area under crop production in 1997-2001

(ha)

Year	Cereals and legumes	Industrial crops	Potatoes	Vegetables	Fodder crops	Orchards and berry plantations
1997	335,241	9,008	35,236	4,039	480,789	11,940
1998	360,485	17,825	32,552	4,286	446,033	12,399
1999	323,951	24,607	31,124	3,970	435,191	11,543
2000	333,239	29,116	30,865	3,880	412,797	11,644
2001	277,774	28,285	22,130	3,661	312,643	18,526

Source: Statistical Office of Estonia

Cereals are mostly cultivated in large agricultural holdings (see Table 14).

Table 14

Cereal production structure in 2001

Cereal production area size group per producer	Area under cereals in size groups (ha)	Structure (%)
< 5 ha	19,569	7
5.1 – 10 ha	19,789	7
10.1 – 50 ha	60,867	22
50.1 100 ha	26,778	10
> 100 ha	146,498	54
Total	273,501	100

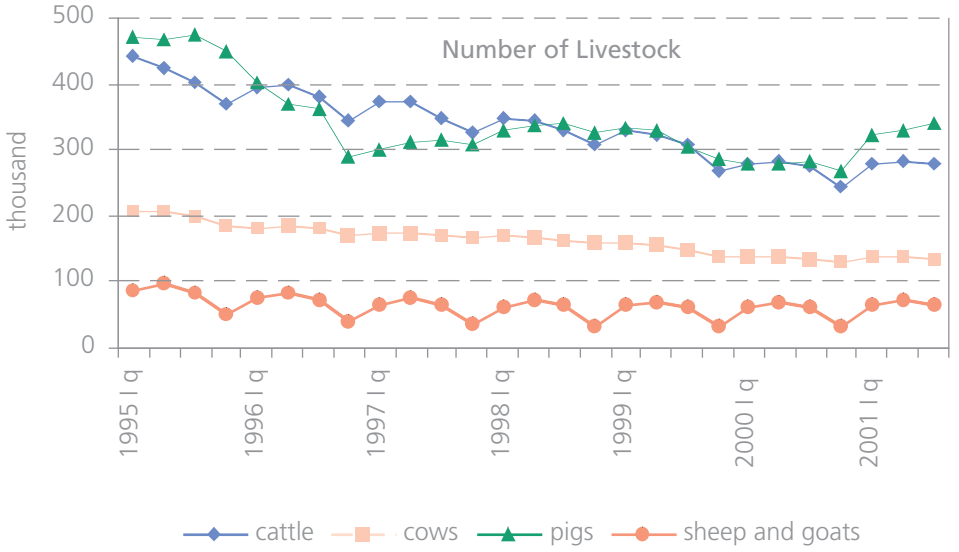
Source: Statistical Office of Estonia

In 1997, ***berries and fruits*** were cultivated on 11,940 hectares in Estonia. By 2001, the growth area had increased to 18,526 ha. The main problems encountered by berry and fruit cultivators are low yields and fragmentation of the cultivation areas, the limited availability of information and inadequate scope of research. The latter includes economic studies and the concentration of berry cultivation in southern Estonia and the islands.

Livestock production. Because of Estonia's natural conditions, Estonia breeds livestock (mainly cattle) fed on roughage. In 2001, milk production was roughly 50% of the total livestock production output. Pig, sheep and poultry are also important livestock production areas. The numbers of livestock (see Figure 11) and livestock production have both been dropping year by year.

Figure 11

Number of livestock in 1995-2001



Source: Statistical Office of Estonia

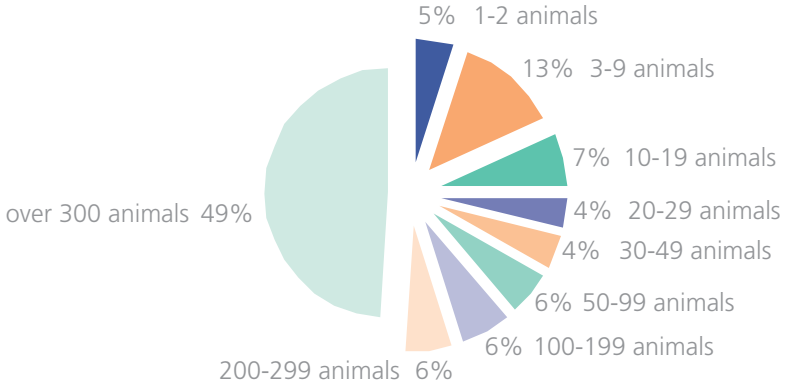
The reasons for the decline are the low prices paid for agricultural produce and the impact of agricultural reforms. From 1997 to 1999, domestic market prices were also influenced by the fall in prices on the world market – dropping on average to a level 35% lower than standard prices during the last 15 years. Milk production, which accounts more than 50% of livestock production, started to rise again in 2000 after being in decline for several years. The productivity of dairy cattle has been increasing since the middle of the 1990s, and in 2001 average milk production was 5,152 kg per cow per annum – considerably higher than during the Soviet period. Due to natural conditions, cattle breeding with its long traditions is the priority area of Estonian agriculture.

The main branch of cattle farming is dairy cattle farming. There were 112,900 cows as of 1 January 2003, i.e. 15,700 cows less than in 2001; the decrease was 14%. The main reason for this was that small producers gave up the dairy business or the buying-in policy of milk processors who preferred large-scale farmers.

Figure 12

Structure of cattle herds by herd size in 2001,

(%)



Source: Statistical Office

Agricultural reforms have also had some effect on ***land use***. In 2001 the acreage of agricultural land in use in Estonia amounted to 890,400 ha, or 20% of the total land reserve. Arable land forms 677,800 ha and natural grasslands 193,800 ha. Estonia has the best supply of agricultural land in Europe – 1.08 ha per capita (e.g. in Finland the per capita hectarage is 0.44, in France 0.51, and in Germany 0.21[2]).

In 2000, approximately one quarter of the arable land was out of use. Many pastures and grasslands were left untenanted because of decreased production and are now turning into bush. Areas of biologically diversified, partly natural land have also diminished, since their appearance and varied characteristics can only survive thanks to the traditional management methods of mowing and grazing. There is a direct relation between unused land and decreases in volumes of production. To a certain extent the problem may also be related to delays in land reforms,

although farms, agricultural holdings and households – potential agricultural producers — are using 4/5 of the agricultural land. By the end of 2000, 2.58 mln ha, or 57%, of the land reserve had been registered in the Land Cadastre. The plots that have not yet been entered into the Cadastre are mostly lands being privatised or restored to private owners.

The present situation in Estonian agriculture does not favour the effective utilisation of land. The division of land that has followed land restitution and privatisation does not match rational land tenure requirements. Some 70% of the arable land need draining. Big land improvement systems covering 735,000 ha (net drained 640,000 ha in arable land) of gross land were built during the Soviet period and do not coincide with the division of plots following land privatisation and restitution. One third of the systems has depreciated. A change is needed in land division schemes and in the reconstruction of land improvement systems. In the 1996-2001 period, a World Bank loan and contributions from the public sector were used for the maintenance of land improvement systems on 85,000 ha, considerably improving land management in such areas. Since 2000, the funding allocated for land improvement systems has been cut considerably because of the termination of the World Bank program. State support for inflow-maintenance (7 thousand km) has been insufficient.

One third of Estonia's arable land is genetically acidic and therefore calls for periodic liming operations to maintain its fertility. Since 1990, the scope of liming operations on acidic soil has been insufficient and this has caused the re-acidification of agricultural land. In order to maintain soil fertility, the estimated area of land to be limed should be at least 25 – 30 thousand ha annually. From1995 to 2000, 10-15 thousand ha were limed annually. Irrigation systems that were mostly built 15-30 years ago have depreciated and are therefore of no use. Agricultural producers need systems providing for a bilateral regulation of water-flows to maintain stable yield levels. The implementation of such irrigation systems will also provide opportunities for a more diversified and sustainable utilisation of water resources.

Agricultural Food Industry

Food industry is an important industrial sector in Estonia. The food industry plays a leading role in procuring and adding value to agricultural production and therefore the viability and development of the sector is highly important to the agriculture, rural development and economy of Estonia.

The food industry accounts for approximately 3% of Estonia's GDP and more than 5% of total exports. It also provides stable employment for approximately 3% of the working population. The most important branches of food industry in Estonia are dairy, meat and fish processing and the production of beverages (Table 15).

Table 15

Food industry indicators in 1995-2001

	1995	1996	1997	1998	1999	2000	2001
Gross output of food industry (mln euro)	482.9	545.5	696.9	690.5	539.1	557.8	622.3
Meat and meat products	78.0	79.3	79.1	92.9	98.0	88.2	102.6
Fish and fish products	73.9	66.4	95.4	131.4	123.9	86.2	88.6
Milk products	87.4	120.4	144.5	190.7	193.2	155.7	182.2
Flour and cereals	4.0	5.0	5.8	5.6	6.6	3.7	4.9
Ready-made feedstuff	23.1	18.7	15.7	22.4	26.3	19.1	16.8
Bakery products	38.7	48.3	59.4	62.9	63.6	48.5	57.4
Beverages	69.7	98.8	100.1	115.4	110.0	119.8	109.2
Employment in food industry (% of total employment in the processing industry)	24.6	23.7	24.4	24.5	21.5	19.9	17.9
Food industry export (mln euro)	95.6	126.4	226.5	238.7	154.5	152.9	175.3
Relative share in total export (%)	7.1	7.9	8.7	8.2	5.6	4.4	4.7

Source: Statistical Office of Estonia

According to information from the Veterinary and Food Board at the end of 2001, there were 48 dairy processing companies in Estonia that year, 21 of them with large and 17 with small processing capacities. Eight dairy processing industries had met European Union requirements. A total of 257 meat processing enterprises had been registered, 15 of them with large and 242 with small processing capacities, but none of these industries had met European Union requirements. Some 107 fish processing enterprises had been registered, 27 of which met the EU requirements.

The relative share of the food industry in gross industrial output has dropped in recent years, being lower during the first half of 2000 than in the beginning of the 1990s. This has been due to increased competition on both the domestic and foreign markets, as well as to decreased supplies of domestic raw materials, the latter caused mainly by a pricing policy that does not favour agricultural producers. Although prices for agricultural products increased in 2000 compared to levels in 1999, agricultural producers were not able to adjust to the changed market situation, so that this had no great effect on raw material supplies. Food industry production volumes also reflected this.

The production concentration of enterprises varies with the branches of the food industry. Beer production is the most concentrated – 93% of the net sales of the entire beer industry are attributable to four major enterprises. It is also high in the meat industry, where nearly 70% of total sales are made by four major enterprises. The dairy industry is the least concentrated, with four major enterprises providing only 38% of net sales in the industry. Compared to 1998, concentration has increased in bakeries and in fish production, while decreasing in the dairy and meat sectors. In coming years the concentration of enterprises is expected to increase in the fish, dairy and meat sectors.

When improving the competitiveness and efficiency of processing one must take into consideration the hygienic, environmental and animal protection standards enforced in the European Union, as well as the opportunities for making the food industry more profitable and flexible. One is thus able to meet the demands of the market and consumers, increase the volume of new products with added value and secure income for the primary producers of agriculture.

Most of the investments that have been made into Estonian food processing sector over the last few years have helped to bring the working conditions into conformity with European Union standards. Estonia did not apply for transition periods for ensuring minimum conformity to hygiene and animal welfare requirements and most of the food processing enterprises have already made considerable investments in this. Therefore, investments into increasing effectiveness and product development have been insufficient.

Statistics show that effectiveness of food processing in Estonia is 7 times lower than is the European Union average. One aspect that shows ineffectiveness of Estonian food industry is the big difference between Estonian retail prices and the prices that are paid to producers - Estonian retail prices have almost reached the EUs average level, but the producer's prices are much lower. With the increase of effectiveness in enterprises, the possibilities to pay higher price to producers also rise. This is the overall objective of Estonia's and European Unions agricultural policy and therefore the accomplishment of higher effectiveness is very important.

Estonian food processing industries will gain from the enlarged EU market, but it will also bring along new market situation and it takes time until industries will get used to it. Quotas and other producing regulating systems, which have not been practised in Estonia before also emphasise the need to increase efficiency in Estonian food industry. Certain food raw material prices are lower in Estonia than they are in European Union but the prices are expected to grow when we enter the EU. The production cannot rise because it is restricted with quotas and it increases the prices of raw materials even more. The higher price of inputs deteriorates the condition of Estonian food processing industries, because the consumer is price sensitive and the already high consumer price cannot rise any more. Therefore the investments into increasing the competitiveness of Estonian food processing industries under the new market conditions become more and more important.

On foreign markets Estonian enterprises have marketed mainly with raw materials (milk powder and butter). It means that there is a redundant dependence on intervention markets. Due to very inconstant prices, it is very risky to trade with raw materials on the world market. Quotas that set limits to Estonian agricultural production emphasise the need for product development and the need for producing value added products. Therefore, it is very important to increase especially product development investments.

The Estonian Ministry of Agriculture estimates that the whole investment need of the food processing is approximately 19 million euro (300 million kroons) a year. The public support to the investments should be at least 3.8 million euro (60 million kroons).

The agricultural market in Estonia developed in relatively favourable conditions in 2000 as demand increased in both the domestic and foreign markets. The new trade regime between Estonia and the European Union that took effect on July 1, 2000 greatly expanded the export opportunities of our agricultural products to the European Union. Some 40.5% of all Estonian food exports went to the EU market in 2000 (30.6% in 1999) and the export volume increased 1.6-fold compared to the previous year.

The customs duties imposed on January 1, 2000 on countries with which Estonia has no free trade agreement were the first step in changing Estonia's trade policy, which has so far been liberal. As the relative share of such countries is not significant in the overall import of food products, the economic effect of the customs duties was modest, as expected.

Fisheries

For Estonia, fisheries are of significant social, cultural and economic importance. Fishing plays an important part in rural development, and in certain regions of the country it is the only source of income.

According to information issued by the Estonian Fishermen Federation, there are approximately 5,400 professional fishermen, and many people along Estonia's shoreline earn their living from coastal fisheries, working either full-time or on a part-time basis. Fishing therefore plays an essential role in the coastal areas. In the 1997-1999 period, the ***relative share of fishing*** in GDP dropped from 0.6% to 0.3%. The fish processing industry, which deals with both domestic and imported fish, still holds a strong position in Estonia's food industry (15% of the gross output in 2000), providing 40% of the food industry's export volume (see Table 15). Employment in fisheries is concentrated in western Estonia, the islands along the west coast, the area along the Gulf of Finland and the coastal areas of Lake Peipsi.

Estonia makes use of fish stocks in both the Baltic Sea and inland bodies of water. Fishing vessels also have access to the fishing grounds in the North-west Atlantic (NAFO) and North-eastern Atlantic Ocean (Spitzbergen and NEAFC). The condition of the fish stocks, regulated at the international level, is constantly reviewed by international research organisations, and the annual assessment has become more critical with each passing year as suggestions are made to impose certain limitations on catches. Estonia has put all the catching possibilities provided by international fisheries organisations to full use. The future of the fish stocks in inland waters is dependent upon the efficiency of the national control system and the measures applied for the purpose of improving the fish stocks.

The exploitation rates are given in Table 16 below.

Table 16

Estonia's exploitation rates for 1991-2001

(tons)

Catching area	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
The Baltic Sea and the Gulf of Riga (inc. coastal fishing)	54,534	36,933	41,201	46,606	59,171	71,370	94,986	86,005	82,997	85,183	84,997
Distant fishing	230,024	90,904	102,982	75,650	54,058	27,625	25,887	37,275	25,687	24,828	17,526
NAFO	5,251	33	4,766	1,186	3,242	1,899	3,240	5,533	10,834	13,737	12,205
NEAFC	13,988	8,906	8,542	25,574	16,806	16,125	17,92	19,351	7,317	1,1091	3,380
Central and East-Atlantic Ocean	84,864	39,542	56,889	17,563	5,174	7,063	4,955	12,391	7,512	0	0
South-western Atlantic Ocean	19,674	6,568	1,338	0	0	2,538	0	0	0	0	1,941
Others	106,247	35,855	31,447	31,327	28,836	0	0	0	24	0	0
Inland waters	1,189	3,509	2,413	1,910	2,365	2,361	2,438	3,877	3,110	3,189	2,461

Source: the Ministry of Environment

In 2000, 154 fishing vessels were working in the Baltic Sea and 15 in the Atlantic Ocean. Some 500-600 small vessels were used for coastal fishing. Vessels of Soviet origin, made in the 1970s and 1980s, still dominate the fleet. Such vessels are built of extremely poor-quality steel and work on engines with service lives of very short duration. The situation of Estonia's fishing fleet, listed by types of vessel, is shown in Table 17.

Recently a number of used fishing vessels constructed in Western countries have been added to the fleet. The age of these vessels is comparable to the Soviet ones mentioned above, while their exploitation value is considerably

higher due to their lower maintenance costs and better construction qualities. The fishing fleet of Estonia needs to be modernised in order to decrease expenditures and to improve the quality of the catch as well as to implement a more contemporary and selective fishing technology. At the same time, modernising the vessels must not increase their fishing capacity. A part of the fleet is subject to permanent reassignment, as the fishing capacity exceeds the catches available. Since natural fish stocks are decreasing rapidly, the capacity of the fishing fleet needs to be regulated in order to balance fishing activities and the availability of stocks.

Table 17

Fishing fleet of Estonia

Vessel type	Number	Average engine capacity (kW)	Average total capacity (GT)	Average total length (m)
Larger than MRTK	12	474	178	30.3
MRTK	35	220	117	25.4
SCS	14	176	76	25.2
PTS	57	203	80	27.1
MSTB	19	103	30	17.5
Small trawlers	52	64	11	12.9

Source: the Ministry of Environment

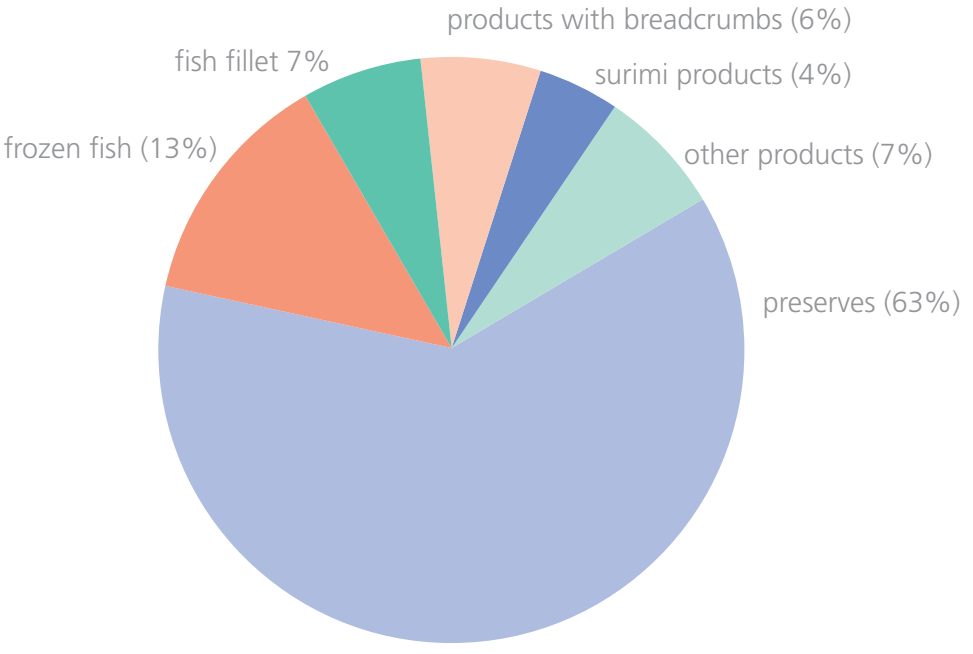
Estonian ***fish processing enterprises*** can be divided into the following four groups according to the nature of their products, source of raw material and market orientation:

- canned fish producers - raw material consists of Baltic Sea and ocean fish, and most of the product is sent to Eastern markets;
- fast food oriented enterprises - raw material is imported and the products are marketed both on the Eastern and Western markets;
- fillet and delicacy producers - raw material consists of imported and local fish; the products are sold on the Western market;
- frozen fish – raw material consists of sprat and Baltic herring from the Baltic Sea, and the products are sent to the Eastern market.

The products of all four groups are also present in the local market (see Figure 13).

Figure 13

Amounts of fish and seafood products realized during the 1st half of 2002



Source: Statistical Office of Estonia

The first group of producers has been the most conservative. Having acquired technologically and physically outdated production means in the course of privatisation, they continued to operate them at maximum capacity. Product development was neglected, the market orientation was not changed, and marketing was impaired by difficulties on the Eastern market. The Russian crisis in 1998 brought about a series of bankruptcies. Producers of the second group own modern production buildings, technology and equipment that enable their production to compete well in any market. Enterprises of the third group have targeted their products at the Western market and suffered little from Eastern market shocks. Their production buildings have been built within the last 10 years and they meet EU requirements. Enterprises of the fourth group have specialised in sale of raw material as the Eastern market offers better prices for frozen fish than the Estonian market.

There are 25 professional fish farms in Estonia providing work for approximately 60 full-time employees. The total output of fish hatcheries is showing a growing trend, and in 2001 the total output was 464 tons of market fish (Table 18). Few of the favourable natural conditions for establishing and expanding fish farms are being taken advantage of and not many existing fish and crayfish farms are increasing production. This is due to the lack of capital, insufficient knowledge of new technology and a limited production output. Approximately 12 fish hatcheries are specialising in the farming of rainbow trout, three are producing carp, and two production units are specialising in growing fish for restocking. Several fish farms have gone in for combined production, simultaneously breeding several species of fish. Three or four crayfish farms are being established. There is also one working eel farm. The registration records show the existence of approximately 50 enterprises that offer their customers opportunities to fish in their ponds. For 10 of such enterprises this is the main area of activity. The provision of fishing services is one of the branches of fish farming providing also additional alternatives for the diversification of rural tourism. For restocking seven species of fish (salmon, sea trout, river trout, whitefish, pike, pikeperch, tench) and crayfish were produced. Restocking has been funded within the framework of the fisheries program implemented by the Centre for Environmental Investments.

Table 18

Output of fish hatcheries 1990-2001

(tons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Trout	734	745	379	297	278	278	194	227	285	147	313	412
Carp fish	917	300	234	43	136	30	61	28	23	30	47	52
In total	1651	1045	613	340	414	308	255	255	308	177	360	464

Source: the Ministry of Environment, Statistical Office of Estonia, 2001

Based on the first sales receipts it can be said that 37 fishing ports exist in Estonia at the moment, mostly unloading the catch of trawlers (Baltic herring, sprat). There are 46 seaports and 15 ports located on the lakes Peipsi and Võrtsjärv. Not all of these have been registered in the Port Register. Smaller harbours meant for trawler boats are situated in Lääne County, along the coastline of the Gulf of Finland, on islands and on bigger lakes. These are shallow (a depth of 2-2.5 meters). Only a limited number of the 58 fishing ports owned by former Soviet-era ***kolkhozes*** that provide landing opportunities for fishing vessels (tracking the arrival and departure of the vessels) are presently owned by fishermen. This also means that fishermen have serious problems with the development of some specific port facilities. For unloading the catches it is important to bring the ports into conformity with the sanitary requirements for fish handling, and the representatives of state inspection services must be located right in the ports. In other parts of the world the fishing municipalities as a rule own the ports and the fishermen rent the quays.

In comparison with EU the most important disparity of Estonia is the poor competitiveness of the fisheries' products handling chain (vessels, ports, industries and fish hatcheries). The fishing fleet of Estonia is outdated and needs to be modernised to maintain competitiveness after accession to EU. The infrastructures of fisheries, above all the fishing ports, are also poor. The production and processing facilities do not fully meet the norms established in European Union.

The production capacity can be increased in fish farming by implementing new fish farming technologies – for example, sea net cages and fish hatcheries with recyclable water (closed system), also by establishing new farms and reconstructing existing ones. A large number of favourable natural opportunities for establishing or extending fish farms, or for increasing the production intensity in the existing fish and crayfish farms, are not being utilised because of the lack of capital, a limited knowledge of new, contemporary technology and small production capaci-

ties. The lack of producer organisations can also be named as one of the disparities. Up to now, support mechanisms for starting such commercial associations have been missing.

The fishermen of Estonia are ageing fast. As a result of cuts in the fishing fleet, many of them will lose their jobs. Fishermen leaving this sector must be provided with social guarantees to mitigate the unfavourable social and economic impact caused by layoffs. The continuity of fishing must be secured and conditions created that will encourage young fishermen to enter the industry.

Forestry

In the decade that followed Estonia's regained independence, forestry was strongly influenced by such matters as the privatisation process, new ownership, the abrupt development of the timber industry and society's increased influence on forestry-related matters and decisions. Very rapid changes in the beginning of the 1990s created a situation where the state administration was no longer able to direct the situation in the forests and forestry. A clear need arose to define and acknowledge the forestry development priorities that were set up in the Estonian Forest Policy, endorsed by the Parliament in the summer of 1997.

Forestland is one of the most important natural resources in Estonia. According to forest inventories (which use statistical sampling methods) the forestland area had increased from 1.27 million ha in the year 1958 to 2.25 million ha in the year 2001 (app. 52% of the mainland territory of Estonia). Of this, 817,000 ha make up the state forest. The growing stock of standing timber is 411million m^3 and the volume increment is 11.6 million m^3 per year. During the second half of the 20th century the forestland area has increased considerably because of the afforestation of natural grasslands and semi-natural meadows and pastures. At the same time important changes have been taken place in tree species distribution: the share of the area under conifers has dropped from 64.6% in 1958 to 51.8 % in 2000.

From the aspect of social development, forestry is especially important to rural areas, guaranteeing employment to local people. In many rural areas forestry is the principal — if not the only — source of jobs for the rural population. Taxes from forest management form a large share in the budgeted income of local governments. Comparatively easily accessible and relatively cheap firewood is also an important source of energy for the rural population. The industrial use of firewood has also increased considerably over the last couple of years. Human rights guaranteed by the law can be said to include the important role of forests in social functions, since for a large percentage of the population forests offer diversified possibilities for recreation. Research carried out over the last couple of years shows that Estonians are increasingly interested in spending their holidays and free time in their own country.

Although the ties between the Estonians and the forest are very strong and the number of those treating forest with negligence is relatively small, the public attitude towards forests can still be improved. Increasing people's awareness of forestry processes, of the impact of people's behaviour on forests and of the multiple uses of forest resources would help to maintain forests and promote sustainable forest management.

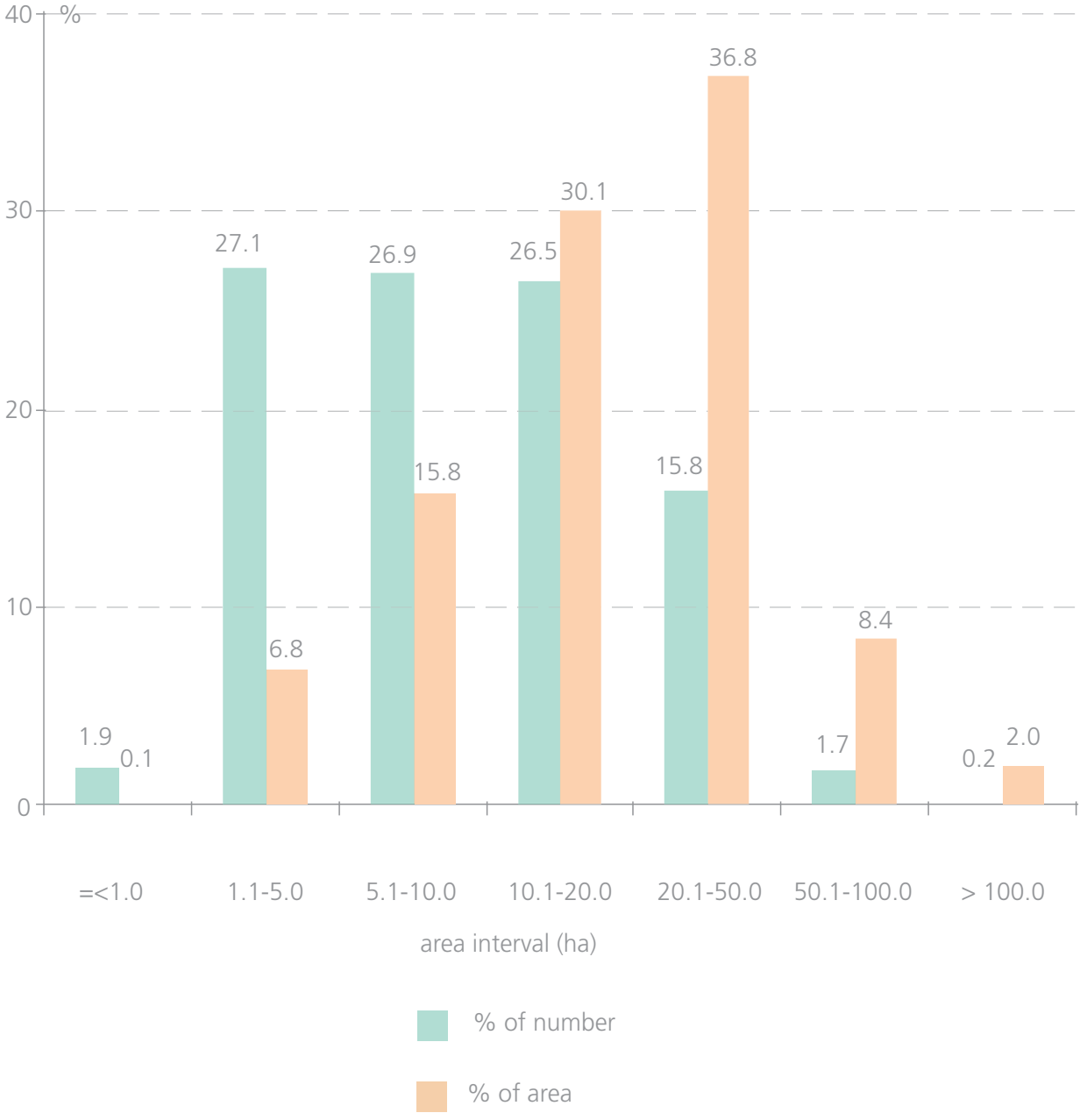
There is no doubt about the diversity of Estonia's fauna and flora, especially if we compare it to that of some of the neighbouring countries. The reasons for that are the regional variations in climate and soil, the fact that the boundary of the distribution area of many species is located in Estonia, the large share of natural landscapes and a long history of traditional methods in cultivating land. In Estonia one can find plant communities that are unique, and the numbers of plant varieties are among the largest in the world (for example, the alvars). The biological diversity of forests in Estonia, including the share of exotic tree species, is better preserved than in many European countries because of less intensive forest management.

The number of ***forest owners*** has changed considerably as a result of land reform. To date, approximately 32% of forestland has been registered as private property, thanks to the restitution of land to the successors of legal owners and to land privatization (700,000 ha). Approximately 70,000 people have already become forest owners. The area of forest growing on formerly private land but still in state ownership amounts to approximately 600,000 ha.

The private forests of Estonia are fragmented and consist largely of economically less valuable broad-leaved trees. The average area of private timberland registered in the Land Cadastre amounts to 6.98 ha, while the average area of managed forestland amounts to 12.5 ha. In other words, registered real estate is mostly made up of 1.8 separate plots (Figure 14). Such fragmentation aggravates sustainable forest management, as it is difficult to achieve economic efficiency in forest administration because of the small volumes involved and the fact that the production period, which extends over several years, does not favour investments made into silviculture. At the same time, one cubic meter of logged timber creates 24.2 euro in added value over year and the state gains 7.9 euro in taxes.

Figure 14

Number and average size of private forest holdings by management planning, 2001



Source: Forest Management Centre of Estonia

The main exploiter of forest resources of Estonia is the ***timber processing industry***. The use of timber and wood waste as a source of energy is also increasing annually. Compared to the other branches of industry, wood processing is second in importance after the production of foodstuffs in the structure of GDP.

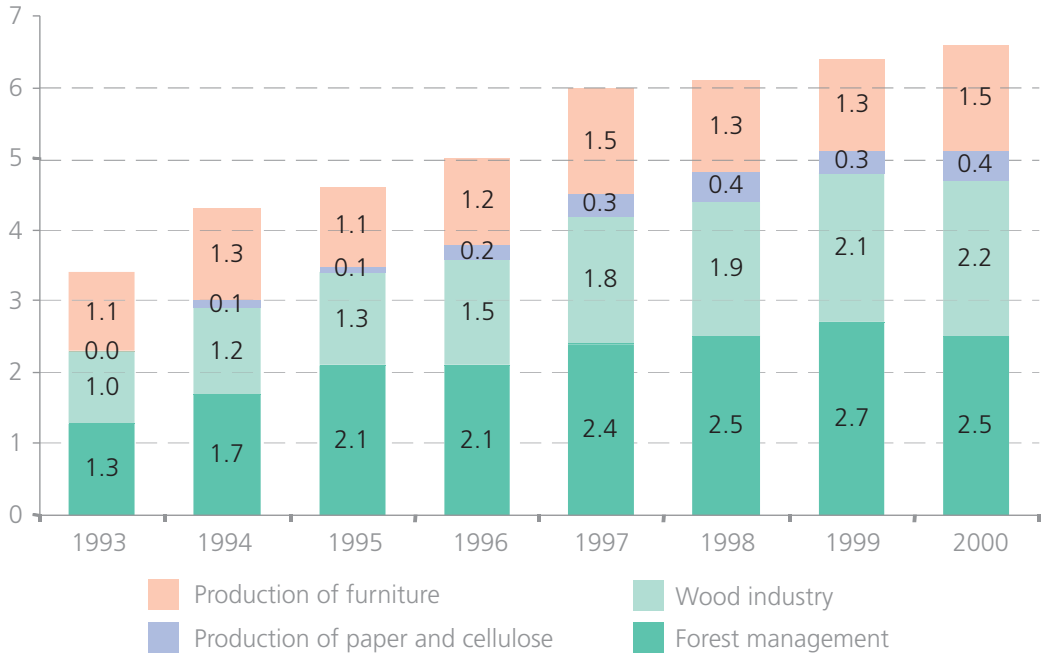
The forest industry has shown steady and stable growth after a decline in the beginning of the 1990s. Privatisation has been completed successfully, the level of investments made into the sector is high, production volumes are increasing and the relative share of production in exports is considerable. In 2001, the timber industry made up 1/7th of the total volume of the processing industry. At the same time the relative share of forest products in Estonia's exports amounted to over 22%. Wood and wooden products (including wooden furniture and module log houses) are among the main export articles of Estonia. The stable growth of the forest sector has helped to promote new economic growth during the periods of decline and to balance the negative foreign trade balance.

The relative share of forest management and the timber industry in the gross domestic product (GDP) has increased steadily. While in 1993 the share of forest management and procurement amounted to 1.3% of the GDP in current prices, the respective share in 2000 already totalled 2.5%. The total relative share of the wood, paper and furniture industries totalled 2.1% in 1993 and 4.1% in 2000 (see Figure 15).

Figure 15

Relative share of forest and timber industry in GDP, 1993-2000

(shown as percentage)



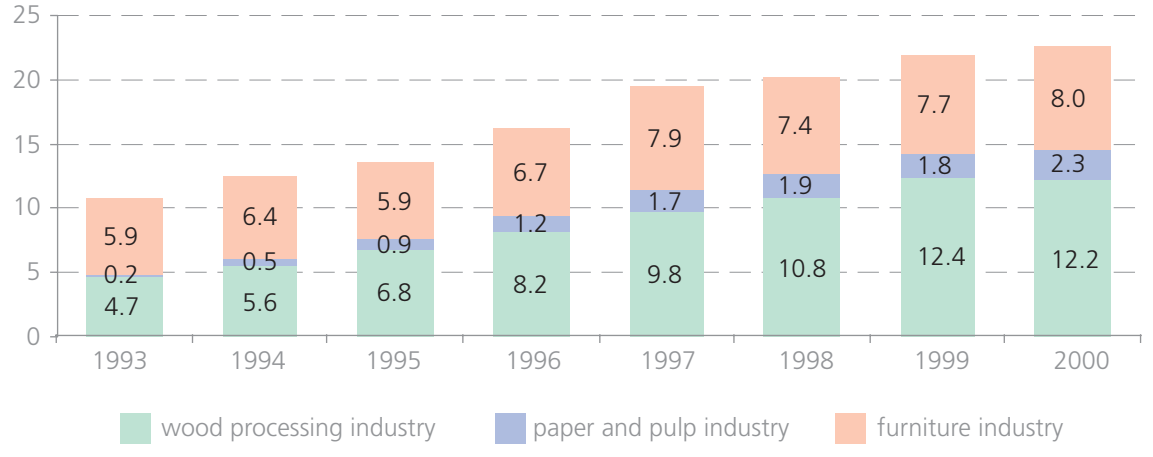
Source: Statistical Office of Estonia

The relative share of wood, paper and furniture in the added value of the processing industry has also increased, going from 10.8% in 1993 to 22.4% in 2000 (Figure 16). The import of wood and wood products has increased annually, but the relative share of this sector in total imports is still rather small (2%). Among the main articles imported are wooden furniture and veneer.

Figure 16

Share of forest industry from added value of manufacturing industry

(%)



Source: Statistical Office of Estonia

The ***forests' state of health*** has not worsened over the last decade. The root system is the main organic factor that can damage forests because it can influence the condition and growth of the forest. The ***biological diversity*** of managed forests is still satisfactory. The number of preserved forest elements that protect the diversity — for example dead trees, natural structure of the woodlands, etc. — is rather large. The completed inventory of key woodland habitats helps to direct protective measures to the areas most valuable for biodiversity.

The share of strictly protected forests amounts to 7.2% of the total forest area. In commercial forests, many rare and endangered species have concentrated into areas with natural structure, substrates and/or other species. Such

valuable habitats must be preserved in forest management activities. The instruction and classification system for the selection of woodland key habitats are in effect. During inventory, 6,922 woodland key habitats with an average area of 2.6 ha were found. Inventories of woodland key habitats and other areas in which conservation is important for biological diversity are continued. As a result, the area of strictly protected forests is expected to increase in the near future.

Estonia has classified its forests at rural district levels (NUTS IV) as areas of high, medium and low fire risk. Of ***fire risk*** categories, the areas at high risk in Estonia are Harju, Hiiu, Põlva, Saare, Valga and Võru counties, accounting for 35% of the total forest area. Areas at medium risk are Ida-Viru, Lääne-Viru, Pärnu and Rapla counties (26%), while Jõgeva, Järve, Lääne, Tartu and Viljandi counties (39%) are areas of low fire risk. In Estonia, tasks related to the prevention of forest fires are divided between different institutions. Putting out fires and the administration of forest-fire information systems is the task of the Rescue Board. Preventive forest fire protection measures and monitoring are administrated by institutions of the Ministry of the Environment. Estonia has devised a draft forest fire prevention plan, which is going to list activities related to forest fire prevention (not endorsed yet). In most cases, forest fires are caused, directly or indirectly, by people. The number of fires and burnt areas fluctuate year by year (Table 19), but the average area has not exceeded 10 ha over the last five years.

Table 19

Forest fires in 1997-2001

Year	Number	Area (ha)	Average area (ha)
1997	359	1146.5	3.2
1998	61	54.0	0.9
1999	130	1103.4	8.5
2000	158	683.9	4.3
2001	91	61.8	0.7

Source: Rescue Board

Estonia's main problems in the forestry sector are related to the development of ***private forest ownership***. Most of the 70,000 private forest owners are interested in managing their forests and try to do it according to "sustainable" forest management principles, but the inventory completed shows that the implementation of environmental protection requirements and the quality of general forest administration are still at a relatively low level. One of the main reasons for this is the weak support system for private forest owners. A stronger support system would motivate private owners to manage their forests in more sustainable ways.

A survey implemented within the framework of the project "The Analysis of the Demand for Forestry-related Advice and the Elaboration of the Forestry Advisory Strategy", funded by the Ministry of Agriculture, demonstrated that three quarters of the private forest owners are interested in getting advice on forestry issues. The need to provide advice for private owners is in the state's long-term interest when it comes to the utilisation of forests as a renewable natural resource. At the moment, the preparation of forest management plans/recommendations, funded by the state, is the most effective way of informing the forest owners on the nature of their forest and on the recommended activities for sustainable management.

In private forests the area of broad-leaved forests — above all birch, gray alder and aspen — has increased over the last few years. This is mostly due to the natural forestation of abandoned arable land, but also to insufficient reforestation or failure to plant new forests on logged areas.

Estonia has approximately 145,000 ha of small, low-fertility plots of agricultural land, overgrown grasslands and scrub areas. Although agricultural land forests itself naturally over time, cultivation is needed to grow economically valuable, high-grade forests. According to expert evaluation, approximately 100,000 ha of former agricultural land could be developed into valuable timberland through forest planting, improved cuttings and reparation of amelioration systems.

The reforestation carried out in state forests totals 5,500 – 7,000 ha per year on average. The volume of regeneration felling in private forests has increased, but there has been no increase in the amount of reforestation. While the felling of private forests exceeds the indices in state forests by more than twofold (respectively 17,600 and 7,900 ha), the amount of reforestation in private forests is 3.6 times smaller than in state forests (respectively 1,987 and 7,129 ha). The same commercial tendency is also showing up in private and state forest stands.

Approximately 500,000 ha of forests growing on former farmlands suffer from excessive moisture. The great majority of forest equipment in use today was constructed between 1970 and 1990. Since 1990 the volume of repair and maintenance services carried out on equipment has decreased approximately ten-fold. Tools and machinery used in forests depreciate in 25-30 years, and to keep them in shape, at least partial renovation should be carried out every 10-15 years. This will help to postpone capital repairs to the maintenance system as a whole. Nevertheless, the number of objects needing repair over the next few years is going to increase abruptly.

The majority of roads in private forests are former farm roads that have been widened to enable the passage of modern vehicles. Track beds and road surfaces have been neither designed nor built to bear heavy modern trucks and forest machinery. This has been felt most severely in the process of preventing and repairing damage caused by storms and forest fires.

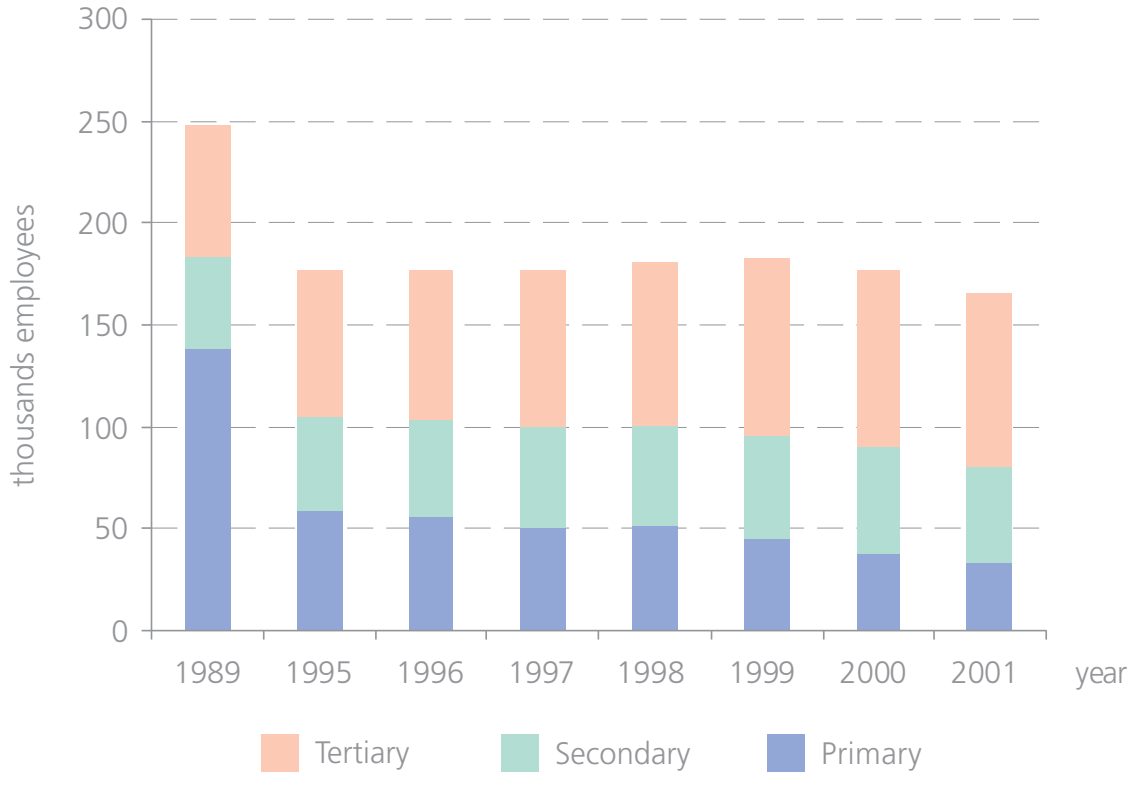
Rural Development

The main issues of rural development and rural policies in Estonia are the extensive social impacts caused by the re-structuring of agriculture, the specific features related to areas with scattered population and the use of land as a production resource.

In Estonia, 30% of the population lives in rural areas. According to the Rural Development and Agricultural Market Regulation Act, a rural area is the territory of villages, small towns and boroughs – in principle, all the territory outside the administrative borders of larger towns. The economic basis for rural development has changed rapidly over the transition period (Figure 17). In 2002, approximately 5% of total labour was employed in the agricultural sector. Employment in the primary sector, mostly in agriculture, has decreased more than twice during the first half of the 1990s. Since 1995 the fall in the employment rate in the primary sector has slowed down. The employment rate in the secondary, and especially in the tertiary sectors has shown a regular increase. The employment rate of the rural population has not dropped over the last few years, but the relative share of employment here is still 30% (70 thousand people) lower than in the beginning of the 1990s. According to experts, improved production efficiency in crop cultivation and livestock production will be accompanied by further decreases in the number of jobs, although the scope of the decrease is smaller than previously.

Figure 17

Employment of rural population in economic sectors in 1989, 1995-2001



Source: Statistical Office of Estonia

This said, diversification of economic activities in rural regions in both agricultural and non-agricultural areas has gained more importance. The strongest alternatives to agriculture in the rural economy to emerge are rural tourism, horticulture, small-scale manufacturing and wood processing, small-scale food processing, ecological farming, services, handicrafts, fish breeding direct marketing and bee keeping.

The development of ***rural tourism*** started back in 1995, when the first 40 tourism farms were established. To date, there are 347 accommodation enterprises in Estonia, 107 of which are tourist farms. According to expert assessment, rural tourism and related services provide employment to around 1000 people. This figure increases if one takes into consideration other enterprises connected with rural tourism (museums, providers of active recreation and holiday services, caterers) that also create new jobs, although indirectly. Opportunities for rural tourism development have plenty of room to grow, for the utilisation rate of facilities is still low and training needs to improve.

Promotion of ***handicrafts and other related activities*** helps to maintain jobs in rural areas and to create jobs for women. Due to the scattered pattern of settlements and only a moderate use of resources, there is still a sufficient supply of raw materials available that could gain new value through their use in traditional skills and knowledge. Handicraft production employs local resources while at the same time supporting lifestyles inherent to rural areas. Through handicrafts, skills and traditions can be sustained over generations. Handicraft related activities also enable to provide more jobs for women.

At the same time, alternative economic activities in rural areas have failed to provide employment to all those who have lost their jobs in the primary sector. Labour-related migration, unemployment rates and numbers of economically passive people have therefore increased.

The number of people finding employment beyond the boundaries of their native rural municipality has increased. While in the beginning of 1995 only 24.9% of rural employees were working outside of their municipality, in the beginning of 2001 the respective figure was 43.4%. A growing problem is that active and successful young people leave the countryside. The main reasons are increasing unemployment and the poor reputation of rural work. This is also characterised by a fall in the number of young farmers. The latter also suffer from the lack of capital required to start a business and purchase equipment.

Unemployment rates in rural areas have increased throughout the entire country. In 1995, the number of unemployed was 114,100 people; by 2001 the number had grown to 134,700. The number of discouraged people – those who have lost all hope of finding a job – must also be pointed out. The number of people who have given up trying to find work is bigger in areas with a higher relative share of rural population, especially in the south-eastern part of Estonia. In 2001, the share of discouraged people in the non-active group was about 10% (the respective figure in towns is 5%).

Income levels in the rural population have fallen because of the combination of declines in employment and low wages. In 2001 the net income per rural household was 19% lower than in towns. It is clear that living in rural areas or small towns is an important poverty risk factor arising from external conditions. The income structure in rural households has also changed considerably. The relative share of income attributable to paid work (in 1996 and 2001, 51% and 56% of net income respectively) and transfers (respectively 26% and 29%) increased considerably. The relative share of income gained from entrepreneurship, in turn, dropped (respectively 21% and 9%).

Decrease of purchase power of the rural population and changes in the services sector have caused a decline in the provision of services in sparsely populated areas. This holds for the service providers in both the public and private sectors and lowers the general quality of life in rural areas even more. The tendency is verified by a 2001 survey on the socio-economic situation, development perspectives and non-agricultural activities in rural municipalities. The share of expenditures on food for a member of a rural household dropped by 11% (in 1996 and 2001, 48% and 37% of total expenditures respectively). The same indicator in urban households was 9% (in 1996 and 2001, 39% and 30% of total expenditures respectively). In rural areas, non-monetary consumption and expenditures on communication services increased 5.9 and 6.3 times respectively (in towns, 8.0 and 4.6 times). As new services enterprises are established in rural areas, they provide new jobs, including jobs for women.

One of the obstacles to development in rural areas is the limited number of people with professional education. A survey on the information requirements of agricultural producers carried out by the market research company Saar Poll (see Table 20), showed that 26.7% of the respondents have no special education in agriculture. The further development of agriculture and rural specialists, however, requires general, technical and economic skills from people working in agriculture, forestry and rural business.

Table 20

Education of agricultural producers by specialities

	Number of respondents	%
No special education	267	26.7
Agriculture	427	42.7
Technical specialities	117	11.7
Humanitarian	75	7.5
Economics	67	6.7
Other specialities	48	4.8

Source: Ministry of Agriculture

The ***age structure*** of farmers influences also the farmers' interest to learn and follow new ideas how to organise their agricultural production. As showed in table 21 almost 40% of farmers are more than 60 years old. Assuming that in general the younger people are more likely biased to innovations, we can conclude that the age structure of farmers in Estonia does not favour spreading of new approaches in agriculture.

Table21

Structure of farmers (sole holders as managers) by age group, 2001

	Total	15-24	25-34	35-39	40-44	45-49	50-54	55-59	60-64	Over 64
Number of farmers	64,797	937	5,741	5,270	6,510	6,569	7,084	7,158	7,247	18,281
Percentage of Number	100	1.5	8.9	8.1	10.0	10.1	10.9	11.1	11.2	28.2

Source: Statistical Office, 2001 Farm Census

Agricultural advisory services have also come into existence, following the example of other countries. Both farmers unions and private consultants provide speciality-related advisory services, but the availability of counselling is still insufficient, even though the state has provided support for the services. Because of new trends in management, production and marketing, the need for qualified labour is going to grow in rural areas – in agriculture too – and this means additional expenditures for providing counselling and other services.

Approximately 700 specialists a year should be trained to ensure the availability of a new generation of agricultural producers, but in recent years the number of graduates answers only 20% of the need. The number of agricultural enterprises (705) and farms (11,000) was used as the basis to estimate the training requirements. The estimated average number for specialists per agricultural enterprise should be 15, whereas the respective average figure for farms is no more than one or two employees with special education. The average working age is supposed to be 25 years.

Agricultural research can be seen as one of the instruments for the implementation of agricultural policies and an important tool for securing the agricultural sector's capacity to adapt to change. In longer term, research will also help to maintain its competitiveness. The system of science and research institutions in the agricultural sector has been reorganised to improve the situation. A common basis of experimental stations and laboratories has been established but it requires further development. Information available in research institutions is planned to be collected into databases and is to be made available to the public. A centre co-ordinating the dissemination of agricultural and rural information has been established. One of the objectives of this centre is to act as a connecting institutional link between the state, producer and research. An Estonian agricultural research development strategy and action plan was completed as a result of co-operation between different parties involved in agricultural research. In line with this plan, the restructuring of agricultural research institutions has begun in order to enlarge small research groups and make them more competitive, while at the same time improving the infrastructure of research institutions. A national program of agricultural research is currently being devised. In future the program is to organise the funding of agricultural research and provide explicit and stable principles for funding.

Working co-operation between research and business is one of the prerequisites for more efficient transition of knowledge into innovative products and services. While the present system for funding research allows one to maintain the existing system on its current level, there are no opportunities for further development of research. It is necessary to find alternatives for increasing the private sector's interest in the funding of research and development.

Voluntary co-operation among rural inhabitants — e.g. the village and small town movement ***Kodukant*** — have emerged in Estonian villages regardless of the fact that economic developments do not favour the countryside**.** The main purpose of the movement is to maintain villages and the rural development in Estonia by helping the revival and harmonised development of rural communities. This includes supporting daily life and folk culture and merging different village movements. Several tendencies in rural areas of Estonia are rather similar to the processes taking place in rural areas in the EU. Population in the countryside is decreasing and getting older, young and well-educated people leave for the city, the role played by the primary sector in employment is dropping, structural unemployment is on the increase and accessibility to services is insufficient. Low living standards, sparse population density and abrupt changes in both the economy and property relations are factors that further impair the situation.

A certain ***potential for development*** exists in rural areas. There are many advantages: a clean living environment, relatively big amounts of cheap land, suitability for business, diversified natural and cultural inheritances, well-preserved local traditions, and satisfactory availability of electricity and telecommunication services in most areas. Natural surroundings, an environment-friendly lifestyle, new value attached to renewable sources of energy and the implementation of information technology in the economy create new opportunities for strengthening the economic basis of rural development.

Experience of SAPARD

The implementation of the pre-accession programme, the SAPARD – has laid down the basis for the implementation of the European Union Common Agricultural Policy (CAP) and rural development policy in Estonia. The SAPARD was launched in Estonia in 2001. Estonia was the second candidate state to launch the programme to help the agriculture sector adjust to the EU requirements and solve rural development problems. Grants given under the SAPARD programme are aimed at improving the competitiveness of agriculture, rural development and enterprise, and rural infrastructure. Moreover, the implementation of SAPARD helps prepare for the administration of support measures to come after accession to the EU. The Agricultural Registers and Information Board (ARIB) administers the SAPARD support scheme. Roughly 100 counsellors have passed certification or training via SAPARD and now have the knowledge to advise agricultural producers and local governments on how to devise development plans and take advantage of EU Structural Funds. To fulfil the potential, stable support to providers of counselling services is needed, as is co-operation between the national structures supporting advisory activities.

The programme consists of the following measures:

- M 1 - support for investments in agricultural production;
- M 2 - support for investments in production and marketing of agricultural and fishery products;
- M 3 - support for investments in developing and diversifying alternative rural activities;
- M 4 - support for investments in rural infrastructure;
- M 5 - technical aid;
- M 6 - support for investments in reconstruction and development of villages;
- M 7 - agri-environmental support;
- M 8 - support for investments in afforestation.

More than 40% of the programme funds have been directed to the adaptation of agricultural production to the EU requirements or to the diversification of agricultural production (M1) given to the agricultural producers. The main investments supported were made in milk production, animal barns, plant production, apiculture, and the establishment of orchards and berry plantations.

Twenty per cent of the funds are used to improve the production and marketing of agricultural and fishery products (M2). Support is given for investments in adaptation of production (milk, meat and fish products) to hygiene and environmental requirements, modernisation of technologies, product development. Companies in which the state has a maximum shareholding of 25% and which employ at least ten people full time, are eligible to support.

Besides agricultural production, a share of the funds has been allocated to the development of non-agricultural enterprise (M3), to compensate for the low rural employment rate caused by the sharp decline in agricultural employment and other factors. Eligible to support are sole proprietors and companies (including agricultural producers) that launch non-agricultural activities and in which the state may have a maximum shareholding of 25%. The supported activities include rural tourism, handicrafts, services, crayfish and fish farming and food processing in small enterprises.

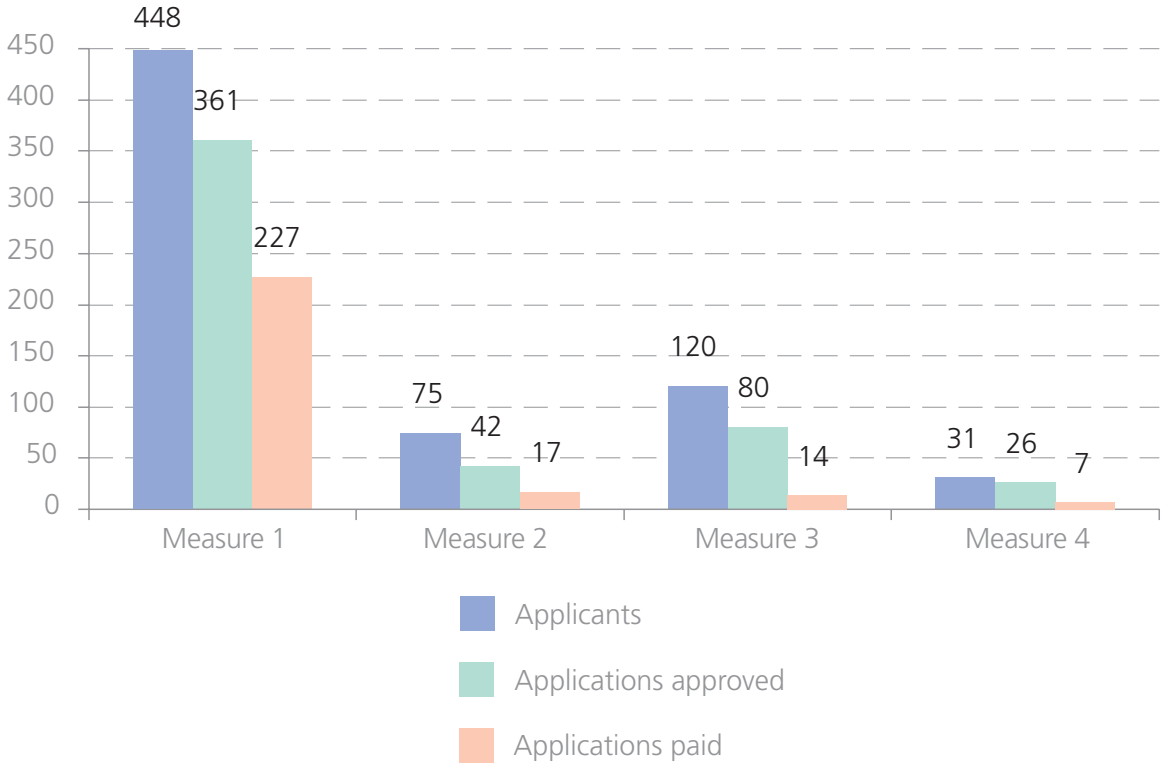
To solve rural infrastructure problems (M4), support is given to the construction and reconstruction of private infrastructure, including roads, power networks, telephone and data communication, water supply and waste water treatment in rural enterprises, including agricultural holdings. Enterprises in which the state may have a maximum shareholding of 25% are eligible to support.

From 2003, a support scheme is launched for the non-profit sector to encourage local initiative in villages (M6): activities that promote village development, encourage the initiative of the inhabitants and their willingness to co-operate and improve the overall life quality in the village. As opposed to other measures for which strict rules have been established, a committee is set up for this measure at the local government to assess the applications and list them according to priorities. The measure is aimed at non-profit associations, local governments (rural municipalities) as well as entrepreneurs.

In current SAPARD program there are also agri-environmental measure (M 7) and afforestation of agricultural lands (M 8), which have not been implemented yet and are being prepared during 2003. The principles of those measures will form basis for similar measures in Estonian Rural Development Plan 2004-2006.

Figure 18

SAPARD — processing of support applications across measures



When comparing the budgets of the three years and the two years of implementation of the SAPARD programme, support has been applied for an average of 54% and approved for 42% of the maximum amount provided in the budget. The progress has been different for different measures. The second measure is the most used measure, where approved applications are 95% of the received applications and the support paid out is approximately 100%. The finances for measure 1 have been committed also quite well, while measure 3 should be used more. Measure 4 is less used - under the measure approximately 4 % of the support is paid out.

The popularity and success of Measure 1 was chiefly contributed to by two factors: the sufficient number of appropriately trained agricultural advisers and the SPP pilot project implemented before SAPARD, which mainly focused on the same measure. The success of Measure 2 was guaranteed by the concentration and viability of the processing enterprises, who have no problems with the self-financing part of the support. As concerns Measure 3, the success of rural tourism-related enterprise is noteworthy. Its guarantee is the efficient umbrella organisation that helped the applicants by providing information and assisting in the preparation of applications. The results of Measure 4 in 2001–2002 were poorer than expected. One of the reasons for this is that such investments are not aimed at profitability, but enable a long-term improvement of rural production and living conditions. In order to improve the situation, Ministry of Agriculture has held discussions with the social partners and has already made

some changes to the measure sheets and relevant legislation. Several aspects have been changed, which have been regarded as obstacles in applying for support (such as the maximum investment support per one beneficiary for measure 3, etc.). Therefore the situation is expected to improve in 2003.

SAPARD measures will be on larger or smaller scale continued within the framework of SPD or Rural Development Plan 2004-2006. The rural development measures financed from the EAGGF Guarantee Section that Estonia plans to implement upon accession to the EU are the following:

- *Agrienvironment (mandatory)* – to support environmentally sustainable agriculture and improve the living environment.
- *Less-favoured areas and areas with environmental restrictions* – to support the preservation of land use and the population of areas where agriculture plays a major role in shaping cultured landscapes, but production is not competitive due to natural conditions.
- *Afforestation of agricultural land* – to support a better use of the land stock and turn it into more valuable forest land (timber production and landscape diversification).
- *Support to assist farmers in meeting EU standards* – to assist farmers in adapting to the new conditions.
- *Support for semi-subsistence farms under restructuring* – to ensure the economic sustainability of smaller agricultural holdings.
- *Technical Assistance*
- *Complements to direct payments* - As a temporary and ***sui generis*** provision support may be granted to farmers eligible for complementary national direct payments or aids under Article 1c of Regulation (EC) No 1259/1999 during the 2004-2006 period only.

1.2.3. INDUSTRY

General Information

In 2001, industry rated for approximately one fourth of the total value added in Estonia and provided for one fourth of the employment (Tables 22 and 23). In 1996-2001, the relative share of industry in GDP dropped. Because of general decreases in employment, the share of industrial employment in the total employment has remained unchanged, while the number of employees in industry has decreased by approximately 5% over the last five years. This has been accompanied by a decrease in labour expenditures – their relative share in total expenditures has dropped to 18%. There has been a considerable increase in productivity of labour – the respective figure has increased by approximately 60% over the reviewed period.

Table 22

The relative share of industry in GDP and growth rate, 1996-2001

(percentages)

	1996		1997		1998		1999		2000		2001	
	Relative share in GDP	Growth rate	Relative share in GDP	Growth rate	Relative share in GDP	Growth rate	Relative share in GDP	Growth rate	Relative share in GDP	Growth rate	Relative share in GDP	Growth rate
Energy	4.1	12.3	3.5	-2.2	3.6	-8.0	3.6	-7.4	3.3	1.2	3.3	-0.7
Resource industry	1.6	7.4	1.5	13.4	1.2	-7.1	1.1	-10.5	1.0	0.9	1.0	10.0
Processing industry	18.1	2.6	18.0	16.9	17.7	6.3	16.5	-1.0	18.1	16.7	18.4	8.2
In total	23.8	2.9	23.0	13.6	22.5	3.4	21.2	-2.3	22.3	13.3	22.7	7.0

Source: Statistical Office of Estonia

In the 1996-2001 period, the characteristic feature in the development of the industrial sector has been a high adaptability to external shocks. This is mainly related to successful privatisation and the active reconstruction process that followed. Most of the big industrial enterprises of Estonia were privatised before 1997. To date, the relative share of private sector in GDP of Estonia has exceeded 75%. Privatisation has promoted increased effectiveness and improved competitiveness.

Other distinguishing features of Estonia's industry are the high share of traditional branches and its large dependence upon developments in the world business environment. In 1996-2000 industry went through both a rise and decline. The most important changes took place in the 1997-1999 period, while the free market competition was tougher for Estonia that ever. External changes caused economic shocks that seriously tested the capacity of enterprises to cut down their expenditures. Decline in money supply, which started at the end of 1997, and rising interest rates also took their toll on the development of the processing industry. As the Russian currency was devalued and export demand dropped, the greatest economic difficulties were suffered by enterprises that had focussed on Russian markets. For industrial enterprises with foreign ownership, the development was somewhat more stable, as such companies were providing sub-contracting services for companies in Western Europe. The peak crisis period was at the beginning of 1999, and the following year saw a step-by-step emergence from the economic slump. The developments that took place in 2001 reflected the industrial sector's strong resistance to unexpected foreign influences. This was seen in the stable growth of domestic products, which were provided by traditional branches of industry regardless of the unfavourable situation in foreign demand.

Table 23

Industry - number of employees and relative share in total employment by sectors 1997, 1999 and 2001

Activities	1997		1999		2001	
	Number of employees (th.)	Relative share %	Number of employees (th.)	Relative share %	Number of employees (th.)	Relative share %
	16.6	2.7	16.5	2.8	11.4	2
Energy	7.1	1.2	7.9	1.4	5.8	1
Resource industry	136	22.1	122.8	21.2	134.1	23.2
Processing industry	159.7	26	147.2	25.4	151.3	26.2
In total	159.7	26	147.2	25.4	151.3	26.2

Source: Statistical Office of Estonia, Data of labour survey

Export is the main development engine of Estonian industry. Exports by industrial enterprises amounts to approximately 50% of the total sale of industrial production. The branches of the economy that are the most successful on export markets are machinery, the wood processing industry and textiles (Table 24). The success of wood processing enterprises on foreign markets is due to the skilful utilisation of local natural resources. Approximately 50% of the mainland territory of Estonia is covered with forest. The success of the textile industry can be related to high quality production and low labour costs.

Table 24

Main exports by basic goods

(as percentage)

Goods	1996	1997	1998	1999	2000	2001
Machinery and equipment	14.2	19.4	23.6	24.1	37.4	33.1
Timber and wood products	12.5	15.6	16.1	18.7	13.4	13.2
Textiles and textile products	16.0	14.7	14.3	13.9	11.3	11.5
Metal and metal products	6.5	7.2	7.8	7.7	7.1	8.1
Other industrial goods (including furniture)	6.8	6.2	6.7	7.8	6.6	8
Food and beverages	15.2	11.5	9.8	7.5	5.9	6.9
Chemical products	8.1	6.4	5.0	4.0	3.7	4.3
Transport (vehicles)	4.1	3.6	3.4	3.0	2.6	3.2
Products of mineral origin	5.8	4.7	2.8	2.6	2.5	2.1
Measuring and medical instruments and apparatuses	1.8	1.8	2.2	2.0	2.0	1.6

Source: Statistical Office of Estonia

Energy and Oil Shale Mining

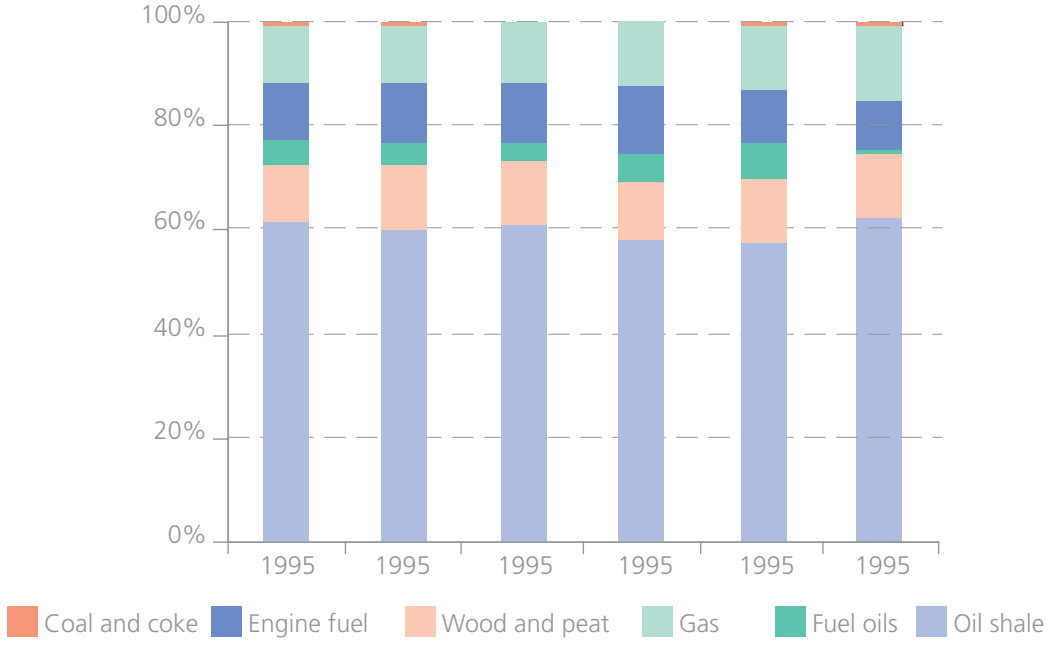
Estonia has remarkable supplies of oil shale, peat and timber. A good potential exists for the development of wind energy as well as some opportunities for using hydro energy. Domestic fuels cover approximately 70% of the demand for primary energy. Oil shale is the major input in the energy sector, being used both for energy production and as a raw material for oil manufacturing. Oil shale is a fuel with low energetic value, rich in ashes and sulphur. Mining and processing oil shale and using it to produce electricity therefore inevitably results in less efficiency of the production processes and greater damage to the environment.

As for gas and liquid fuels (with the exception of oil shale oil), Estonia is dependent upon imports, while gas can only be imported from Russia through pipelines. The gas is imported directly from Russia, as well as through Latvia, where gas is stored in underground natural storage facilities that reduce the risks connected with gas import stability.

The importance of various sources of energy in balance of primary energy of Estonia is characterised by Figure 19.

Figure 19

Supply of primary energy in 1995 – 2000



Source: Balance of Energy, Developed by Statistical Office of Estonia in 2000

Primary energy is dominated by oil shale and wood fuels are the top of the list of renewable sources of energy. Their relative share in the balance of primary energy is approximately 10.6%, while hydro and wind energy account for approximately 0.1%.

Estonia has quite a large potential for implementing ***hydroelectric and wind energies***. Estimates show that it is possible in Estonia to employ wind energy to produce up to 1.28TWh of electricity. The theoretical upper limit for the use of hydro-energy provides for an annual production of electricity amounting to 0.2 TWh, while the potential of renewable fuel sources for energy production would be 5–6 TWh per annum. Since renewable sources of energy are spread rather sparsely all over the territory of Estonia, the use of such resources is dependent upon the availability of transmission and distribution networks in potentially suitable areas.

In Estonia, ***electricity*** is mainly produced from oil shale mined in Ida-Virumaa. Estonian and Baltic power stations are located in the vicinity of Narva. The power stations are badly out of date, with the oldest energy blocks having been in service 40 years. At the moment the first stage in the renovation of the energy blocks at Narva power stations in is progress. The first stage will be to replace the boilers used for the combustion of oil shale with new equipment that uses the boiling bed technology. The accumulated capacity of the energy blocks to be renovated will total 430 MW (gross indicator).

In 2000 the share of oil shale in production of electricity was 91%. Hence the share of power-production methods that are environmentally sound is still very modest. The largest combined electricity and heat production power station is the Iru power station, which supplies the heating networks of Tallinn. In 2001, the combined electricity and

heat production power stations provided 0.1% of the total amount of electricity produced. However, with added capacities (Virtsu wind park, Linnamäe hydro-power station and combined production station, which works on waste gases from the Pääsküla landfill), the amount is estimated to go up to 0.4% in 2002).

Estonia's ***power production based on oil shale*** is unique in the world and is closely connected to the economy, society and environment of Ida-Virumaa. The oil shale sector is the biggest and most important provider of employment in the region, but over the last couple of years the number of employees in oil-shale mines has decreased considerably. While in 1992 the number of people employed was approximately 11,000, in the first quarter of 2002 fewer than 5,000 workers were mining oil shale for Eesti Energia Ltd. The main reasons for this were the closing of several mines and the step-by-step implementation of more efficient mining technology. The tendency is the same in the power stations, where the increased share of services hired from outside has also caused a fall in the number of permanent employees. The sharp decline of employment rates in this sector has created socio-economic problems that are of considerable importance in north-eastern Estonia. These problems could be solved through the development of entrepreneurship and support to R&D activities.

The greatest share of air pollution comes from enterprises (including power stations) that process oil shale – approximately 60% of Estonia's SO_2 emission. Regulation of the emission of such gases in Estonia is according to the European Union's large combustion equipment directives (EC/88/609 and EC/2001/80) and respective international agreements. During accession negotiations, Estonia submitted an application in harmony with the respective directives during the transition period, with the result that certain limits were established on supplying the consumers with electricity produced at oil shale power stations as of 01.01.2003. After Estonia becomes a member of the EU, Estonian oil shale power stations will find it difficult to compete with the power stations of other EU countries. The rate of waste arising from dust-combustion technology used for burning the fuel is high. The SO_2 content of the waste is 4.5 times higher than regulations allow, and the concentration of volatile ash in the gases released into the atmosphere also exceeds the norms[3]. To sum up, it can be said that Estonia's oil shale energy sector is the largest anthropogenic source of pollution: the power stations emit 83.3% of the SO_2 and 87% of NO_x of the pollution emerging from point sources.

The situation in oil-shale energy waste is approximately the same. The volume of ashes dumped on ash fields in 2000 amounted to approximately 5 million tons. Three million tons of mine waste were the result of oil shale production, amounting to 72% of the total waste produced in the country. Hydrological withdrawal systems, which turn the water alkaline, are used to dispose of the ashes. The piles of ash have accumulated considerable amounts of water, the disposal of which into the environment would be unacceptable.

Residual waste is not the only problem characterising the energy sector of Estonia. The waste produced and carelessly dumped by the oil-shale chemical industry causes a considerable number of environmental risks.

It is estimated that if the power stations in Narva are not renovated, they on their own will not be able to cover Estonia's energy requirement by the year 2005. Even if the annual production of the Iru power station – amounting to approximately 500 GWh – is taken into consideration, the problems with meeting the energy needs of consumers with the electricity produced in domestic power stations is going to be a serious problem by 2008 (see table 25). Therefore the energy sector of Estonia needs large investments in the next few years, either for renovating the existing power stations, or for constructing new ones, to meet the domestic energy demand and to comply with environmental standards.

Table 25

The estimated amount of energy to be distributed in the networks of Estonia

(GWh)

Year	Consumption and losses	Narva Power Stations	Iru PS	New and renovated power stations, import
2005	7,120	6,600	500	20
2008	7,390	5,340	700	1,350
2011	7,970	5,340	700	1,930
2015	8,880	5,340	700	2,840
2016	9,150	2,300	700	6,150
2020	10,190	2,300	700	7,190

Source: Ministry of Economic Affairs and Communications

While adopting the Long-term National Development Plan for Fuel and Energy Sector (endorsed by the Parliament on 18.02.1998), Estonia chose to ***go on with using oil shale for energy production for at least 15 years*** while reconstructing both the mines and power stations. The Restructuring Plan of the Oil Shale Sector provides for a step-by-step decrease in the share of oil shale, while making investments in more effective and environmentally sound technologies and in developing other branches of the economy in the north-eastern region of Estonia.

Some 92% of the energy distribution and exchange networks belong to the government agency, Eesti Energia Ltd. The agency has been able to make limited investments in the development of a power network over the last 20 years. According to estimates by Eesti Energia, 2.5% of the networks should be reconstructed annually, but in fact the investments have been considerably lower. To date, the average age of high voltage power lines of Estonia is 33 years. Considering the age of the power networks therefore, investments into them must increase in the near future if consumers are not to suffer from supply problems. The lack of quality networks in areas that have potential for the use of renewable sources of energy — for example northern Estonia and the islands — poses a further problem.

In 2000, boiler houses used mostly natural gas, liquid fuel oils and timber for ***heat production.*** Around 38% of the heat provided by boiler houses came from natural gas. Local fuels (oil shale, peat, timber, shale oil) accounted for 40% of the heat produced. The technical condition of long-distance heat distribution networks is also rather poor, thus lowering the competitive advantages of long-distant heat production and forcing home owners to switch to local heating. As a result, the capacity of the networks is several times lower than planned, and this in turn increases heat losses in the distribution process. One of the prerequisites for competitive heat and electricity production is improvement in the technology and effectiveness of long-distance heating networks.

Comparison with other countries shows that the ***efficiency*** of the energy sector of Estonia is ***low*** in respect to production, distribution and consumption and the efficiency factor of power stations does not exceed 29%. The energy losses in power distribution and exchange networks are 15-18% in Estonia, while the respective indicator in EU countries is under 10%.

GDP's energy consumption (the relation of supply of primary energy to GDP) has dropped considerably in Estonia (from 2.1 kWh/kroon of 95 in 1993 to 1.0 kWh/kroon of 95 in 2000). Nevertheless, according to the information provided by the International Energy Agency, the said sustainable development indicator of Estonia is still beyond the average level in EU, but also the neighbouring country Finland with comparable climate – in 2000, respectively, 2.1 and 1.5 times (when calculating GDP based on purchase parity). While the impact can mostly be related to the low level of the Estonian GDP, our energy conservation potential (decrease in the use of primary energy) is still relatively high. The heat consumption in dwellings, for example, is between 180-280 kWh/m^2 per annum, which exceeds the respective average Scandinavian ratio 1.3-fold. More extensive implementation of energy audits would help to improve the energy efficiency.

The primary energy requirement per GDP (1 USD) unit of Estonia (in 2000, 35.1 MJ/euro) exceeds the respective average EU ratio considerably. The energy efficiency of Estonian economy is characterised in Table 26.

Table 26

GDP's energy efficiency, 2000

Country	Energy consumption for GDP production (MJ/GDP)
Hong-Kong	1.9
Denmark	3.9
Norway	5.8
Iceland	8.1
Finland	9.1
USA	11.6
Estonia	46.8
Russia	62.7

Source: World Competitiveness Yearbook 2001, IMD

As for the ***energy policy,*** Estonia was one of the first transition countries that stopped subsidising energy and fuel prices. In 1999-2000, an energy saving programme, financed from the state budget by ca 6.4 million euro, was implemented. This amount has been replenished from foreign loans and foreign aid, secured by the state. The use of timber and peat in heating has increased as a result of the energy saving programme. The ***new energy saving programme was endorsed in 2000***, in a new situation in which economic growth is going to increase energy needs. The programme developed for 2000–2005 included the following specific objectives:

- The change in energy requirements, caused by the economic growth, should be kept two times lower than the growth of GDP
- In the 2008– 2012 period, a reduction in CO_2 emissions by 8% compared to 1990 will be achieved. The reduction follows the Kyoto Protocol.

Intentions are to launch several national energy audit systems for the purpose of achieving objectives, as well as to develop action plans in more specific areas. When implementing the energy policy, the state will proceed in line with the Long-term National Development Plan for Fuel and Energy Sector (endorsed by the Parliament on 18.02.1998). The Plan establishes the following strategic objectives for Estonia's energy sector:

- To provide a stable supply of energy with optimal price/quality ratios
- To support the county's economic and political independence through the development of an independent energy sector
- To improve efficiency in the production, transportation and consumption of energy
- To meet international environmental standards
- To renew technology in the production of electricity from oil-shale so as to raise efficiency and lower harmful waste
- To use the natural resources available in current mines and production facilities
- To favour energy and heat co-production stations
- To support energy production from renewable sources as a state policy

The *development potential* of Estonian energy sector is related to:

- Implementation of new technologies for both electricity and heating energy production (boiling bed processing of oil shale, combined production of electricity and heating energy);
- Continued applied research in the area of oil shale processing, combustion and mining technologies;
- Priority development of technically and economically sound combined production of heat and electricity, based on alternative fuels (peat, gas, organic fuels);
- Cut-down of losses in energy distribution and exchange networks;
- Energy-saving attitude of consumers;
- More extensive implementation of renewable sources of energy

Considering the strategic objectives, the development potential of the energy sector and the aim and scope of resources of Structural Funds, it would be advisable to pay closer attention to implementing energy conservation measures in the modernisation of local infrastructures and more extensive use of renewable energy sources when planning the implementation of Structural Funds.

Processing Industry

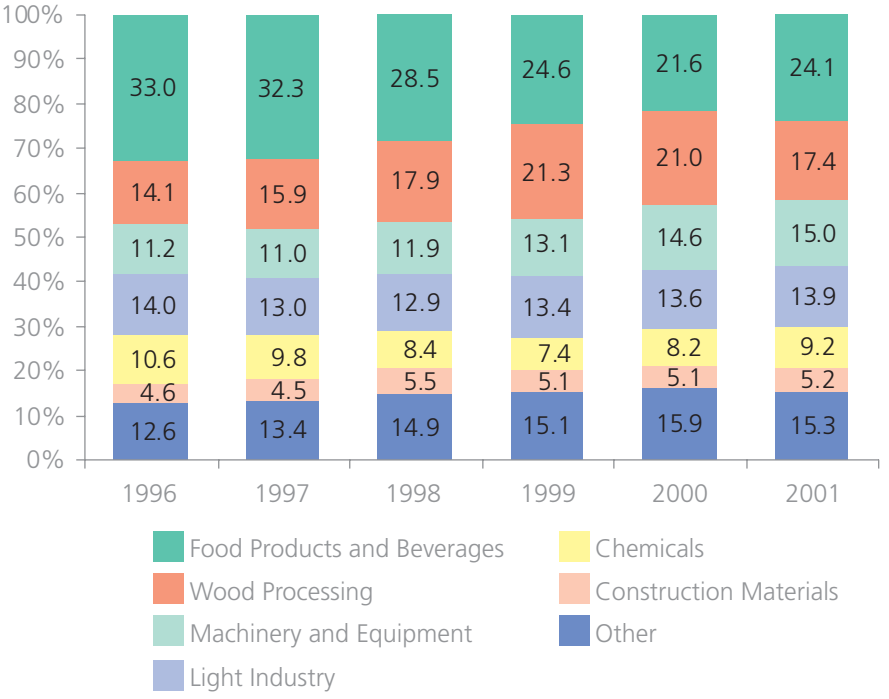
The processing sector forms the largest share of Estonian industry. The processing industry provides approximately 85% of the gross industrial output, approximately 83% of the industrial value added and 88% of the jobs available in the industrial sector.

The gross output of the processing industry is mostly influenced by developments in its four main branches – food, wood processing, light industry and the manufacture of machinery and equipment. The relative share of these four branches amounts to 70% of total industrial sales (Figure 20). In the 1996-2001 period, several structural changes took place in the industry. The relative share of the food and chemical industries decreased, while the relative share of the export-oriented manufacture of machinery, equipment and wood processing increased. The share of light industry has remained more or less unchanged.

Figure 20

Structure of processing industry in accordance to the sales of industrial products, 1996-2001

(as percentage)



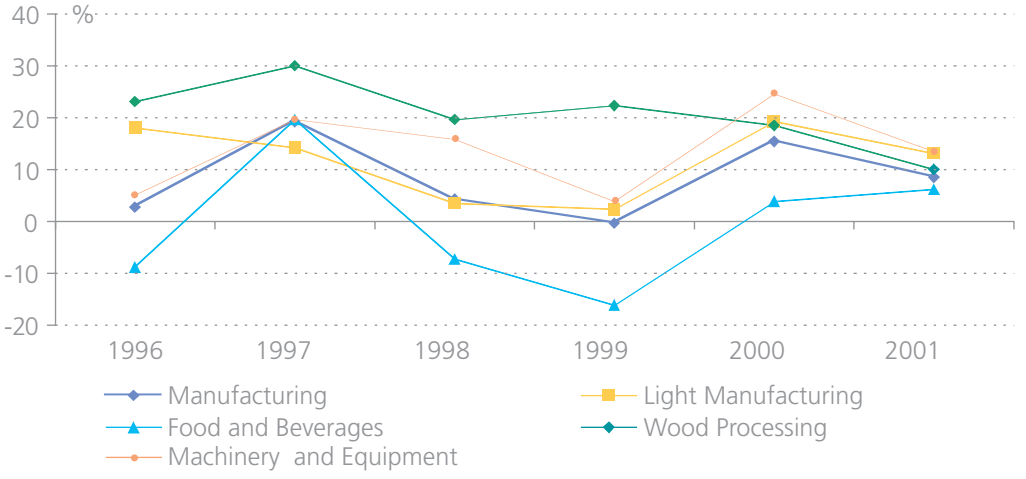
Source: Statistical Office of Estonia

In 1996-2001 the increase of sales in the processing industry, expressed in fixed prices, has been rather volatile (Figure 21).

Figure 21

Real rates of growth in main branches of processing industry by years, 1996-2001

(as percentage)



Source: Statistical Office of Estonia

The decrease in the share of the most important branch of the processing industry – food processing[4] – has been caused mostly by the increase in the relative share of the manufacture of machinery and equipment. The second important branch is the wood processing industry, where growth has been the most stable. Wood processing has the highest export potential in Estonia, as local raw material is used for production[5]. The share of light industry has started to increase over the past couple of years. Employment rates are the highest in the light-industry sector, and employment remains high in the manufacture of machinery and equipment, providing employment for approximately 23% of the workers in the processing industry. The development of light industry and the manufacture of machinery and equipment play an important role for the labour market, as these two branches account for approximately 47% of the workforce in the processing industry. The share of chemicals and construction materials in the

sale of industrial products is rather modest. The construction materials industry is strongly influenced by changes taking place in the economic environment, mostly through investment activities of the enterprises.

The best year for most enterprises in the last decade was 1997. The production boom of this year was soon replaced by a decline, however, caused by the financial crisis that hit the Russian and Asian markets. Hardest hit was the ***food processing industry,*** where growth turned negative both in 1998 and 1999, dropping down to - 20%. The main reason for that was the loss of the Russian market, since more than 50% of the products had been going to Russia. To date, the food processing industry is overcoming the crisis and the sales volumes are gradually increasing. The relative share of export to Russia has almost disappeared, while the European Union has become the main export market.

In 1998, only the ***wood processing*** enterprises were able to bypass the crisis. Sales have shown stable growth in this industry over the entire period under review, but the growth rate is slowing down. The slowdown has been caused by decreasing capacities of sawmills and the stabilisation of prescribed amounts to be cut. Estonian wood producers lack regular market information about prices in the public and private sectors. They also suffer from an absence of an effective logistics system. The wood processing industry is due for some structural changes in the near future. It is important for the focus in timber exports to shift from unprocessed timber to processed timber and wood products and to increase the share of furniture and prefabricated (module) wooden houses.

Light industry also suffered from a slight setback in the decline, but recovered quite fast, so that production volumes have risen again. Such a growth can be related to high foreign demand and quality for products. Producers here are also considered by foreign markets to be highly reliable. Moreover, local companies have started to adopt aggressive marketing policies for penetrating the foreign market. The textile industry accounts for the major share of the gross output (approximately 50%), while clothing and leather make up the rest. Sub-contracting for foreign producers plays a relatively large role in light-industry exports, with the clothing industry in the lead in this area. The textile industry exports considerable amounts of primary products, and the relative share in this output is increasing annually.

Sub-contracting is also big in the manufacture of ***machinery and equipment.*** The development of this branch as a whole is dependent upon the economic success of neighbouring countries and their demand for sub-contracting. The manufacture of machinery has increased over the past couple of years and further growth can be predicted, as several companies from neighbouring countries intend to start factories in Estonia. In the manufacture of equipment, the main features are its important role in sub-contracting and its highly automatic production methods. Nevertheless, the value added by this branch is relatively small because of its big share in sub-contracting. The lack of innovative local products has several causes, one of them being limited co-operation by industry and research institutions. The branch should still be successful in future, however, since Estonia is hoping to promote research and technology-intensive production, provided that there will be an availability of qualified labour.

A certain setback has taken place in the chemical industry, which uses mostly oil shale as its raw material. The difficulties are related to the economic problems in Russia and CIS countries, negative price developments on the world market and a decline in competitiveness on both the domestic and foreign markets. The production of inefficient phosphor fertilisers has stopped, as has the manufacture of oil shale products, benzene and carbamide. The production of several chemicals and medicines has also decreased. Consequently, the share of the chemical industry in sales by the processing industry has dropped to 9.2%. Compared to other candidate countries, Estonian industry can be characterised by a relatively low share of industrial value added in the whole economy – approximately 22%[6]. At the same time, the growth of value added in industrial sector of Estonia has been one of the fastest in the 1995-1998 period: Estonia comes third after Hungary and Poland. Compared to the respective average in EU, there is not much difference. It can then be said that in Estonia the services sector is the strongest, supporting more or less the entire economy.

The ***inflow of direct foreign investments*** has had a considerable effect on the competitiveness of the processing industry. This has increased the export volumes of Estonia and brought along several structural changes. Approximately 20% of the direct foreign investments have been directed into the processing industry[7], with food processing, chemicals, construction materials and wood processing attracting the major share of investment[8]. Most of the capital inflow has gone into branches with relatively low labour costs and easily available supplies of raw material.

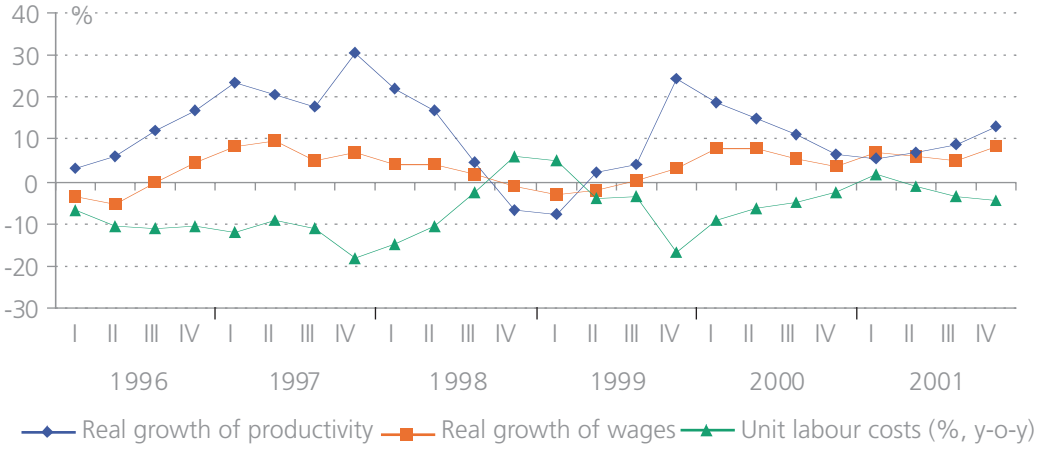
One of the most important factors affecting the inflow of investment is the low price of production[9]. ***Relatively low-cost labour*** is also one of the attractive features of Estonia. The average wage level in Estonian industry is 26% of the EU average. In the international context, competitive labour gives Estonia an important advantage in competing in the marketplace as well. On the other hand, low wages may be accompanied by impaired competitiveness

because of increases in labour expenditures per production unit. The dynamics of wages in the processing industry and productivity in general have been rather erratic in Estonia in 1996-2001. The impact of the external environment can be distinguished clearly (see Figure 22). During periods of crisis, the increase in wages has exceeded the respective indicator for productivity and therefore the share of labour expenditures per unit has increased. Over the last couple of years productivity has increased again, and therefore labour expenditures per unit have decreased, as it is characteristic of slow increase in wages.

Figure 22

Growth rate of productivity and wages in processing industry, 1996-2001

(as percentage, compared to the same period of previous year)



Source: Statistical Office of Estonia

The main problem faced by industrial enterprises is the ***lack of higher-quality labour***, impeding the establishment of new competitive enterprises and the expansion of existing ones. The inflexible educational system can be seen as one of the main reasons for structural unemployment, as it does not provide any opportunities for training skilled specialists able to cope in the contemporary industrial environment. Therefore, the division of labour in society is uneven and decreases the aggregate productivity.

The productivity level of Estonia is still far behind that of the EU. The productivity of labour of the Estonian industrial sector only makes up 26% of the EU average (by comparison, in Slovenia it is 58%). The ***level of productivity*** is low, mostly because of insufficient product development, limited search for innovative solutions and large numbers of employees with qualifications that do not match labour market requirements. At the same time, the growth of productivity in the industrial sector has been the fastest in Estonia (38%) compared to the other candidate countries (1995-1998). ***High share of sub-contracting*** is a characteristic feature of the export structure of Estonia and has supported rapid growth in exports. During the first half of 2001, sub-contracting amounted to 40% of Estonia's total exports. The structure of sub-contracting is highly concentrated, as approximately 78% belongs to the manufacture of equipment, 14% to light industry (mostly clothing) and 5% to machinery and the metals industry. The remaining 3% are divided between other branches.

The increase of sub-contracting for machinery and equipment, providing as it does the rapid growth of export, is mostly due to active trade with Finland and Sweden. Estonia supplies the electronic industries having major influence in Europe with completed components. Finland and Sweden make up approximately 1/2 of the export market of Estonia; this is another feature characterising strong relations with Nordic countries. The large share of sub-contracting makes the position of industrial enterprises rather unstable, since companies heavily dependent on sub-contracting pay little attention to independent product development and marketing, and the industrial end products they provide have relatively low added value.

To realise its ***potential for development,*** industry in Estonia should shift the focus from traditional industrial branches to the manufacture of products with higher value added. It is important to apply new industrial technologies and to implement an innovative approach. The focus should be on developing and establishing technology-intensive enterprises with a good potential for growth. It is important to switch from sub-contracting for foreign companies to the development of original products and thus to obtain a secure position in the international division of labour. It would make sense to specialise in the production of single items with high potential, as our industry is too small to manufacture products.

The potential of the food processing industry is based on the availability of the dominant domestic raw material – milk – and its conformity with EU quality requirements. The textile and clothing industry should find a market niche that provides access to foreign markets. The latter suggestion will get a new meaning in 2005, when the EU textile and clothing market will be liberalised. The wood processing industry should advance its technological processes to manufacture complicated products and demand a higher processing level. This is important for changing from simple export of raw materials to the more profitable one of processed wooden products. Manufacture of equipment has the best prospects, since Estonia can make use of the great number of researchers, engineers and well-qualified labour force of Estonia. Further potential is seen in the birth and growth of completely new industries, such as microbiology, pharmacy and information technology. The objective would be to turn from a country with a low technological level and cheap labour into one with high technological potential and highly qualified labour. Such a development can only be achieved through technological development, promoting and supporting innovation while informing both the producers and the consumers of the importance of these aspects. Fast technological development and increased productivity are the best supports for further development.

1.2.4. SERVICES SECTOR

General Information

As in the other countries of the world, the tertiary sector is also growing in Estonian economy. On the one hand, this can be seen as a general trend caused by global development; on the other, a structural change such as this in the economy is related to the general reconstruction of the Estonian economy.

As a result of structural changes having taken place in the economy of Estonia, the relative share of the services sector has increased over the last decade. While in 1996, employment in the tertiary, or services, sector was 56.5% of total employment, it had increased to 60.1% by 2001. The share of the sector in provision of value added has increased from 61.5% to 65.5% (Table 27).

Table 27

The relative share of value added created by the tertiary sector in GDP by activities , 1996-2001

(%)

	1996	1997	1998	1999	2000	2001
Whole and retail sale, repair of vehicles, motorbikes and personal items and home appliances	15.8	15.1	14.9	14.4	14.5	14.2
Hotels and restaurants	1.4	1.3	1.3	1.4	1.3	1.4
Transport, warehouses and communication	11.4	12.8	14.3	15.2	15.4	16.4
Financial trade	10.0	10.4	11.1	11.2	11.1	11.3
Real estate, rental and business services	3.9	4.2	3.6	4.0	4.2	4.3
Public authorities and security, social insurance	4.7	4.6	4.4	5.1	4.8	4.5
Education	5.7	5.5	5.5	6.1	5.6	5.4
Health care and social work	4.3	3.9	3.7	4.0	3.9	3.4
Other	4.5	5.0	4.8	4.8	4.7	4.5
Tertiary sector in total	61.5	62.8	63.5	66.2	65.5	65.5

Source: Statistical Office of Estonia

The tertiary sector activities that provide a major share of employment and value added are wholesales, retail sales, transport, storage and communications. In 2001, these activities provided for 24% of employment and 30% of the value added created (2000).

The development of the services sector is characterised by better-quality services and a rapid rise in prices. Service prices are approaching those of the world market. In 2001 prices charged for services were twice as high as in 1995, while the increase in the price of goods was more than two times lower over this period. From 1996 to 2001, development was the fastest in transport, storage and communications, as well as in hotels and restaurants, where the value added in fixed prices has increased by more than 60%. The value added has also increased considerably in real estate, rental and business services, financial trade and trade sector. Growth has been less noticeable in public services (public authorities, education, health care and social work). Productivity (GDP in fixed prices per employee)

has increased in the services sector by one third (compared to 1996). The greatest surge of growth has been in transport and communication services (82%) and hotels and restaurants (55%), while the growth in other branches has been approximately 20%. The productivity of public administrations has not changed compared to 1996.

The development of the tertiary sector is supported by both the domestic and foreign demand, and by 2001 the total volume of services exported overseas had increased three times compared to the level of 1995. The positive balance of services has helped to level out the negative balance of trade. Transport services amount to approximately one half of the total export of services (transit traffic plays an important role here). Transport-related support services and the conveyance of passengers in the tourism sector have also developed along with transport services. Travel services are another strong branch besides transport, amounting to 31% of the export of services in 2001. The export of insurance, financial, computer and information services has increased considerably over the last few years.

Over the next few years one can expect the development of the tertiary sector to be faster than that of the rest of the economy. Joining the European Union will support the development of the sector, since Estonia will become one of its border countries.

Transport

The development level of the ***transport infrastructure*** has a great importance for strengthening the competitiveness and sustainable development of the Estonian economy. As we look at the quantitative aspects, Estonian transport infrastructure is well developed and comparable to infrastructures in the Nordic countries. This goes for road and railway networks and a number of seaports and airports (Table 28).

Table 28

Estonian transport networks, as of 01.01.2001

Railway		
	Length of public railway lines, km	968
	Of which lines with double tracks, km	105
	Electrified railway lines, km	132
	Density of public railway network, km/1000 km^2	21.4
Roads and streets		
	Total length of public roads, km	50,439
	Of which the length of state roads, km	16,434
	Of which paved roads , km	8,460
	Density of road network, km/1000 km^2	1,114
	Of which density of national roads, km/1000 km^2	363
Waterways		
	On sea, km	1,640
	On inland waterways, km	520
Airways		
	The estimated total length of Tallinn ***FIR***[10] flight routes, km	3,489

Source: The Ministry of Economic Affairs and Communications

The Pan-European transport corridor passes through Estonia and is one of the most important roads in the state. The main sections of the mentioned corridor are: Tallinn – Pärnu – Ikla road (Via Baltica) and Tallinn – Tapa – Tartu – Valga railway. This corridor is also a part of TINA road network. The main sections of TINA in Estonia are Tallinn-Tartu-Võru-Luhamaa and Jõhvi-Tartu-Valga roads and Tapa-Tartu-Petseri and Tallinn-Tapa-Tartu-Valga railways.

"The joining link" between corridors No 1 and No 9 (in Russia) was also fixed as a part of the Pan-European transport network at the Conference in Helsinki. It can be observed as a branch to corridor No 1, running along an east-west direction – the Tallinn-Narva road and Tallinn-Tapa-Narva railway, Tartu-Petseri railway and Tallinn-Paldiski railway and the road following this course. The Tallinn-Paldiski railway and road make a direct connection with Corridor No 1, therefore providing access to the ice-free seagoing port in Paldiski. Corridor No 1 extends to the

following transport terminals: port of Tallinn and its nearest surrounding ports (incl. Paldiski, Pärnu and Kunda); freight terminals in Tallinn and Muuga and the Tallinn Airport.

The most important international junction is Tallinn and its suburbs, encompassing as it does the largest deep harbors open to navigation all year round, together with passenger and goods terminals both in road and railway transport and an international airport. All the main railway and road arteries, waterways and airways flow into the capital. The other important transport centers of Estonia are Tartu, Pärnu and Narva. Two thirds of the international freight traffic runs between Tallinn and St. Petersburg, 90% of it via the railway. Approximately 95% of the transit trade and a majority of import and export freight traffic passes through the seaports of Estonia. With the largest part passing through the Port of Tallinn Ltd., passenger transport and tourism services also pass through the terminals of the Port of Tallinn Ltd.

Roads make up the network that links different regions. By 1 January 2001, the official length of registered roads in Estonia was 50,400 km, 16,400 km of which (32.6%) are state roads.

The main predicament in the road system is an insufficient level of capital investment and the limited number of up-to-date roads. Technical equipment and installations are outdated. During the last decade a disparity has emerged between the amount of vehicular traffic and road development. With the rapid growth of passenger cars (in 1991 – 174 vehicles/1000 inhabitants; in the beginning of 2001 – 297 vehicles/1000 inhabitants), the traffic capacity of the main roads and many streets of Tallinn and other bigger cities has become exhausted. Traffic management also calls for technological and organisational updating, especially when it comes to traffic safety.

The aim is to concentrate on the maintenance of existing less-travelled roads, which are important to the development of counties. The deterioration of the main roads and side roads is a problem because of insufficient financing over the last few years.

The share of roads with bitumen-gravel pavement is 48%, or 7,961 km. The financing of road maintenance has turned out to be more expensive than expected and the annual pavement reconstruction volumes are very small. Therefore, the aim is to keep the bitumen-gravel roads dust-free and improve the living environment.

The total length of public railways is 968 km. As the railways have to put up with a major share of the rapidly increasing international carriage of goods and transit traffic, difficulties arise with the limited capacity of routes and border stations, as well as with the technological insufficiencies of railway infrastructure and rolling stock. Environmental, safety and speed problems are a logical consequence of the bottlenecks named above. Seeing our future as a boundary state of the European Union, we should start thinking of expanding the border crossing in Narva and building a new border station in the south-eastern part of Estonia. Since 1989, the technical situation of railways has been deteriorating; therefore, the speed of travel has had to be limited in many sections. Although capital repair of the main tracks has started, the investments needed have been too large to improve the situation.

The electric railway is a part of the public railway network, the total length of electrified lines being 132 km. The main task is to organise passenger transport in Tallinn and Harju County. In 2001 approximately 3.7 million people used the system and total turnover was 78 million passenger-kilometres. Reconstruction of the electric railway and the development of passenger transport are the key solutions for improving passenger transport.

To increase passenger transport on railways and improve alternatives for passenger transport, focus should be put on the development of passenger transport on electrified and non-electrified railways and on the reconstruction of infrastructures.

There are 101 ports in Estonia, 31 of them involved in merchant shipping (freight and passenger transport). All the freight ports in Estonia are open to foreign vessels. The biggest turnover of international freight and passenger transport is taken by Vanasadam (the Old City Harbour), Muuga Harbour, Paljassaare Harbour and Paldiski South Harbour. All of these belong to the state-owned trading company Port of Tallinn Ltd., and are open for navigation all year round. Additional ports are the private Port of Kunda, the municipal North Port of Paldiski and the part-municipal, part-private Port of Pärnu, all of which have the largest turnovers of international goods. Hundipea Harbour, owned by the Maritime Administration, is in a very bad situation. For years the harbour has been in a condition that is hazardous to navigation, to its users and to the environment.

The use of inland waterways is becoming popular again. Historically, inland waterways connect 35 historical harbour sites (at Lakes Võrtsjärv, Peipsi and Lämmijärv), all of which need to be constructed in the light of expanding tourism. There is also great potential in the shipping traffic to be opened in Tartu-Pihkva line.

As to local traffic, small ports – Virtsu, Kuivastu, Rohuküla, Heltermaa and Sviby – (connections between the islands and the mainland) belong to the state company, Saarte Liinid Ltd. For inland waterways it is important to construct

transport infrastructures and modernise internal ports like Tartu, Mustvee, Kallaste and Piirissaare. Despite extensive construction and reconstruction work, funded both by the public and private sectors, small ports and ferry terminals have to struggle with problems related to backwardness of underdeveloped infrastructure (berths, communication systems, water and sewage networks, electrical power distribution, roads on the territory of ports, fairways). Lack of proper infrastructures hampers regular navigation between the smaller islands (Kihnu, Ruhnu, Piirissaar).

It is extremely important to improve the infrastructures related to safety (navigation signs and related common monitoring systems, radar system of maritime traffic control and management) to the point where they match the level of developed countries. To date, 630 nautical miles of waterway have been marked. Unfortunately, many of them need to be reconstructed (hydrological surveys, dredging, additional marking and charting) to make traffic safety more efficient and meet contemporary shipping requirements. Up to 280 nautical miles of new waterways need to be projected and built for the development of shipping, especially for passenger transport, sea tourism and larger volumes of intensified goods being handled in ports that were formerly not accessible to cargo ships.

On January 1, 2002, five certified airports existed in Estonia for commercial air traffic, one heliport and six local airfields. The biggest civil airport of international importance in Estonia is Tallinn Airport. The airports of Kuressaare, Kärdla, Pärnu and Tartu are mainly for domestic flights, but can also to a certain extent be used for international air traffic. Kihnu and Ruhnu airfields, servicing air traffic with the islands, are in very poor condition.

By the end of 1998, Tallinn Airport had become the biggest airport in the Baltic States. Passenger transport has increased by 25% over the last six years. By 2001 the passenger turnover of the Tallinn Airport has grown to 570,000 passengers. According to its development plan, the airport should become an internationally acknowledged North-European aviation transport centre by 2015.

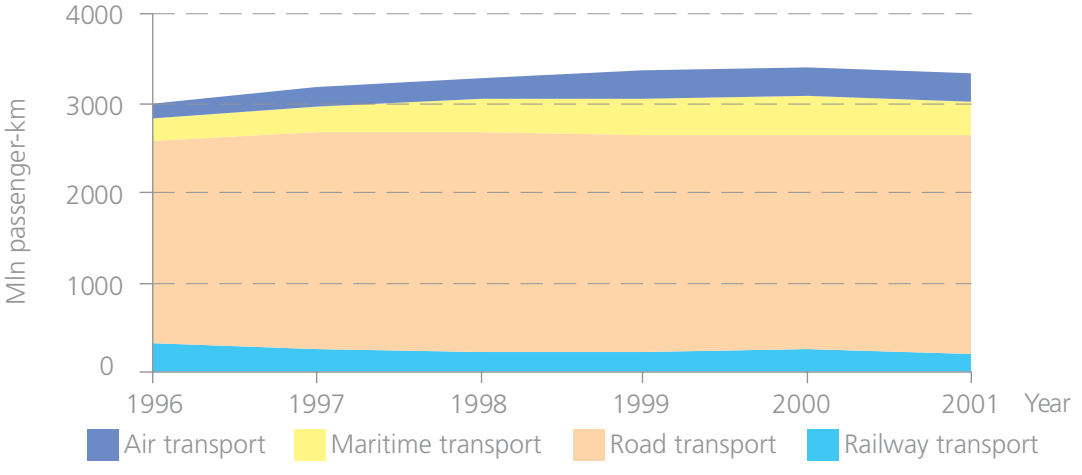
The reconstruction of the passenger terminal of the airport was completed in 1999. It was funded through large-scale foreign loans, the Phare assistance program, the state budget and the assets of the company. The first stage of the airport platform reconstruction was completed at the same time. In 2006, the annual passing capacity of the passenger terminal should be up to 1.4 million passengers. Presently, the most important priority in aviation infrastructure development in Estonia is the modernisation of the facilities of regional airfields. Secondly, the facilities in Tallinn and other airports so as to meet international standards and bring the government agency in charge of national supervision – the Estonian Civil Aviation Administration – into accordance with the requirements of the European Union.

In 2001 the passenger transport turnover of Estonian transport enterprises decreased by 12% compared to the previous year to approximately 249 million. Domestic transport amounted to 244.8 million and foreign transport to 4.4 million passengers. Some 68.9% were carried by road transport, 27% by tram and trolley bus, 2.2% by train and trolley-bus, 1.8% by water transport and 0.1% by plane. The passenger turnover was approximately 3.6 billion passenger-kilometres in 2001 (Figure 23).

Figure 23

Passenger transport, 1996-2001

(mln passenger km)



Source: Ministry of Economic Affairs and Communications

Air and maritime transport contribute 90% of their services to international trips. The general turnover of passenger transport is also increasing on account of international passenger transport. Road transport is the most common mode for domestic travel. After a decline in the beginning of 1990, the volume of passenger transport stabilised on railways, but the competitiveness of railway travel cannot be improved without considerable modernisation of railways and rolling stock and increasing the frequency of travel. International southbound train traffic was interrupted for lack of profits. The number of passengers travelling to Russia is decreasing. Commercial domestic aviation brings in few revenues – mostly because of the lack of paying customers – and therefore, only subsidised flights connecting the islands and mainland are presently taking place.

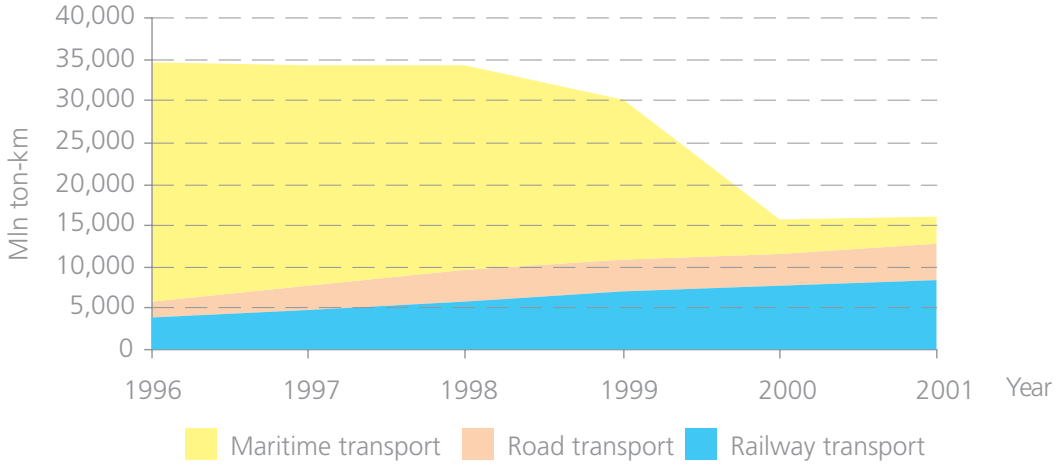
International transport dominates the freight transport provided by Estonian freight companies. The relative share of domestic portage is lower than 1/3 when expressed in volumes of goods and less than 10% when expressed as freight turnover.

The amount of domestic commercial freight traffic has increased during the 2nd half of the 1990s. Volumes in international freight transport have also increased. The drastic decline in the portage of solid goods in bulk and the crisis in the Far East in 1999-2000 have decreased the sea freight turnover by more than ¾. The road and railway freight transport is increasing simultaneously (Figure 24). The freight transport undertaken by transport companies of Estonia is divided as follows: 80.5% by railway, 17.6% by road, and 1.9% by air or sea transport. The transport turnover increased in 2001 only by 0.5% compared to the previous period, rising to 16 billion tons; international freight transport turnover amounted to 92% of this.

Figure 24

Freight transport turnover by Estonian transport operators in 1996-2001

(mln ton-km)



Source: Ministry of Economic Affairs and Communications

Transit freight transport plays an important role in the Estonian economy. The main freight transport chains are the port-railway and port-road systems.

Two thirds of transit freight transport passing through Estonia passes through seaports. In 2001, the freight traffic through ports amounted to 41.3 million tons of goods, 28.6 million, or 69%, of this was transit. Transit freight passing through Estonian ports increased in 2001 by more than 5.3% compared to 2000. The increase reflects mainly an increase in the traffic of oil products.

The majority of goods are handled in ports belonging to the Port of Tallinn Ltd. In 2001, the freight turnover of the Port of Tallinn Ltd came to 32.3 million tons; compared to 2000 the increase was 9% (29.3 million tons). The relative share of transit freight amounted to 24.5 million tons, or 75%, 1.3 of which came in by sea and 74.6% of which went out by sea. Transit freight traffic increased by 10.6% compared to 2000. Based on the total freight turnover, the port of Tallinn holds a leading position in the Baltic Sea region. This shows that the port has a favourable geographic location in respect of the Russian raw-material market and once again proves the competitive advantages of the port.

Approximately 65% of the international freight transport moves along the Tallinn - St. Petersburg railway. The freight transport by railway has also steadily increased since 1995. In 2001, freight transport went up by 1.3% com-

pared to the previous year, amounting to 64.4 million tons. Freight transport by public railway decreased by 1.3% in 2001, while transit freight transport increased to 4.6%, amounting to 30 million tons, or 47% of the total freight transport. The increase is mainly due to the increased transport of oil and oil products, amounting at the moment to more than 65% of transit freight.

Further development of combined freight transport on international routes is dependent upon short sea-shipping routes and on the efficient establishment of sea and railway connections with Russia.

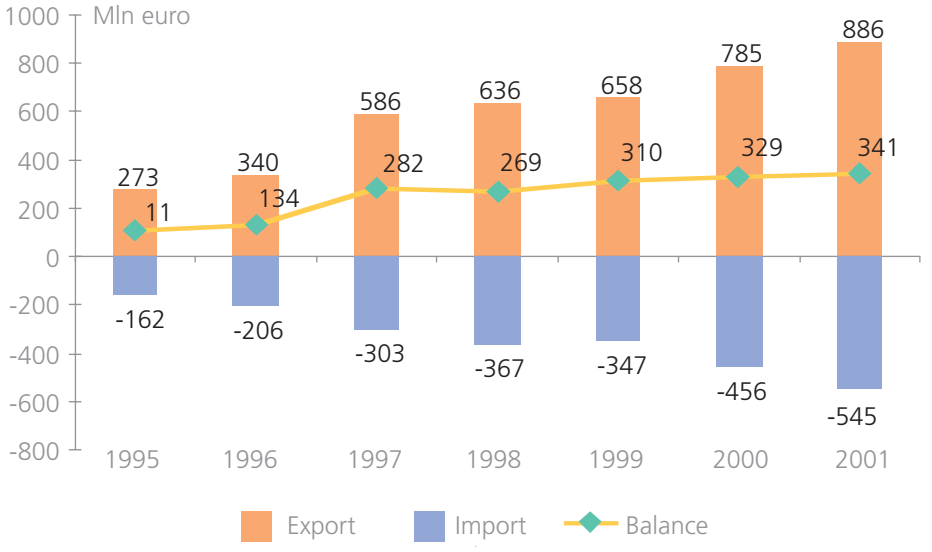
The number of licences meeting EU standards — not only exchanged with CEMT member states and other countries but also an increasing number of vehicles — gives us grounds to predict an increase in volumes of international road transport passing through Estonia.

The transport sector is also very important for Estonia as the stabiliser of foreign economy balance. The transport service export-import balance has been positive in succession. Amounting to approximately one half of the total export of services, the export of transport services has contributed considerably for decreasing the clearing account deficit (Figure 25).

Figure 25

Export-import balance of transport services in 1995-2001

(mln euro)



Source: Bank of Estonia

The transport policy of Estonia is characterised by extensive privatisation of both the operator services and infrastructures, use of taxes and prices for regulating competition of transport modes and infrastructure policy that favours international connection routes (transport links).

Operator services are mostly provided by private enterprises. Sea transport, inter-urban bus traffic and air traffic are all organised by private companies. The most important state-owned transport companies are AS Tallinna Lennujaam (Tallinn Airport Ltd), AS Tallinna Sadam (Port of Tallinn Ltd), AS Elektriraudtee (Electrical Railways) providing services within the immediate vicinity of Tallinn. AS Eesti Raudtee (Estonian Railways) (34% of the shares are state-owned) is the major owner of the public railway infrastructures in Estonia.

Since 1992, prices have been allowed to float in passenger and freight transport services and are no longer subsidised by the state. In accordance to the internationally acknowledged market relations and transport policy, owners (holders) of vehicles must cover all expenditures made by society for road establishment and maintenance, for traffic regulation, for safety and for the observance of environment protection regulations. To avoid any distortions in a free transport service market, such expenditures must be objectively reflected in the cost of transport services provided. To date such things as motor-fuel excise duty, motor vehicle excise duty, local motor vehicle tax, railway utilisation fee, over-flight navigation fee and waterway utilisation fee are all considered to be transport taxes in Estonia. The category of transport taxes should also include state fees imposed on the owners of vehicles.

State and local authorities can use their budgets to allocate support for regular public services, for purchasing public transport vehicles, for building or repairing infrastructures used by public transport and for organising public transport researches (surveys). The objective for supporting public transport is to secure the best prices for public

transport tickets, thus encouraging people to use public transport instead of private cars, making public transport accessible for social groups in the lower-than-average income bracket and providing all regions with equal development opportunities.

In 2001, support from state budget and local authorities accounted for 56.5% of the public transport expenditures in local road transport. State budget supported 71.9% of domestic railway traffic and 50.6% of the ferry traffic connecting the islands and the mainland.

Estonia has set as its objective to integrate with the Trans-European transport network and to observe respective EU policies. Europe is linked as a community by the network of roads, telecommunications and energy of the European Union (*Trans-European Network*). This strengthens the economy, creates jobs and helps to improve the living standards of all its citizens. The development of European transport networks prefers railways to roads and aims at a symbiosis between the flexibility of road traffic and the environmental friendliness of railways. State budget allocations, foreign loans and allocations from ISPA funds have enabled Estonia to start extensive reconstruction and repairs on its main roads.

Compared to European Union, the relative share of the Estonian transport sector in its GDP is considerably larger than the respective EU indicator. At the same time remarkable disparities can be noticed when comparing the infrastructure, technological level of means of transport and logistics of the Estonian transport sector with EU countries that have size and transport requirements in common with Estonia (see Table 29).

Table 29

Development disparities in transport

Indicator	Unit	Estonia	Denmark	EU
Private cars (1999)	Per 1000 inhabitants	312	329	440
Number of people killed in traffic accidents (1999)	Per 1 million inhabitants per year	191	98	114
Relative share of electrified railways (1999)	%	13.6	26	49
Relative share of transport sector in GDP (1998)	%	8.5	6.2	4
Railway network (1999)	km per inhabitant	968	2,324	152,729
Highways (1999)	km per inhabitant	-	880	51,336
Passenger turnover (bigger airports, in 2000)	passengers	550,747 Tallinn	18,300,000 Copenhagen	531, 900,000 (the total for EU)

Sources: Ministry of Transport and Communications, Statistical Office of Estonia; European Union Energy & Transport in Figures 2001

The number of vehicles in Estonia is comparable to the number in Denmark, but while the traffic density is lower, the number of people killed in traffic accidents is two times higher than in Denmark. Although the share of electrified railways in Denmark is not too much bigger than in Estonia, the technical level of Estonian railways is very poor. In Estonia there is no internal aviation network, mostly because of the lack of paying customers. Approximately 70 small marinas are scattered along the coastline of Estonia, all open for international navigation and supporting the development of sea tourism. The infrastructures of these marinas need to be developed to meet changing tourism requirements.

The main problem to be solved when improving the infrastructures of the transport sector in Estonia is the lack of state budget funds for current road maintenance and larger investments. In Estonia the main road maintenance costs amount to 8.8 thousand euro per km per year, while the respective figure in Denmark is 22.2 thousand euro. The big difference in the number of people killed in traffic accidents, compared to member states with well-developed traffic controls and traffic culture is, most of all, related to the factors listed above.

Development potential of Estonian transport. Modernisation of the main transport networks is a priority task to be solved for the economic development of Estonia as well as for regional development. While the international airport in Tallinn has mainly been modernised and business revenues are being used for the further development of freight ports, the state should take responsibility for updating the main roads, railways and waterways.

The modernisation of the roads connecting the country's east and west will secure a competitive position for Estonia in the ever-growing market of transit freight. Reconstruction of roads connecting north and south will enable Estonia to merge TEN-T network, improve access to the economic nucleus of EU and contribute to securing road

connections between Finland and Central Europe. After the railways have been privatised, solutions for the best form of partnership between the private and public sectors — aimed at modernising railway traffic — should be researched. Modernisation of the main roads and railways will improve accessibility to all the larger towns in Estonia and create better opportunities for harmonising regional development.

Telecommunication and Use of Information Technology

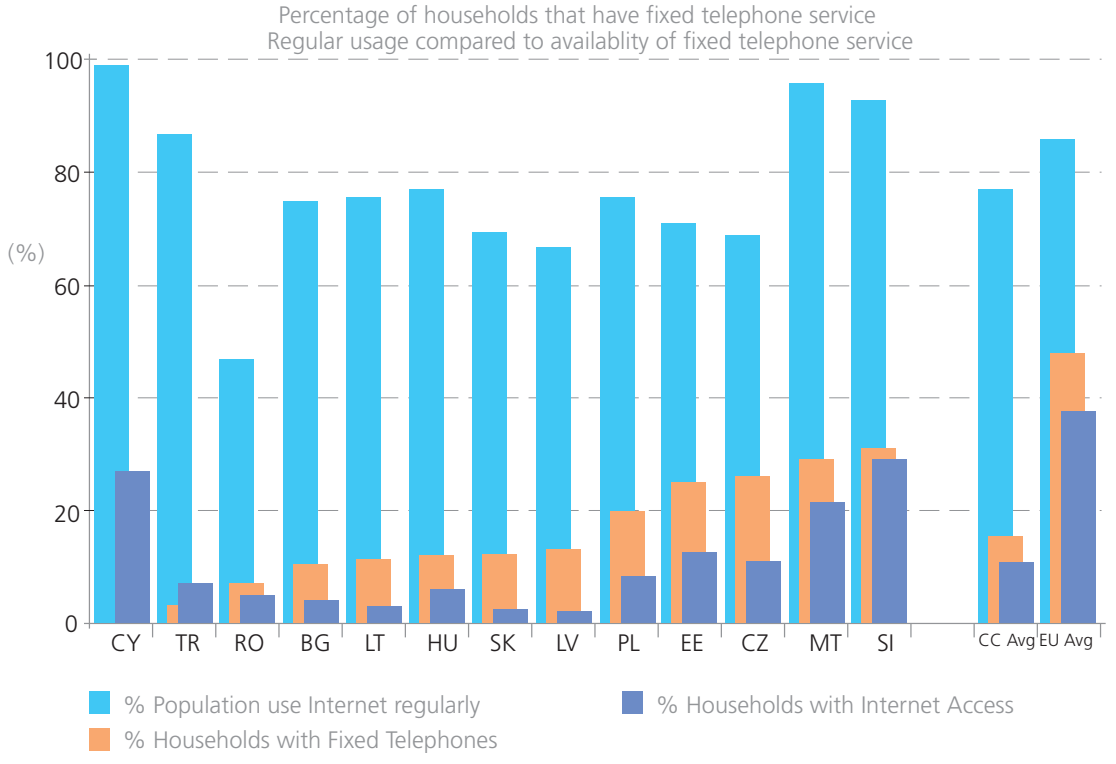
Like other countries, Estonia is getting adjusted to the new technological-economical paradigm, which includes the extensive application of information and communication technologies in different spheres of life and economic growth, supported by technological innovation. Such an adaptation can be observed from two aspects as we consider the context of developing an information society: first, the development of new information technology solutions, and second, the application of information technology.

As to the first aspect, the future of Estonia's industrial sector is darkened by several important problems. Although Estonia's economy as a whole has undergone important changes and reorganisation over the last decade, the emergence of new, knowledge-extensive branches of industry has been rather modest. The same goes for expenditures made on research and development. It can be said that no world-class information technology is being developed in Estonia.

Nevertheless, Estonia has been characterised as a considerably successful country when it comes to the implementation of information technology[11]. This is true in comparison with both those countries in transition and those in the process of development. The use of the Internet is shown in Figure 26.

Figure 26

Number of telephone and Internet connections per 100 inhabitants



Source: EU Candidate Countries, 2001

Rapid implementation of the Internet in Estonia and the relatively high level of its use in comparison with Central and East-European countries is largely thanks to an early application of the Internet in research and education, as well as to the existence of well-developed telecommunications network.

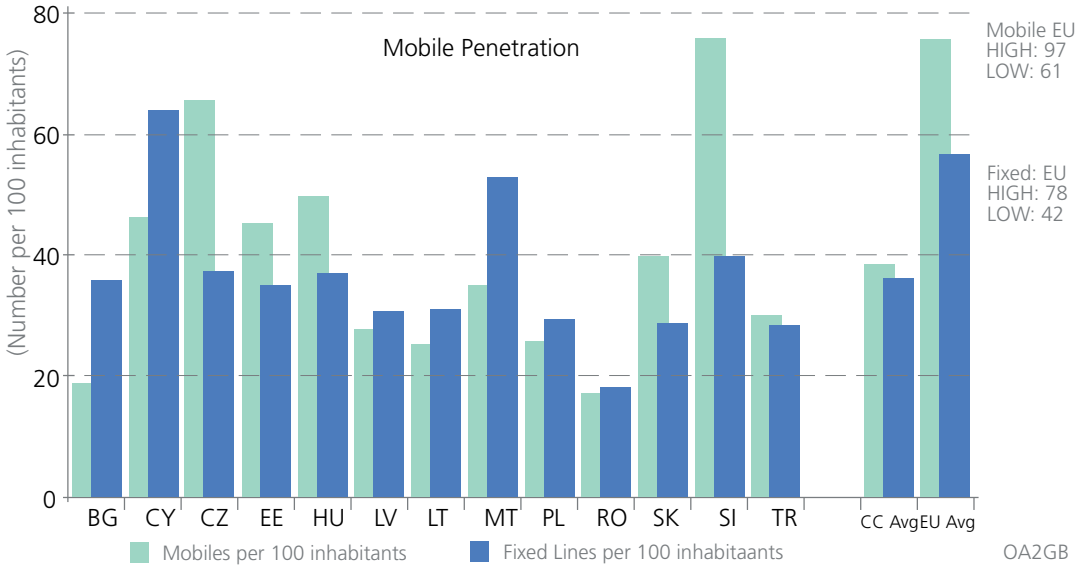
The development was started by state support for the Internet and the development of data communication through education and research. Providing of schools with computers was seen as the first priority. Both initiatives have contributed largely to the development of school education in Estonia through extensive implementation of information and communication technologies. In 2000, all the primary schools and high schools in Estonia had computers and 75% of them had permanent access to Internet. All students in Estonia have mastered computer skills; furthermore, they have introduced computers and the Internet to adults as well.

As one of the reasons for the rapid development of the telecommunications market we can point out the fact that the fast development of infrastructures was achieved because of the surrender of special rights by concession. The Government of the Republic of Estonia and Eesti Telefon Ltd (ET) in 1992 signed the concession agreement. The contract provided ET with special rights for the provision of main services (provision of national and international telephone, telex and telegraph services, together with their installation and interconnection) for eight years (until 01.01.2001). Investments amounting to 4.55 billion kroons (290 mil EUR) were made into the development of Estonia's telephone networks pursuant to the concession agreement.

Estonia today is characterised by its large number of telephone connections in the fields of both fixed networks and mobile telephones (Figure 27). Estonia was also one of the first Central and East-European countries to liberalise its telecommunications market. The decline in the cost of services through free market competition, plus the development of technology are the factors having the strongest impact on the increased implementation of the Internet over the next couple of years.

Figure 27

Number of mobile and fixed network telephones per 100 inhabitants



Source: ITU

Estonia has shown itself to be keen to implement contemporary technologies and experiment with new solutions. So far the development of an information society in Estonia has concentrated on the creation of telecommunications infrastructures and making the Internet available. This has been the case in many other countries as well.

At the same time the number of IT-users in Estonia has reached a certain level of saturation and several surveys have shown that the increase in the number of Internet-users has stopped. We can therefore expect the gap between the users and non-users of information technology to become wider.

To provide for the further development of an information society and to overcome the digital gap, the implementation of new technology in Estonia must become even more convenient and effective than before. The creation of new jobs based on information technology depends of the ability to provide motivation for the non-users of today. For that purpose a suitable training system should be developed and people should be provided with various applications necessary for their everyday life.

The increased labour productivity of existing jobs, based on the implementation of information technology (both in public and private sector) is mostly dependent upon the capacity to develop new IT solutions and apply these as effectively as possible. The aim of such innovation processes is the simultaneous improvement of the quality of products and services, accompanied by a decrease in expenditures related to the reorganisation of activities.

As we consider the facilitation of the implementation of information technology it is very important to improve the efficiency of the training provided for IT specialists. Extensive implementation of IT in all the stages of life, beginning from elementary education and extending to life-long learning, is also very important for the maintenance of the existing jobs and modernisation of the educational system

A review of substantial services shows that the attempts of the public sector to create e-Government solutions and the activities of the banks in developing Internet banking services have been the main landmarks in the Estonian IT landscape. The improved convenience and efficiency of new IT solutions and substantial Internet services have also contributed to the spread of the Internet.

We can therefore summarise that information society's development needs in Estonia do not differ much from the situation in Europe. Estonia has participated actively in the development of e-Europe and Northern e-Dimension action plans and is very much interested in achieving the goals established. Therefore it is important for Estonia to create new, user-friendly IT solutions for use in e-Government, e-Education, e-Health care, e-Economy, etc. that would motivate people to use information technology and provide access for people living in less-favourable conditions.

Focusing on a purposeful implementation of information technology will support Estonia's socio-economic development and improve labour productivity. As the necessary measures are designed, attention will be paid to the need to improve Estonia's competitiveness through information technology by increasing the domestic enterprises' capacity to develop innovative technological solutions that are competitive on the international level.

Tourism

Tourism has become an important economic sector in Estonia. Although the importance of ***domestic travel*** is increasing, foreign visitors are using the main share of paid services. In 1999, expenditures by domestic tourists totalled only about 10% of the total expenditures made by all tourists. The immediate share of ***foreign tourism*** in GDP is 10% in Estonia. If indirect impacts are considered, this will amount to 15%[12]. The relative share of tourism in employment is approximately the same. In 2001, exports in tourism services amounted to 13.3% of total exports. The growth in tourism service exports was quite rapid, but by 2002 the rate had slowed down.

The number of foreign visitors to Estonia has increased from 2.4 million in 1996 to 3.2 million in 2001. As is the case with tourism service exports, the number of foreign visitors arriving in Estonia is stabilising. The number of day-trippers dropped by 10% in 2001, while at the same time increasing number of visitors spent several days in Estonia.

While the majority of visitors are day-trippers, the share of regular tourists (overnight visitors) came to 41% of the total number of arrivals in 2001. More than half of foreign guests came here to spend holidays and approximately one third came to Estonia for business purposes. Most tourists visit Tallinn, but the number of people visiting other areas has also increased. As a result of increasing numbers of overnight visitors and longer period spent in Estonia, the growth of tourism services has been faster than the increase in the number of visitors. Overnight visitors spend more money in Estonia than day-trippers. In 2000, the average expenditure made by a one-day visitor to Estonia amounted to 64.81 euro (1,014 kroons), while expenditures made by an overnight visitor were 218.83 euro (3,424 kroons).

In most cases, sea transport was used to reach Estonia. In 2001, 62% of foreign visitors came here on regular ships and 4% on cruise ships. Around 28% used road transport, 5% came by air and 1% by train. The number of cruise ship passengers has increased considerably. In 2001, three times more visitors than in 1996 preferred to come to Estonia on board a cruise liner.

Neighbouring countries are the main arrival sources for Estonian tourism. In 2000, 56% of the visitors came from Finland, 14% from Latvia, 9% from Russia and 3% from Lithuania and Sweden. The relative share of the Finns among the tourists visiting Estonia is dropping: the increase in prices is making Estonia less attractive for tourists as merchandisers.

The development of tourism ***enterprises*** is comparable to the changes taking place in the number of visitors and tourism services. The number of accommodation establishments has doubled over five years, and several international hotel chains have arrived on the Estonian hotel market. Not only have the larger towns seen rapid developments in the field of tourist lodging, but so have rural areas as well – approximately 2/3 of the 400 places of accommodation in Estonia are located in the countryside (data of 2001). Establishments in Tallinn hold the major share of the accommodation market. In 2001, Tallinn provided approximately 70% of the lodging for foreign tourists.

Regardless of the considerable increase in places of accommodation, the number of tourists staying overnight has grown even more rapidly, thus increasing the average room occupancy rates. The number of visitors fluctuates strongly according to the season, and while in summer it is difficult to find a place to stay, in winter the occupancy rates plummet.

The number of enterprises providing tourism services has shown a constant increase. In 2001, 258 enterprises were operating as travel agencies or tour operators. In July of 2002 there were approximately 280 registered tour

operators or travel agencies. A total of 15 travel agencies have been given the IATA (International Air Transport Association) license.

Estonian ***tourism policy*** has been focusing on legal regulation of the sector and on supporting the dissemination of tourism information. Tourism development on the national level is a task of the Enterprise Estonia foundation. A network of tourism information centres has been established in co-operation with local authorities. Besides dissemination of information, the network is also developing and updating the country's tourism information database. In 2000, a non-profit organisation, Eesti Maaturism (Estonian Rural Tourism), was set up. It is responsible for organising personnel training for, and the marketing of, rural accommodation enterprises.

In 2000, the Tourism Act was passed and a national tourism development program drawn up. Compulsory requirements for tourist accommodation were established, and procedures and requirements for the categorising of accommodation enterprises were passed. A tourism satellite account system is being implemented. It provides the user with a specific overview of the sector and updates statistical information on tourism.

Compared to the European Union, the relative share of tourism services in total exports is somewhat larger in Estonia than the respective average European Union indicator: in 2001, tourism services amounted to 40% of Estonia's export of services. The number of accommodation providers, compared to the number of population, is two times smaller in Estonia, but the relative share of accommodation establishments in Estonia is bigger than the respective ratio in Denmark, Finland or Sweden. The number of overnight tourists in respect of population is higher in Estonia than the average EU indicator.

Historical monuments and architectural heritages (medieval towns and fortresses, old manor houses), tradition-based cultural life (music, dancing and handicraft, folk festivals), clean and diversified nature (landscapes, bodies of water, nature reserves) are the main tourism resources of Estonia. The natural and cultural resources of Estonia can be categorised into four geographical groups:

- Tallinn – capital city, well-preserved medieval old town and town wall;
- The northern and eastern parts of Estonia: the northern coast with diversified nature, National Park of Lahemaa, the architecture of manor houses and ancient strongholds, a gateway to Russia;
- The western part of Estonia, the islands Saaremaa and Hiiumaa: the greatest potential for nature tourism in Estonia – picturesque beaches and villages, juniper landscapes, holiday beaches and resorts, the resort town of Pärnu;
- Southern part of Estonia – landscape of cupolas and lakes, a lively cultural life, numerous opportunities for natural tourism, winter sports, summer events and ethnic and cultural diversity (the Setu people, old Russian religion), the research and cultural centre of Tartu.

Estonia remains merely on the periphery of the tourism packages of central Europe and there are many competitors – countries that offer similar tourism packages. The competitive advantage of Estonia is its reputation as a country that is developing fast, striving to become a member of European Union and not yet fully discovered by outsiders. Nevertheless, several critical factors still stand in the way of tourism development in Estonia. As a holiday destination it is not very well-known in Western Europe and other distant markets and it lacks a clear and well-established image. Many foreign visitors have expressed their concern about the poor availability of information[13]. Approximately one half of the visitors arriving here have found out about Estonia only from relatives and acquaintances.

Fears about safety are another concern expressed most often by the foreign visitors. Increasing crime rates are promoting a negative image (the situation in crime is described in detail in section 1.3.5). Other problems exist as well. Tour packages in Estonia lack diversity and are mostly focussed on Tallinn. There are too many short visits, too much dependence is placed on Finnish the market, and investments into tourism infrastructures[14] located outside of Tallinn are too limited. The seasonal fluctuation in the number of visitors is also a major problem.

In 2001 an image project "Welcome to Estonia" was launched by Enterprise Estonia for raising people's awareness of the country. The aim of the project was to promote the development of tourism and the economy as a whole, while co-ordinating systematic marketing efforts in Estonia between the public and private sectors. During the first stage of the project, a marketing concept introducing Estonia was developed for use in TV commercials, in print and at fairs and exhibitions. In addition to the public sector, several enterprises in the private sector are making use of the same concept.

The national tourism development plan also provides some solutions to main problems and makes suggestions for improving the competitiveness of Estonian tourism. The main issues highlighted in the plan are marketing, product development, and quality and information management. Estonia can implement several measures to enhance its

competitive edge on the tourism market. Expedient marketing, better training of workers, improved product development; greater market diversification and improvements made to tourism infrastructure are all such measures.

1.2.5. BUSINESS

Business Structure

According to the Tax Board, in 2001 there were 33,179 economically active enterprises[15] in Estonia. Some 77% of trading companies in operation were micro-enterprises, 18,5% small enterprises, 3.4% medium sized and 0.5% large enterprises[16] (Table 30). Private limited companies made up 81% of the enterprises, 15% were public limited companies and 4% were commercial associations, trust funds or subsidiaries of foreign trading companies. The Tax Board also lists 66,386 sole proprietors in Estonia.

In 2001, the number of enterprises increased by 5.8%. It should be remarked that the increase took place in the group of micro-enterprises, while the number of enterprises in the other size groups went down. One reason for that was smaller number of employees needed by enterprises as a result of improvements in production efficiency, which resulting in the re-classification of enterprises into size groups with smaller number of employees. The number of small and medium-sized enterprises has not grown to any great extent (Table 26).

Table 30

Operating trading companies by size, 1999-2001

(%)	1999	Relative share (%)	2000	Relative share (%)	Change (%)	2001	Relative share (%)	Change (%)
IN TOTAL	29,535	100.0	31,346	100.0	6.1	33,179	100.0	5.8
Micro-enterprises	20,541	69.5	23,429	74.7	14.1	25,532	77.0	9.0
Small enterprises	6,215	21.0	6,106	19.5	-1.8	6,134	18.5	0.5
Medium-sized enterprises	1,203	4.1	1,128	3.6	-6.2	1,135	3.4	0.6
Large enteprises	178	0.6	177	0.6	-0.6	159	0.5	-10.2
Enterprises with undefined status	1,398	4.7	506	1.6	-63.8	219	0.7	-56.7

Source: Tax Board

The business activity of the population is characterised by the number of enterprises per thousand inhabitants. In Estonia the respective indicator was 24[17] in 2001, whereas the differences in counties were almost threefold: in Ida-Viru County it was 9.7, in Jõgeva County 12.5. The highest figure was in Tallinn and Harju County (36.7). Such differences are related to the lack of qualified labour, funding opportunities and insufficient infrastructures for supporting business in less developed areas.

This indicator shows that in Estonia, business activity is twice as low than the respective average in EU. Estonia has still a long way to go before reaching the business activity that is characteristic of a developed market economy. The main reason for that is the lack of knowledge and skills related to business, as well as Estonia's short business traditions. The main reserve for increasing business activity would be the establishment of more micro-enterprises in Estonia. Although the relative share of micro-enterprises is increasing, the respective indicator is still considerably larger in EU while the importance of other size groups is lower. The number of micro-enterprises should increase twofold in Estonia to reach the business activity and size structure characteristic of the EU.

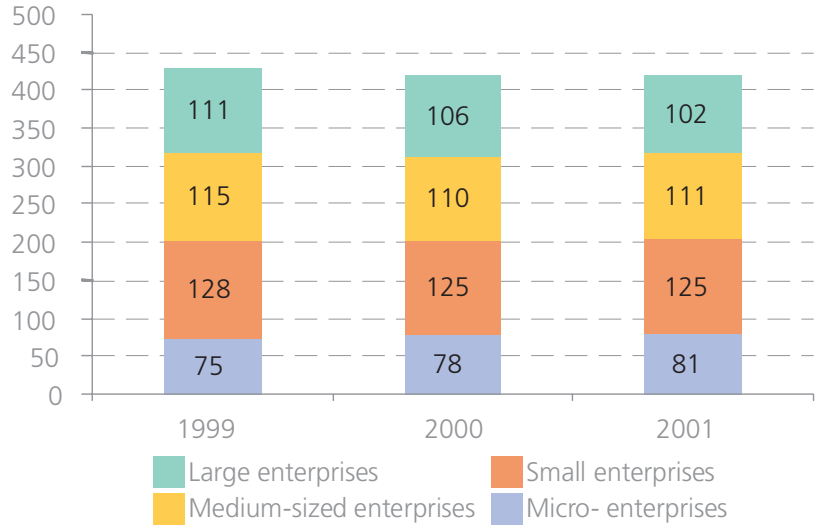
In addition to its low business activity, the development of the business sector in Estonia is characterised by regional disparities. Some 59% of all the enterprises operate in Tallinn and Harjumaa, whereas the relative share has increased over the last years (in 1999 – 56%). The concentration of business in towns can also be noted: 60% of trading companies are located in three larger cities, more than one half in Tallinn. Companies located in Tallinn and Harjumaa provide 69% of the total business turnover and 57% of export volume.

Small and medium-sized enterprises (SMEs) provide employment for more than a half of the labour force in Estonia and form two thirds of the business employment rate. In the 1995-2001 period, the employment rates dropped both in overall business and in big and medium-sized enterprises, while the employment rates provided by (micro and) small enterprises have prevailed (Figure 28).

Figure 28

Employment in enterprises of different size in 1994–2000

(thousand employees)



Source: Estonian Tax Board, Commercial Register

The number of enterprises has been increasing because of micro-enterprises during the last couple of years, so the small and medium-sized enterprises play an important role in further development of business activity and employment in Estonia.

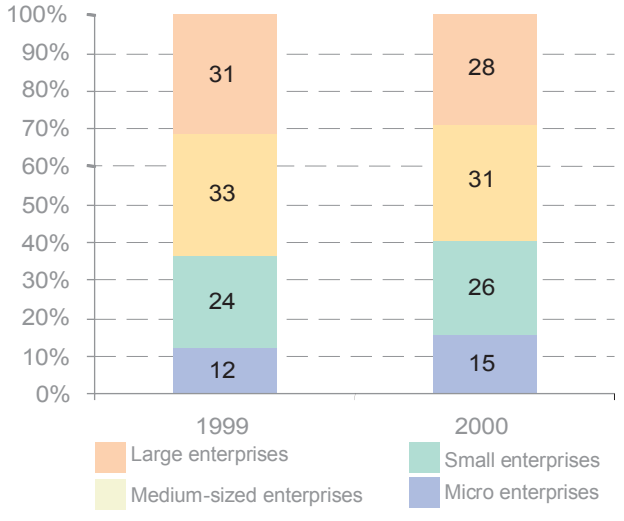
Micro- and small enterprises are strongly represented in sectors that require small amounts of capital: trade, accommodation, catering, business services and finance (66% of micro- and 47% of small enterprises). Medium-sized and big enterprises operate mostly in the processing industry and in mining (38% of medium-sized and 51% of big enterprises).

The contribution of small and medium-sized enterprises to the economic growth becomes even more noticeable if we look at the importance of the value added they have created in GDP, being approximately 52%[18] in Estonia in 2000, compared to 49% in 1999. Around 28% of the value added was produced by big enterprises and 72% by small and medium-sized enterprises (Figure 29). Small and micro-enterprises contributed 41% of the value added. Considering the importance of such enterprises in the total number of companies, the indicator is relatively modest. Compared to 1999, the importance of SMEs increased by a couple of percentage points in 2000, which highlights the increased contribution to the development of the economy provided by these enterprises.

Figure 29

Value added created in business by size groups

(%)

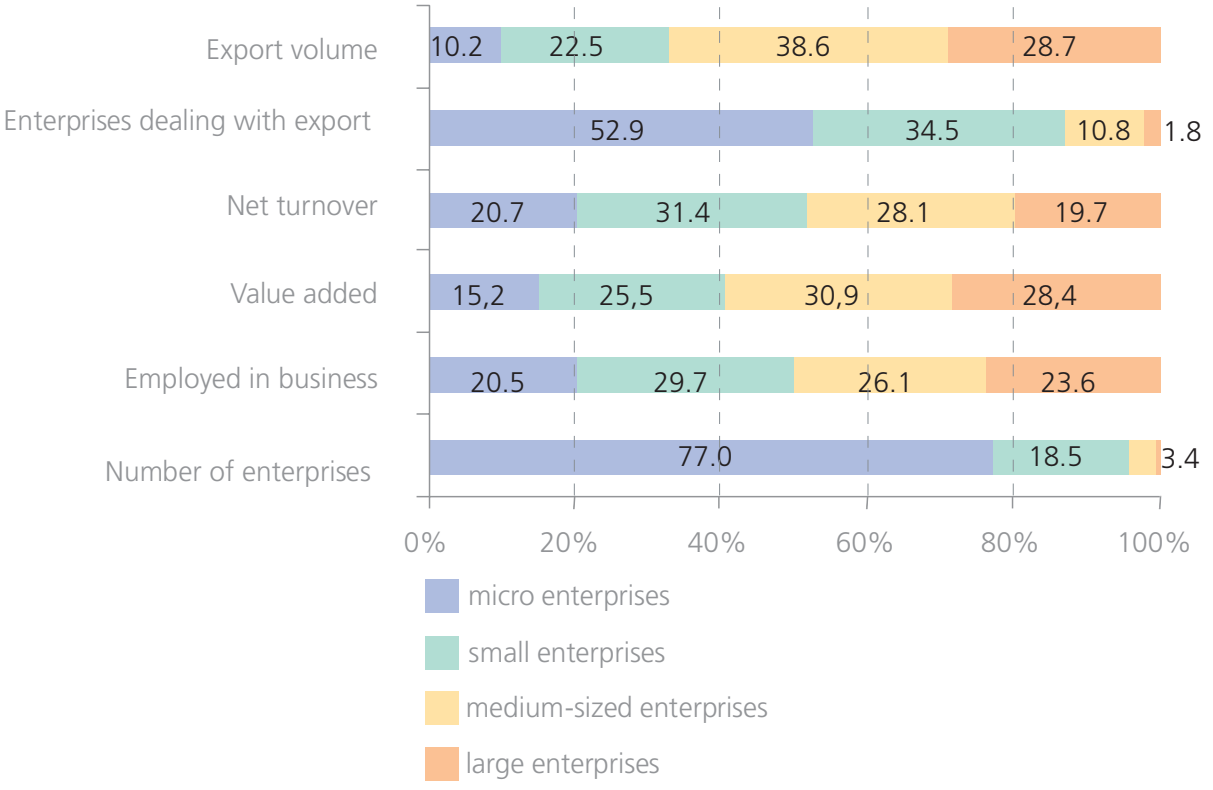


Source: Statistical Office of Estonia

In 2001, there were only 5,408 exporting companies, that is, roughly 16% of the total number of enterprises. As for the SMEs, the respective indicator has grown over recent years. Figure 30 shows the relative share of size groups in net turnover and export compared to the other indicators described above. It is obvious that micro-enterprises, which account for 77% of all enterprises, provide employment for 20% of the people in the business sector and account for 15% of business sector's added value. At the same time they are capable of providing only 10% of the total export volume. Such a distribution is indicative of the representation of size groups in different spheres: small and medium-sized enterprises are mostly represented in the processing industry, which makes up 95% of export volumes. Considering the negative trade balance on the one hand and the modest added value of industrial production on the other, this fact became evident when the processing industry was analysed and compared with the services' sector. One can assume that micro-enterprises play an important role in servicing the export-oriented industry (for example, transport and communications).

Figure 30

Relative share of SME-s in economic development in 2001



Source: Tax Board

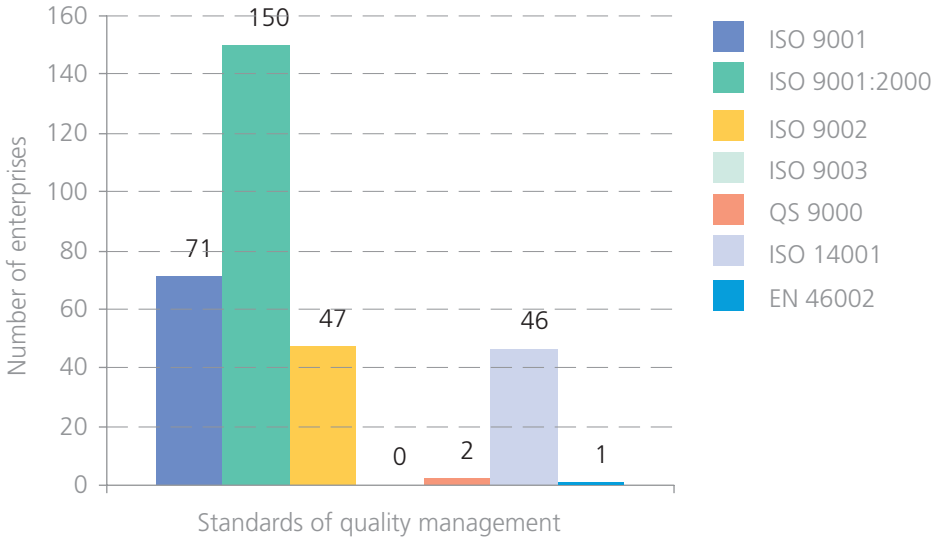
Quality Promotion

Quality management contributes directly to increased competitiveness of products and services. Improved awareness of enterprises about the issues related to quality management could be pointed out as one of the positive trends in quality management. The implementation and application of quality systems in enterprises has increased. ISO 9000 standard series has become the preferred quality management model in Estonia. As for the quality management methodology, the scope of impact of these standard series may be too dominant in Estonia, but the current development in the structure of ISO 9000 will adjust it better to the situation in Estonia. Therefore the continued implementation of the quality system by enterprises must be encouraged.

Compared to the total number of enterprises, the number of those using quality management systems is still very small (see Figure 31). This means that many enterprises can improve their competitiveness by implementing the quality management systems that meet their requirements.

Figure 31

Number of enterprises making use of different quality management system standards



Source: Quality Association of Estonia

At the same time, quality management methodologies provide a number of other tools that can be used to increase the competitiveness of Estonian products and services:

- improving the market position of products by improving their consumption characteristics and by satisfying customers' expectations
- increasing the profit margin by diminishing production /quality costs
- increased efficiency of business processes through a complex analysis based on, for example, quality prizes, self-assessment or benchmarking
- increasing the trustworthiness and stability of products through the implementation of quality management systems and statistical process management, etc.

As a rule, Estonian enterprises and organisations make very limited use of the tools listed above and their competence in this sphere is generally very limited. Main problems in this area are related to enterprises' limited awareness of existing opportunities on the one hand, and lack of interest in co-operation between different stakeholders on the other. This is combined with an underestimation of the potential profits to be derived from such co-operation. According to the surveys carried out, the main obstacles hindering the improved quality of Estonian products and services are related to the human factor (lack of competence in many areas, incl. quality management), difficulties with investments and technological innovation, limited markets, and non-adequate levels of respective infrastructure (incl. ill-developed state co-ordination)[19].

Working quality infrastructure systems should be secured by the state. This is important for the entrepreneur to provide evidence that his products meet certain established requirements. The main problems related to the implementation of quality systems arise from the limited market potential of Estonia. For that reason the investments made into equipment and into proving the product's conformity in necessary institutions (state central metrology agency, standardisation centre, accreditation centre, conformity evaluation institutions) will turn out to be unprofitable. Consequently, the private sector's interest in making the respective investments or co-financing thereof is limited. This problem also refers to the institutions performing market supervision. Market supervision institutions need tools necessary for the testing of products available on market. As a rule, such equipment cannot be purchased because of budget restrictions. Acquisition of such tools is often inexpedient, as the scope of testing carried out within the framework of market supervision is limited. At the same time the market supervision institutions cannot purchase the respective testing services, as there are no providers of such services.

To conclude, enterprises, especially SME-s in Estonia, need more assistance so as to enhance their competitiveness. This may take various forms: launching quality promotion projects (Estonian Quality Award Contest), information dissemination, provision of supportive environment for carrying out applied research and using benchmarking methodology (Estonian Centre for Excellence). This presumes much tighter co-operation between various parties (Estonian Association for Quality, employers' unions, the Estonian Chamber of Commerce and Industry, etc). Foster-

ing the international dimension, for example participating in EU quality management projects, would be important too.

Main Causes Hampering Business Development and Entrepreneurship Policy

The main problems encountered by Estonian enterprises are the lack of financing and qualified labour, insufficient business infrastructures in less-developed regions and only modest knowledge and skills related to business management[20]. These can all be seen as reasons for low business activity.

The banking sector and financial markets have developed fast in Estonia during the transition period, but ***some market obstacles in the financing of small enterprises remain.*** The mains reasons for that are insufficient collaterals and the short business history of SMEs, so that extending credit to such enterprises involves high risks. For the same reasons, the interest rates charged are high. Transaction costs that are out of proportion to the loan amounts provided to small enterprises, can be also be seen to be an obstacle.

Disproportions in the labour market cause ***a shortage of qualified labour,*** while at the same time micro- and small enterprises lack the funds for in-business training. Because of their lack of experience, the administration competence of managers in small enterprises also leaves much to be desired. SMEs also tend to underestimate the usefulness of training and consultation. The strategic importance of increasing the competitiveness of the enterprise through employee training should therefore be emphasised.

In regions located at a certain distance form the capital city, ***lack of business infrastructures*** or ***non-compliance with the modern requirements*** can also be considered as obstacles to the development of entrepreneurship. Small entrepreneurs and enterprises starting out often lack the funds for the development of necessary infrastructures, so that starting up a business may be postponed, or the enterprise might re-locate to another area, which aggravates the concentration of business even more.

Since 1992, several measures have been used to support entrepreneurship efforts (above all, in small and medium-sized enterprises) at national levels. The measures take into consideration the problems that hamper business development and hinder enterprises' large potential for providing employment and eliminating regional disparities. They include consultations provided for emerging businesses; training, advisory and fair participation support schemes; loans, loan guarantees; export subsidies, etc. Major shares of the assets have been channelled into supporting the restructuring of agriculture and rural development. Between 1998 and 2000, the enterprise support amounts diminished somewhat, but at the same time attempts were made to use the funds available in a more efficient way. During the period observed, the main share of the public sector support measures implemented were loans; to date some of the loans have been replaced with different guarantee products provided to secure bank loans. Such a development is in line with the proceedings taking place in the European Union, where state collateral, risk capital and loan schemes are introduced to support self-sustenance.

In 2001 the Ministry of Economic Affairs issued a national policy document, "Enterprising Estonia", which outlined a national policy for the development of small and medium-sized enterprises in the period 2001-2006. The need for a national policy on entrepreneurship has arisen because of specific problems and market failures faced by small and medium-sized companies, which prevent them from realizing their market potential on the same level as large enterprises. At the same time, business development should contribute to socially and regionally balanced economic growth. SMEs play an important role in the creation of new jobs and opportunities for enhancing the initiative of business undertakings in less-developed areas.

The main objectives of the enterprise policy are to facilitate business activities and to create new jobs while improving the competitiveness of Estonian businesses. The principles of regional development are kept in mind while making the effort to achieve these objectives. The policy focuses on the following priority areas: human resource development, improvement of possibilities for financing, development of business support structures, improvement of dissemination of enterprise-related information and the simplification of administrative and legal procedures.

In 2001 several new support measures in accordance with the new policy document were introduced. The new measures include start-up aid, support for the development of infrastructure, support for improving the skills of the labour force and various guarantee products. The measures are implemented through Enterprise Estonia and KredEx. In 2001, Enterprise Estonia provided 183 thousand euro (2.87 million kroons) for SMEs. This was supplemented by expenditures on the development of business support systems and business information portals. Compared to previous years, there were no considerable changes in the volume of business support disbursed. In 2000, business-support funding accounted for 210 thousand euro (3.34 million kroons) and in 1999, 140 thousand euro (2.22 million kroons). One of the aims of KredEx is to provide enterprises with local and leasing collateral with

the purpose of improving their financing opportunities. The total value of guarantees provided by KredEx was 6.11 milion euro (95.6 million kroons), which enabled enterprises to acquire 13.74 million euro (215 million kroons) from private financial institutions.

The efficient implementation of enterprise policies assumes ***establishing structures capable of implementing the policies.*** Over the next few years more attention will be paid to developing foundations to implement business support programs and increasing the awareness of enterprises about the business support structures and measures available to them.

In the area of quality management, several steps have been taken since the year 2000. Estonia has initiated several Phare projects to acquire adequate information about the issues. Enterprise Estonia carries out the Quality Award project and has established the Estonian Centre for Quality Management. The state has launched several schemes for the better implementation of quality assurance systems, mostly in the sphere of quality infrastructures like metrology, accreditation, conformity assurance, etc. Plans include the initiation of a survey aimed at establishing an optimal quality assessment system and infrastructure in Estonia. The results of this project will be used in designing policy measures to improve the assessment system, taking into account the needs of Estonian enterprises.

Estonia has joined the European Small-scale Entrepreneurship Charter and multi-annual programme for enterprise and entrepreneurship, and in particular for small and medium-sized enterprises (SMEs) (2001-2005). When it comes to business development, Estonia shares objectives and development trends with other EU member states and candidate countries. Participation in initiatives, undertaken in related spheres, has provided a good opportunity to learn from the business development experiences of other EU member states and candidate countries.

1.2.6. RESEARCH & DEVELOPMENT ACTIVITIES AND INNOVATION

Over the last decade the economy and society of Estonia have gone through an essential process of development. Despite a relatively good position with respect to other countries in global competitiveness reports[21] Estonia is still technologically a somewhat poorly developed country. Since the beginning of 1990's, the competitiveness of the economy has been mostly based on low-cost production factors, which have made Estonia attractive to foreign investors. The growth of labour productivity has largely been based on restructuring in various sectors of the economy. Considering the small size of the Estonian market and the imminence of EU accession, matters such as research, technology development and innovation (RTDI) must become the basis for the creation of new competitive advantages supporting long-term economic growth.

This introduction on the socio-economic context for the proposed RTDI measure of the SPD attempts to make explicit the factors and development trends influencing the competitiveness of the Estonian economy. It will also outline the current and potential contribution of the Estonian 'Innovation System' to socio-economic growth objectives.

Productivity and Competitiveness: RTD&I as a Driver of Economic Growth in Estonia

If competitiveness is defined as a sustained increase in real incomes and in the standard of living with jobs available for all those who wish to find employment[22], then the recent performance of the Estonian economy cannot be considered completely satisfactory. While the annual growth rate of GDP has been 5% during the period 1995-2001, and GDP per capita has increased from 32% in 1995 to 42% of the EU15 average in 2000, the number of unemployed has increased significantly over the last decade despite the decrease in the population of working age.

During the same period, the restructuring of the Estonian economy has continued apace with a significant reduction in the contribution of the primary sector to GDP and the increasing importance of the service sector, which has risen from 64% of GDP in 1995 to 68.8% in 2001. The growth of the GDP does not, however, seem attributable to such inter-sectoral changes in economic activity. It has been largely the result of a strong flow of inward investment (FDI stock as a % of GDP being the highest of the candidate countries, 53.2% in 1999) that has served as a low-cost base for exports and resulting in a sizeable increase in exports (2.8 times in current prices between 1995 and 2000).

Enterprises are competitive when they can achieve sustained growth in labour and total productivity, enabling them to beat the costs per unit of output and other non-cost characteristics of other firms. Such productivity growth depends, amongst other factors, crucially on RTDI, the creation of information communication technologies (ICT), up-take and diffusion and the match between skills base of the workforce and new types of jobs being created. In this respect, despite sustained productivity growth over the period 1995-2000 (Estonia outpaced all other candidate countries in terms of productivity growth)[23], labour productivity in the manufacturing sector was only 26% of the EU average and overall productivity of the economy stood at 37% of the EU average (Table 31).

Table 31

Labour productivity in 1998, EU15=100

	Labour productivity in manufacturing	Labour productivity in total economy
	EU15=100 (1998)	
Group 1	**20-40%**	**<40%**
	Bulgaria	Bulgaria
	Latvia	Latvia
	Estonia (26%)	Lithuania
	Lithuania	Romania
	Romania	Estonia (37%)
	Poland	Poland
Group 2	**40-60%**	**40-80%**
	Slovakia	Turkey
	Hungary	Slovakia
	Turkey	Portugal
	Portugal	Hungary
	Czech R	Czech R
	Greece	Slovenia
	Slovenia	Greece
Group 3	**80%>**	**80%>**
	Spain	Spain
	All other EU economies	All other EU economies

Source: Based on Eurostat Statistics in Focus, Theme 2, 13/2001.

Moreover, in terms of the structure of the Estonian manufacturing industry, the specialisation pattern is the most labour intensive, the least capital intensive, and has the lowest scale intensity compared to other leading central and eastern European candidate countries (the Czech Republic, Hungary, Poland, Slovenia and Slovakia). All of this would suggest that Estonian industry is faced by significant challenges in terms of raising value added and productivity. Indeed, data would suggest that productivity growth has been mainly driven by capital deepening (explaining in part employment losses) with, for instance, a rate of Gross Fixed Capital Formation (GFCF) of 27% for the period 1995-99, which is the second highest for the candidate countries (Eurostat, 2001). The important role of foreign direct investment (FDI, which accounted for 23.4% of GFCF between 1995-99) in new capital investment could be an indicator of a positive effect in terms of new technologies (depending on the sectors). Openness towards trade and FDI is an essential feature of the catching-up process. However, it is not openness by itself that matters, but how a country uses FDI as means to upgrade technological and organisational practices and thereby increase its long-run competitiveness.

As economic growth is strongly linked to export performance, the share of high-tech exports in total manufacturing exports is clearly an important indicator. Estonia (with 13.4% in 1999) fares well in this amongst candidate countries (second only to Hungary). However, 50% of the total export volume is made up of sub-contracting machinery and equipment (intermediary goods), suggesting that high-tech exports are of lower R&D intensity. Imports penetrating the Estonian market and the competitiveness of Estonian firms that serve the national market are also issues that require support for technology upgrading, manufacturing productivity and logistics, if the accession is not to result in a further hollowing out of local production in certain sectors.

Research, Technology Development and Innovation: Key Indicators

In order to structure the presentation of current baseline "context" indicators for the Estonian RTDI and facilitate comparison with the EU15 and other candidate countries, the European Innovation Scoreboard framework is adopted (see table 32). The following analysis is divided in four sections:

- Human resource development (educational levels of economically active population, education expenditures, educational level of entrepreneurs);
- Knowledge creation (expenditure on R&D; research output – patents);
- Transmission and application of knowledge (innovation activities in firms);
- Financing of innovation, output and markets (financial markets and risk capital, the role of ICT in diffusing knowledge, etc.).

Table 32

Innovation Scoreboard 2002 – selected accession countries[1]

No [2]	Indicator	Year[3]	EU	CZ	EE	HU	LT	LV	PL	SI	SK
1.	**Human resources**										
1.1	New S&E graduates (bachelor and master degrees, PhD) (% among population aged 20-29)	2000	10.26	4.00	**6.83**	4.49	9.35	5.52	5.90	13.10	––
1.2	Population with tertiary education (% amongst population aged 25-64)	2001	21.22	11.59	**29.42**	13.96	45.03	18.15	11.73	14.12	10.66
1.3	Participation in life-long learning (% amongst population aged 25-64)	2001	8.5	––	**5.3**	3.0	3.7	16.3	5.2	3.7	––
1.4	Employment in medium-high and high-tech manufacturing (% of total workforce)	2001	7.57	9.16	**4.79**	8.80	3.18	1.72	7.54	8.74	6.75
1.5	Employment in high-tech services (% of total workforce)	2001	3.61	3.22	**3.38**	3.24	2.01	2.19	––	2.71	3.03
2.	**Knowledge creation**										
2.1	Public R&D expenditures (% of GDP)	2000	0.67	0.54	**0.53**	0.45	0.53	0.29	0.45	0.68	0.24
2.2	Business expenditures on R&D(% of GDP)	2000	1.28	0.81	**0.15**	0.36	0.07	0.20	0.25	0.83	0.45
2.3.1 A	EPO patent applications (per million population)	2000	152.7	12.1	**6.9**	16.1	1.1	2.5	2.3	20.6	5.9
3.	**Transmission and application of knowledge**										
3.1	SMEs innovating in-house (% of manufacturing SMEs)		44.0	––	**33.2**	––	49.0	––	4.1	16.9	––
3.2	SMEs involved in innovation co-operation (% of manufacturing SMEs)		11.2	––	**13.0**	––	12.0	––	––	––	––
3.3	Innovation expenditures (% of all turnover in manufacturing)		3.7	––	**2.4**	––	––	––	4.1	3.9	––
4.	**Innovation finance, output and markets**										
4.1	High-tech venture capital investment (% of GDP)	2001	0.242	0.021	**––**	0.035	0.900	0.624	0.045	0.150	––
4.3	Sales of "new to market" products (% of all turnover in manufacturing)	2000	6.5	––	**6.0**	––	––	––	––	––	––
4.4A	Home internet access (% of all households)	2001	31.4	13.6	**30.1**	14.8	6.8	7.2	9.8	30.0	16.7
4.5	ICT expenditures (% of GDP)	2000	6.93 [3]	9.3	**9.8**	8.7	4.7	––	5.9	5.2	7.5
4.6A	Inward FDI stock (% of GDP)	2000	30.3	42.6	**53.2**	43.4	20.6	29.1	21.3	15.5	24.2

[1]: Main data source is EUROSTAT excl. 3.1-3.3, 4.3, 4.6 (National Statistical Offices), 4.1 (EVCA), 4.5 (WITSA/IDC (Digital Planet)), 4.6A (UNCTAD (World Investment Report)

[2]: Indicators 2.3.1A, 4.4A and 4.6A are alternative indicators.

[3]: Year of reference has taken as majority of all countries excl. 3.1-3.3 (EE 2000, LT 1998, PL, SI 1999).

[4]: The EU mean is calculated using WITSA/IDC data and is thus not comparable with the mean for the MS Scoreboard.

Source: 2002 European Innovation Scoreboard, European Commission

Human Resource Development

Human resource development indicators are critical for the creation and absorption of technology. Evidence suggests that catching-up processes have been accompanied by rapid improvements in the education levels of the gen-

eral population and the labour force. In this context, it is of concern that the number of researchers and engineers has been steadily dropping in Estonia. In 2000, 4.4 researchers and engineers were employed in Estonia per 1000 employees. This is a relatively good indicator even in international context (5.1 in EU, 1997). At the same time, the number of young researchers is limited, 43% of people engaged in research being older than 50 (2000). As for the division of Estonian researchers by specialisation, the rate for those dealing with the natural sciences is 29.7%, with technical sciences 17.4%, with the humanitarian sciences 18.1%, social sciences 17.1%, medical sciences 10.9% and agricultural sciences 6.8% (2000). The age and specialisation structure of Estonian researchers — and their qualifications in some areas — do not match the requirements for developing the competitiveness of the Estonian economy. Technological sectors that develop new products and services – including information technology – are in urgent need of highly qualified engineers.

Moreover, the highly qualified researchers and engineers available have little motivation to implement their knowledge in business. The co-operation between researchers and enterprises is not intensive enough. In 1998, Estonian enterprises employed only 0.66 researchers and engineers per 1000 employees. In 2000, the ratio dropped to 0.48. In EU, the indicator in 1997 was 2.5.

Formally, the relatively high average level of education in the labour force could be presented as one of the strengths of Estonia. The share of people with tertiary education[24] in the labour force in Estonia is 29.42% (2001), which is also somewhat higher than EU average (21.22%). At the same time a relatively high formal level of education does not always reflect the quality of education, nor does it necessarily respond to the requirements of enterprises.

Regardless of the numerous weaknesses listed above, Estonian researchers are still competitive in many areas, as can be seen from the example of their successful participation in international co-operation. Some 54.6% of the articles published by Estonian authors in international research journals are written in the course of international co-operation. Estonia has successfully participated in the EU RTD Framework Programmes. In the EU 5th RD&I Framework Programme (as of 01.10.2002) the number of proposals with Estonian participation was 808, while the selection rate was 26.7. Such a success rate is comparable to the average in EU Member States. As for the other international RD&I co-operation and information networks, Estonia is a full member of COST, EUREKA and GEANT, and also participates in the Innovation Relay Centre (IRC) network. Estonia has two EU level centres of excellence in the framework of EU 5th R&D Framework Programme.

Creation of new knowledge

Growth requires increasing explicit technological effort through R&D and industrial innovation, as well as diffusion of existing knowledge through economy. These areas are represented by a variety of research and development indicators, which approximate knowledge creation.

Expenditures and funding of research and development activities (R&D) reflect well the R&D situation in Estonia and highlight several problems. ***The total expenditures of research and development activities are very low*** amounting to only approximately 37 million euro (579.4 million kroons) in 2000**.** The research intensity of the Estonian economy during the period 1995-2001 has fluctuated between 0.6 and 0.7% of GDP, which amount to only about 37% of the average for EU member states (1.95% of GDP, 2001).

The public sector is the largest investor in research and development (R&D) activities. In 2000, the public sector contribution to R&D totalled 78% (EU 34%, 2000). Nevertheless, the public sector expenditures on R&D (0.53% of GDP in 2000) are still lower than the EU average (0.65% of GDP in 2000). The state has been rather research-focused when allocating the limited funds available. Approximately 90% of the R&D allocations made from state budget funds have been channelled into research activities while the national measures aimed at supporting technology development activities and stimulation of innovation are rather limited.

Expenditure of Estonian enterprises on R&D amounted to only 0.15% of GDP in 2000 (EU – 1.28% of GDP, 2001). The division of R&D expenditures between basic studies and applied research and technological development reflects the domination of basic studies and applied research (70% of total expenditures in 2000), which indicates insufficient application of knowledge in the economy and a low level of development activities in companies.

A high level of basic research has been maintained or achieved in certain disciplines, but the linkages between the emergence of new knowledge and development of new technologies based on that knowledge have remained weak. Patenting activity, reflecting the scope for the implementation of R&D output, is very low. The number of EPO patent applications in Estonia is 6.9 per million people (EU average is 152.7). Knowledge about intellectual property issues is poor, both in companies and in R&D institutions. The regulation and management system of intellectual property is an important part of establishing and developing a favourable environment for implementing

scientific results in universities. This is supported by ESTAG's SPINNO programme, which began funding projects in Tartu University (in partnership with other research institutions and the Agricultural University) and Tallinn Technical University in 2002.

Transmission and Application of New Knowledge[25]

Although much progress has been made in raising the profile of innovation as a key driver of competitiveness within governmental and policy circles, the understanding of the importance of innovation still needs to be reinforced in the business sector and other key private-sector stakeholders (financial sector, etc.) in order to truly accomplish the strategic objectives of the "Knowledge-Based Estonia 2002-2006".

International comparative surveys would suggest that awareness of the importance of in-company innovation in Estonia is reasonably good. The Global Competitiveness report 2001-2002 suggests that Estonia is ranked in the top three to four candidate countries in terms of the degree of 'company-level' innovation and interest of companies in 'absorbing new technologies' (see Table 33).

Table 33

Company-level innovation and absorption of technologies

Indicator/ Country	Company-Level Innovation (a)	Company-Level Technology Absorption (b)
Romania	6.3	5
Germany	6.2	5.9
United Kingdom	6.2	5.8
France	6.2	5.7
Finland	6.1	6.6
Belgium	5.9	5.6
Czech Republic	5.7	5
Poland	5.5	5
Estonia	**5.3**	**5.5**
Spain	5.3	5.5
Latvia	5.2	5
Greece	5.1	4.3
Hungary	5	5.1
Slovenia	4.9	4.8
Slovak Republic	4.8	4.6
Lithuania	4.6	4.9

(a) In your business, continuous innovation plays a major role in generating revenue (1=not true, 7=true)

(b) Companies in your country are (1=not interested in absorbing new technology, 7=aggressive in absorbing new technology)

Source: The Global Competitiveness Report 2001-2002, World Economic Forum

The preliminary results of the Innovation Survey (based on the CIS3 Eurostat methodology) covering the period 1998-2000 also tend to indicate a relatively good openness to innovation amongst Estonian firms. About 36% of firms (see Table 34 below) indicated that they were innovators[26] (see Table 30). This compares favourably with the EU average for CIS2.

In terms of the influence of various factors such as size, ownership or export orientation, the survey tends to confirm the standard findings at the EU level that the larger the number of employees or net turnover, the higher is the probability that the enterprise is innovative. However, considering the number of innovative smaller enterprises (those with less than 20-49 employees), the relative performance is much weaker (some 13% below the EU average).

Similarly, the fact whether a company belongs to a group (or concern) is a significant factor in influencing innovation performance in Estonia. Only 29.6% of firms not belonging to a concern declare themselves innovators, while over 51.4% of firms belonging to a concern are innovators.

Table 34

Results of the CIS 3 survey in Estonia (2002)

Type of company	Share of innovators 1998-2000
Innovators	35.7%
With innovation expenditure in 2000	**28.5%**
N° of employees	
10-19	27.6%
20-49	36.2%
50-99	45.2%
100-249	54.5%
250+	75.4%
Not belonging to a concern	29.6%
With foreign equity	46.7%

Source: Estonian Statistical Office

Foreign equity investments in Estonian firms also appear to be a major factor in influencing innovative performance, firms with foreign equity being 1.5 times more innovative than those without foreign equity. Moreover, the effect on innovation appears to be correlated to the degree of ownership (rising to 51.3% for 100% foreign owned companies). The orientation of firms between national versus export markets also clearly makes a difference, although the main distinction is between firms that export and/or serve the entire national market (both groups reporting about 39% of innovators) and firms serving only part of the national market, or limited parts of neighbouring countries (within 50km radius). The latter are clearly less innovative.

Co-operation amongst enterprises is another important factor in promoting innovation performance. The CIS study underlines that some 35% of innovative Estonian firms had co-operation agreements with other enterprises or institutions. This compares favourably with the EU average (25%) but is somewhat lower than the neighbouring Nordic countries. There is a clear tendency for export-orientated firms to co-operate more than non-exporting firms. However, Estonian enterprises' very low propensity for co-operating with universities and other research institutions can be considered as a negative finding of the CIS survey.

The survey also underlined the relatively lower use made by Estonian firms of external information sources for innovation (notably once again universities and non-profit R&D structure). It also highlighted the current widespread dissatisfaction of enterprises with respect to information made available and support provided by the public sector.

To sum up, while the number of companies declaring themselves innovators appears reasonably important, 'innovation intensity' is very low[27] and innovators are more predominant in medium-to-large firms, with foreign equity serving the entire national market and/or exporting. The CIS results suggest that 'innovators' increased their net turnover by 28% between 1998 and 2000, while non-innovators turnover declined. Equally, the effect of being an innovator or not appears to be significant on export potential, the export of innovators increasing by 41% compared to 25% for non-innovators. Such findings underline the importance of increasing the number and intensity of innovators in the Estonian economy through the SPD measure.

Financing and Output of Innovation

In general, the efficiency level of Estonian financial markets is reasonably high, mostly because of the openness of the economy and the considerable volume of foreign investments into the banking sector. The efficiency and competitiveness of the banking sector give Estonia a leading position among the Baltic States and place it ahead of Hungary and Greece in this respect. The Government has given a priority to provide a collateral system for both enterprises and individuals, making use of the KREDEX institution. The loan capital provided by local banks is lower than the respective indicators of the EU countries, but compared to other candidate countries Estonia is amongst the leaders. The capitalisation of the securities' market is similar to other countries. Estonia ranks third after Cyprus and Turkey.

Estonia has a number of venture capital funds. Nevertheless, the investment level as a whole is relatively low when compared to venture capital[28]. According to experts, the available assets are usually channelled into expansive

projects accompanied by limited risks, or takeovers initiated by management and management buy-outs/ins. The limited private investment enterprises of Estonia have started certain activities in the spheres of start-up capital. When it comes to demand, "innovative" projects in Estonia often remain below the critical level, necessary for the involvement of venture capital, and the number of high-technology spin-off enterprises established is relatively low.

According to the outcome of a CIS survey, new or improved innovative products only amounted to 16% of the turnover generated by the processing industry in 2000, which is twice as low as the comparative EU indicator. According to the scoreboard, Estonia is ranked next to EU countries (for example, Portugal) where innovation in enterprises is scored to have the lowest importance. This evidences the need to increase support granted for product development, especially for small enterprises, where new products only amount to 13% of the turnover.

Estonia's results are rather good when we look at the indicator revealing the number of home Internet connections (which can be observed as the indicator of both the dissemination of new knowledge and demand for new ICT products) and the relative share of ICT expenditures as of GDP (which is expected to have favourable impact on both productivity and innovation). Nevertheless, surveys carried out in the IT sector in 2001 show that more attention should be paid to the implementation of ICT in business. The main obstacles to the implementation of ICT are the enterprises' limited contribution to the RTD&I, the fact that IT applications focus on process development instead of the main business, and the low level of income and skills that do not favour the purchase of necessary technologies.

As for existing jobs, the IT-induced increase in productivity (both in the public and private sectors) is mostly based on the development of new IT solutions and the efficient implementation of them. The purpose of the innovation process described is to improve the quality of products and services while cutting down expenditures attributable to the reorganisation of activities.

RD&I – Perspectives

For a better utilisation of objective advantages (a large number of researchers and engineers, a well-educated labour force and competitive basic research disciplines) the RD&I development in Estonia demands a consensus at the national level and long-term agreements. The Estonian RD&I strategy — "Knowledge-based Estonia 2002-2006", approved by Parliament on 06.12.2001 — is the first stage taken in RD&I policy.

The two priorities highlighted in the strategy are:

- strengthening the knowledge base
- developing the innovation system

The strategy defines the objectives, opportunities, principles and key areas for RD&I development in Estonia. It serves as a basis for organising RD&I activities over the next few years by establishing a framework for public sector support measures, to be implemented up to 2006 (see Table 35).

Table 35

State budget funding on RD&I activities

(million euro)

	2000	2001	2002	2003	2004	2005	2006
State budget expenditures on RD&I	23.69	27.54	31.80	39.24	45.63	56.50	64.81
incl. Ministry of Education and Research	21.03	22.84	26.41	27.48	29.40	35.15	38.35
incl. Ministry of Economic Affairs and Communications	2.36	3.92	4.47	10.86	15.34	20.45	25.56
incl. other ministries	0.29	0.78	0.91	0.89	0.89	0.89	0.89

Source: Estonian RTD&I Strategy for 2002-2006

For public sector funding for RD&I, the Ministry of Economic Affairs and Communications, using the measures implemented by Enterprise Estonia, should increase its activities, especially in the sphere of technological development and innovation. The main goal of the strategy is to increase the amount of total expenditures related to RD&I development to 1.5% of GDP by 2006. The objective of public sector investments is to increase the share of private

and foreign capital channelled into development activities. EU pre-accession measures as well as future funding from Structural Funds are needed to enhance the public sector contribution to RD&I development.

Schemes to be co-financed by ERDF, described under the measure for supporting RD&I of this document, grow out of the objectives and development trends defined in Estonia's RTD&I strategy. The schemes described in the measure and to be financed by ERDF have been chosen according to the following basic criteria: political priorities, ex ante surveys and initial designs. The measures have been, or are being prepared with state support or with the EU pre-accession (Phare) funds.

1.2.7. SUMMARY

- In Estonia, relatively fast economic growth has taken place since 1995. From 1995 to 2001, the average GDP growth rate was 5% per annum. The economic growth has been supported mainly by a fast increase in exports to the industrial countries and the inflow of foreign capital. The economic structure is approaching that of industrial countries in that the relative share of agriculture has gone down, while the share of the services' sector is increasing. Regardless of these aspects, the GDP per capita in Estonia amounts to no more than 41.8% of the respective EU indicator (2002). Estonia's balance of payments is characterised by the current account deficit, which is attributable to a deficit in foreign trade.
- As to the primary branches of the economy, the situation has changed most in agriculture. The total number of employed in the primary sector decreased more than 3-fold in the 1992-2000 period, and the total output of agriculture decreased 1.6-fold. Those involved in agriculture find it difficult to initiate production that is competitive and at the same time meets environmental protection requirements. Approximately one fourth of arable land has been left untended. Irregular felling of private forests and the owners' limited knowledge of forest management hold back the sustainable development of timberland. In private forests the volume of trees felled is well above the figures necessary for reforestation. In fisheries — the important source of income in several coastal areas — the main problem is the technical backwardness of both fishing fleets and ports. The chief prerequisites for preserving fish stocks are regulating fishing efforts and improving the efficiency of fishing equipment.
- A rapid decline in the jobs available in the countryside has caused massive rural unemployment (13.4% in 2001) and labour-related commuting out of areas of origin (43% in 2001). An economically viable population in rural areas and the conservation of the landscape are possible only if local economy is strengthened. Opportunities for creating new jobs and fighting unemployment in the countryside depend on rural diversification, both in the agricultural and non-agricultural areas (rural tourism, handicrafts, small-scale food processing and marketing, ecological agriculture, etc.). The main supports for local business development are a clean living environment, sufficient amounts of free land available, a diversified natural and cultural heritage, local cultural traditions and a proper availability of electricity and telecommunications services.
- Although the productivity growth of the industrial sector in Estonia has been the fastest in the candidate countries (38% in 1995-1998), the actual productivity of labour is still very low, only 26% of the respective EU indicator. Several restrictions are related to the production of energy based on oil shale (91% of electricity – 2001). The technology and equipment of power stations in Ida-Virumaa are outdated. Electrical power production as a whole is impaired by ravages to the environment and wasteful energy losses combined with low efficiency. The primary energy requirement per GDP unit in Estonia exceeds the respective EU indicator 5-6-fold. Continued production of energy by means of oil shale over the next 15 years demands large investments into technology and bringing the sector into compliance with environmental requirements.

  Developments in Estonia's electrical energy sector will depend on modernising oil shale combustion technology, a combined production of electricity and heat and the use of renewable sources of energy. The development potential of the processing industry can be seen in the re-orientation and provision of products with higher added value. Subcontracting for foreign companies can be substituted for extensive marketing of domestic products as we improve the technological level of production and strengthen independent product development. Improved co-operation between local research and development activities will provide Estonia with opportunities for creating a number of new knowledge-extensive branches of production.
- The tertiary (or services) sector has grown and developed fast in Estonia in the 1990s. The structure of services has diversified and productivity rates for both employment and labour have increased (more than 30% from 1996 to 2000). Exports in the transport and tourism services have helped to balance the trade

balance deficit. Leaving aside public services aimed at the general population (education, health care, social welfare), it can be said that further developments in the services sector are mostly dependent upon the public sector meeting certain pre-requisites. In improving the transport infrastructure, special attention should be paid to the construction and maintenance of main highways, railways and sea routes, their technical modernisation and elimination of "bottlenecks". The implementation of information technology has been fast in Estonia, but the limited number of user-friendly IT-applications and the emerging "digital gap" between various levels in the population will hamper further development. The increase in the number of tourists (tourism is estimated to provide 15% of GDP) is slowing down.

Estonia has several opportunities for enabling it to solve some of the problems highlighted above. In addition to the allocations from EU structural funds, the income from transit traffic can be used for the development of transport infrastructures (ports held by the state, railways that have been partly privatised). IT implementation can be easily enchanced because of the existing high-level technical infrastructure and society's favourable attitude towards new technology. The main demands for the growth of tourism is better marketing, the provision of new products and the prolongation of tourists' stay in Estonia. These goals can be achieved by directing tourists away from the capital city and drawing their attention to the rest of the country with its historical values, architectural heritage, pristine nature and cultural life based on old traditions.

- Business in Estonia today got its main start in the 1990s. Business and entrepreneurship have been the main sources of positive economic development. At the same time they pose a number of problems. During 1994-2000, employment in the business sector has not gone up. Although there is no statistical data for accurate comparison, estimates show that entrepreneurial activity in Estonia is only one half of the average EU indicator. The fact that the level of business activity is different on the regional level is also one of the reasons for regional disparities. While in Harjumaa (with Tallinn) the number of operating enterprises per 1000 inhabitants is 34.3, in Ida-Viru County the respective figure, where unemployment rates are the highest, is 9.7.

  Development opportunities are mostly related to SMEs, which contribute 99% of the total number of enterprises and provide 2/3 of the jobs in the business sector. Increases in the number of enterprises and of employment come mainly from micro-enterprises (0-9 employees). Here the public sector could help by eliminating certain conditions that hamper progress (such as lack of capital and labour), providing business-related skills and knowledge, easing an overly complicated legal framework, etc.

- Weak R&D is a major problem in Estonia's economy. Total expenditures on R&D amount to only 0.7% of GDP; while in the EU the respective indicator is 1.9%. The disparities are related mostly to the limited participation of private sector (only 30% of total expenses), reflecting a situation where technological development activities are scarce. In Estonia, the number of patent applications per 10,000 inhabitants comes to only 0.1 (the respective EU average is 2.5).

  The good educational level of Estonia's labour force can be seen as an advantage for the strengthening of RTD&I role in Estonia (23% of labour has tertiary level education). The same is true for researchers that are competitive on an international level. The public sector could contribute to more intensive co-operation between research and business by a partial management of R&D risks and by establishing certain co-operation structures.

1.3. PEOPLE

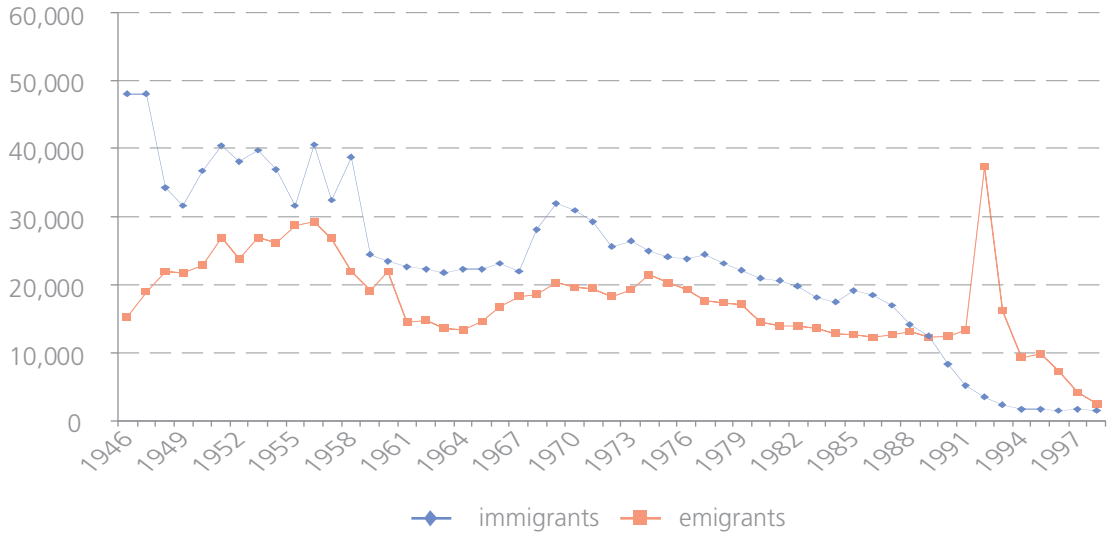
1.3.1. POPULATION

In the 1990-2000 period, the population of Estonia decreased by approximately 200,000 people, or 13%. This reduction can be attributed both to emigration and a natural fall in the birth rate. During the 50 years of the Soviet period the population situation changed drastically as the number of people of Estonian nationality in the population dropped from the pre-war figure of 88% to 61.5% in 1991.

In the beginning of the 1990s, more than 100,000 former immigrants from the former Soviet Union countries and their descendants left Estonia. According to registration figures, 37,375 people left Estonia in 1992. In the 1990s the negative balance in migration was the reason for a decline of 85,000 people in the population (Figure 32). Since those leaving Estonia were mostly living in bigger towns, the number of urban dwellers dropped as a result of emigration, while the share of people of Estonian nationality in the whole population went up from 61% to 67.9% in 2000.

Figure 32

Immigration and emigration, 1946-1999

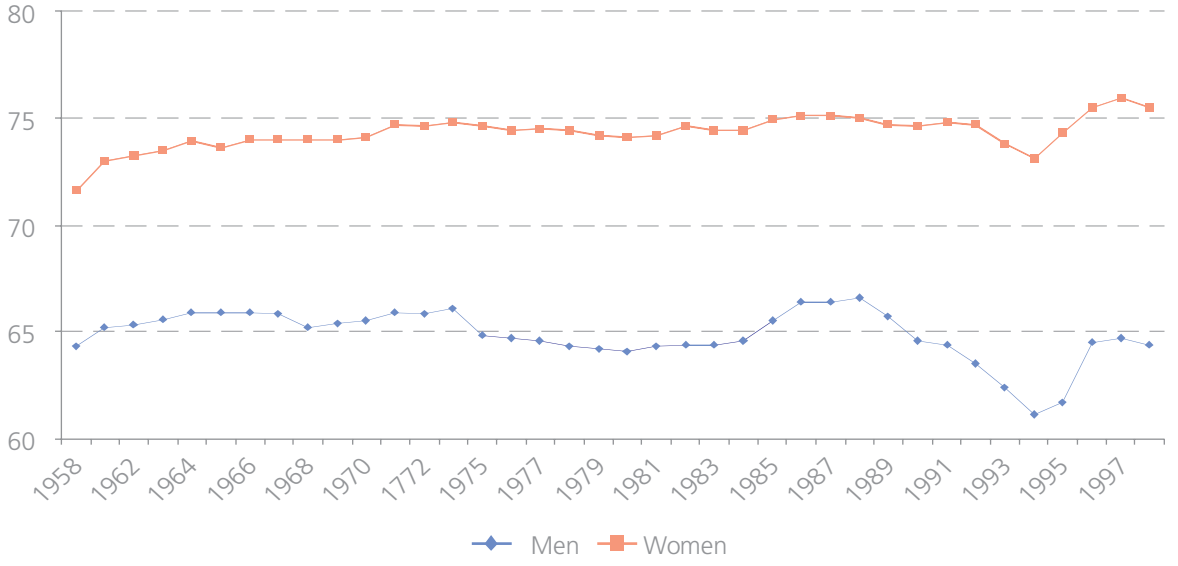


Source: Statistical Office of Estonia

The birth rate has been falling steadily since 1989. While the total fertility rate was 2.26 in Estonia in 1988, by 2001 it had dropped to 1.34. In the meantime, the death rate has increased as the population gets older. The average life expectancy among the general population is one of the lowest in Europe. The average expected life span for men at the moment of birth was 65.1 in 2000, for women 76.0. The average in the EU in 1999 was 74.9 years for men and 81.2 years for women. The average expected life span for men has not exceeded the level of the 1980s, whereas for women it has increased to a certain extent (Figure 33).

Figure 33

Average life expectancy, 1958-1999



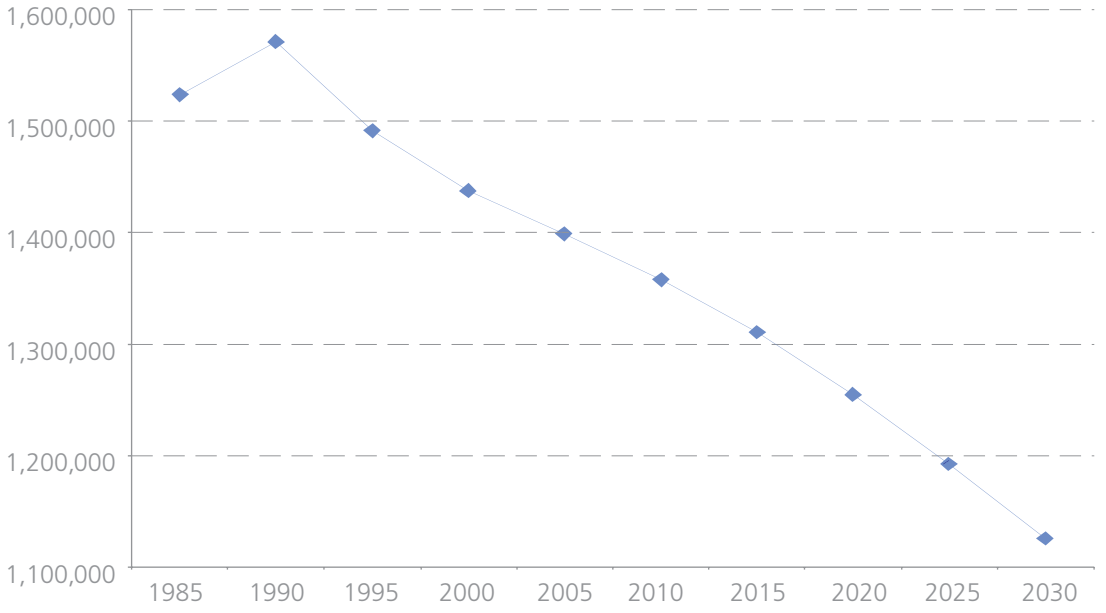
Source: Statistical Office of Estonia

The main reason for the negative natural increase is the decreasing birth rate. As a result, the number of children aged up to 4 years has dropped by a half and the number of children aged 5-9 years by 40 % compared to 1992. The number of aged people has increased.

Several forecasts have been developed about the population in Estonia (UN, Statistical Office of Estonia, Office of the Minister of Population). The following information is mostly based on the estimates developed by the Statistical Office, considering the different demographic trends of Estonian and non-Estonian communities and assuming these trends to be the same as in 1998. The effect of migration has not been included in the forecasts (see Figure 34).

Figure 34

Changes in population numbers, 1985-2030: Forecast



Source: Maamägi, A. (1999). Estimate Number of Population in Estonia and Gender and Age Composition in 2000-2035, Population I, Demographic Overview 1998, SA of Estonia

According to the forecast, population numbers will continue to fall. In the decades to come the number of children will decrease even more, and in time the population decline will shift over to older age groups.

The working population will increase considerably until 2010, so that the dependency ratio will improve compared to the present situation. After that the number of workers will start to drop. Since the number of children will be decreasing simultaneously, the ratio between labour and dependent people is not going to be impaired. This ratio is characterised by a dependency index, expressed as a ratio of the total number of dependent people (aged 0-19 and over 65 years) to the total number of labour (people aged 20-64) (Table 36).

Table 36

Population by main age groups in 2001-2035

	0-19	20-64	65<	Dependency index
2001	347,082	811,538	207,564	0.68
2010	270,186	873,391	214,074	0.55
2035	168,758	674,038	215,074	0.57

Source: Forecast made by the Statistical Office of Estonia

To sum up, it can be said that the ageing of the population will have no considerable effect on the economy of Estonia in the short-term perspective. The generation born at the end of the 1980s is only just beginning to enter active labour life, and by 2010 this may create considerable tensions at the labour market. The number of aged people will not increase so much as to cause great increases in current health care costs. However, the increasing life span will inevitably extend the need for a long-term social security system. Drastically dropping relative share of children and young people in society calls for considerable reorganisation. However, the reorganisation of educational network (reorganisation and closing down of schools) must not deteriorate the living conditions of families with children and the general level of education provided for children.

As for the long-term perspective, the sustainability of the Estonian population is questionable. Therefore, it is important to develop and implement population policies aimed at increasing the birth rate and decreasing the death rate, thus stopping — or at least decreasing — the negative population trends in the long run. The population total cannot be stabilised over the next couple of years, as the structure of the population has determined some of the main characteristics of demographic changes. Only intensive immigration or emigration can cause essential changes.

The relatively large share of non-Estonians among the population is one of the characteristic features of Estonia. More than 1/3 of the population speaks Russian and has difficulties communicating in Estonian. Living in compact communities in Tallinn and the industrial cities in the north-eastern part of Estonia, they form a social group that is only weakly related to the society and culture of Estonia. The competitiveness of the non-Estonian population on the labour market is often poor because of their insufficient Estonian language skills. The integration of the non-Estonian inhabitants with the labour market and the whole society is a socially, economically and demographically complicated task to be addressed. For that purpose, Estonia is implementing the following integration policies aimed at:

- Language training opportunities provided for all age groups and speciality-related language training for adults;
- Maintenance of the culture and identity of non-Estonian national groups and increasing their social competence;
- Improved youth work among the Russian-speaking youth;
- Increased media consumption of Estonian and Russian programmes produced in Estonia among the Russian speaking population;
- Provision of support to Russian-speaking groups in the population who are exposed to social risk factors (AIDS, drugs, crime).

1.3.1. EDUCATION

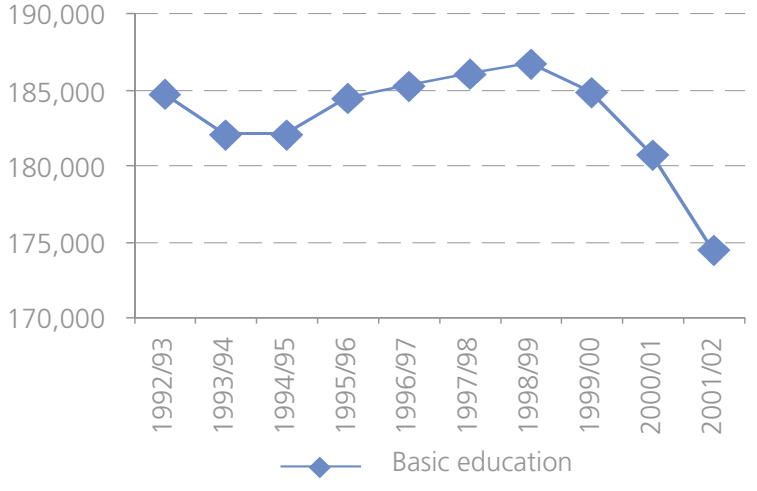
The level of formal education among the adult population of Estonia is rather high compared to the member states of the European Union. In 1999, the relative share of people with at least secondary education among the people aged 25-59 was 88% (the respective indicator for the EU is 64%). Nevertheless, the Estonian educational system has failed to keep up with fast changing labour requirements so as to provide young people joining the labour market with a level of education and professional skills that match labour market requirements.

Over the years to come, the decreasing population numbers will have a considerable impact on the Estonian educational system as a whole. In 2001, the number of students first attending school had decreased by 1,300 compared to the previous year. In future the decline in numbers of pupils in primary education will go down, but will remain negative nevertheless (Figure 35). Since in 2002 children born in the years with high birth rates were attending grades 7 and 8, the number of students have a different fluctuation rate at different levels of school (Figure 36). The number of secondary school students, for example, will be the biggest in the 2004 – 2006 period, when the size of the age group is largest and therefore calls for additional classes in vocational education.

The decreasing number of students at different levels of education has a direct impact on the school network and the government regulation for teacher training. Decrease in number of students means increasing demand for subject teachers, while the demand for class teachers is dropping.

Figure 35

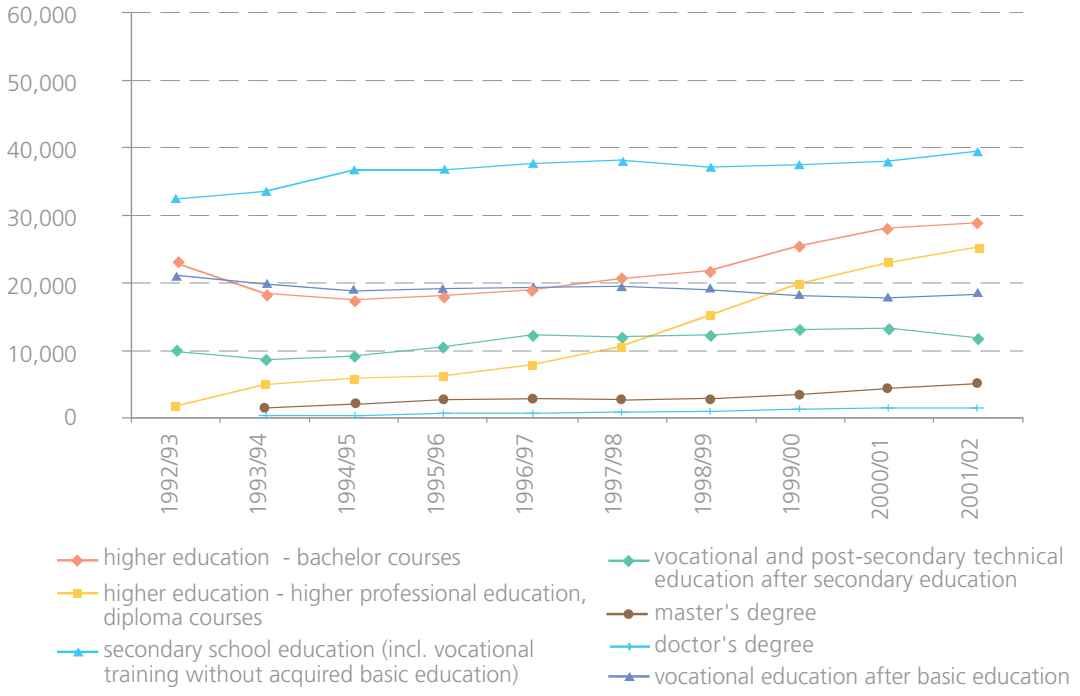
Number of students at basic level of education in 1992/93 – 2001/2002



Source: Ministry of Education and Research

Figure 36

The number of students by types of education in 1992/93 – 2001/2002



Source: Ministry of Education and Research

General Education

The formal education system should provide opportunities for obtaining good elementary and primary education, as at these educational levels students obtain competence enabling them to become judicious and responsible members of society.

In Estonia, ***the share of children attending pre-school childcare institutions*** has increased during the period of independence – from 54% in 1992 to 76% in 2000. Pre-school child care institutions are mostly set up by local governments and funded from local budgets.

Basic education is mandatory in Estonia. Local governments are mostly in charge of primary schools and secondary schools. Expenditures on municipal schools are funded from the state budget support provided to a municipal budget.

In 2000, the average share of young people aged 13-16 in education was 96% (Table 37).

Table 37

Young people involved in educational systems, aged 13-16, in Estonia and EU

Age	Population of Estonia (January 1, 2000)	Number of students in Estonia (Oct 1, 1999)	Relative share of young people involved in education, 2000, %, in Estonia	Relative share of young people involved in education, EU average, %, 1994/95
13	21,917	21,427	97.8%	100%
14	21,892	21,242	97.0%	98%
15	22,320	21,081	94.4%	97%
16	22,165	20,903	94.3%	91%

Source: Ministry of Education and Research; 2001, Eurostat

However, in the 1990s one of the major problems emerging in education was the ***increased number of students dropping out of school or having to repeat a school year*** during the third stage of study, that is, at the basic educational level (Table 38). In 2000/2001, 1,616 students, or 0.89% of the total number, dropped out of primary education. The number increased considerably among boys, amounting to more than 2/3 of all dropouts. Bringing back to school the children who have terminated their studies and providing all students with full opportunities for continuing studies is also a reason why dropping birth rates will not directly influence the level of expenditures on primary and secondary school in the near future.

Table 38

The Number of Students dropping out from Primary School by Gender, 1993-2000

	IN TOTAL	Girls	Boys	IN TOTAL	Girls	Boys
1993/94	782	249	533	0.43%	0.28%	0.58%
1994/95	871	251	620	0.48%	0.29%	0.67%
1995/96	799	228	571	0.44%	0.26%	0.61%
1996/97	830	278	552	0.45%	0.31%	0.58%
1997/98	819	214	605	0.44%	0.24%	0.63%
1998/99	920	220	700	0.50%	0.25%	0.73%
1999/00	998	277	721	0.54%	0.31%	0.76%

Source: Ministry of Education and Research

There are many reasons for dropping out. Teachers have grown used to working with homogeneous groups; the deteriorating economic situation in families; and lack of a system of school counselling for students and parents. Different measures aimed at making studies more efficient have been implemented in the past few years. These include greater varieties in the curriculum, special classes, home studies and alternatives for the individualisation of studies. Assessment of the measures has already been initiated. Although their implementation has been accompanied by in-service training, this has not been sufficient.

In recent years social problems have become more acute in Estonia; for that reason many parents are unable to take care of their children or provide them with opportunities for normal learning by making sure that they attend school. It would be better for the health and development of these children if they could spend the whole week in school. From the point of view of organisation, it would be possible to establish student dormitories at primary and secondary schools, the maintenance costs of which would be covered by local authorities.

The share of dropout students is high at the secondary school level, where young people should continue their studies until the age of 18. The implementation of professional training programs at the secondary level and career counselling would help to decrease the number of young people who find themselves on the labour market with no training.

Elaboration of curricula, but also improved basic and continuing training for teachers play a leading role in perfecting the content of education. A national curriculum framework endows a school with the necessary rights and responsibilities to develop a syllabus that is consistent with the specific characteristics of the school itself and the region to which it belongs, as well as with the wishes of its students. The system for the external assessment of study results (examinations at the end of different school levels, primary school graduation examinations based on common materials, state examinations in secondary schools) is being implemented. Students with special needs are provided with suitable conditions for studying in regular schools. The situation where young people find themselves on the labour market with no preparation could be avoided through the implementation of professional training in advance and a system of career consultation.

A better material learning environment also has an important role in improving the quality of education. Here the responsibility lies with both the state and the local governments.

Schools of general education have been supplied with computers within the National Tiger Leap Program. In-service training has supported the provision of computers for teachers and the distribution of new teaching materials. Nevertheless, the investments made so far are not sufficient. Only one computer per 28 students is available (2002), while the average ratio of students and computers recommended by EC is 10:1. In some countries there is 1 computer per 6-8 students. The project of bringing schools and Internet together has been successful – 96% of students are learning in schools with a permanent Internet connection (75% schools). At the same time additional investments are needed to increase the speed of data communications in schools with permanent connection by 4 – 10 times, as well as to provide all schools with Internet connections (this is either lacking, or of very poor quality, in 6% of schools). An important leap has to be made to bring computers and new technologies into different subject classes. The research has revealed that the share of students using computers in classes is 5-10%.

High-quality youth work give young people the courage and skills needed to implement the knowledge gained from formal education. Such activities also play an important role in forming young people's social competence by providing them with opportunities for diversified personal development. The purpose is to create the prerequisites that would enable young people to engage in creative development activities out of the family, studies and work, help them to socialise and become well-integrated members of society. The main development aspects for extracur-

ricular activities are the creation of structures for youth work, including the establishment of open youth centres, the development of a funding system for such activities and improving of the quality of spare-time activities by improving the training system and elaboration of quality standards.

The activities are being devised, co-ordinated and implemented on different administration levels in co-operation between the state, local authorities and non-government organisations.

Vocational Education

In the 1990s, vocational education has been forced to shift its focus from training labour for large-scale industries to training workers capable of using more complex technology for small enterprises. The vocational education system went through the first stage of reforms in the 1990s. The specialities being taught changed, and specialities characteristic of Soviet large-scale industry were replaced with those that matched the new needs of the Estonian economy. The reforms also involve implementing new curricula and reorganising school networks.

The last substantial change involves not only merging vocational schools and establishing vocational training centres, but also cutting down the number of state-owned schools devoted to occupational education and setting up private vocational educational institutions. The number of students attending vocational educational institutions has also increased considerably in Estonia (by 25% in 1993 – 2000).

The founding of regional multifunctional centres of vocational education has played a central role in reforming vocational training. Such centres have already been opened in Tallinn, Võru County and Narva. The main difference between the multifunctional centres and other schools of occupational training is the extensive range of activities provided by the multifunctional centres. The centres provide initial training based on vocational, secondary vocational or higher vocational education curricula, professional initial training (professional training provided for young people with no basic education), adult education and training for people with special needs. They also teach professional counselling, training for vocational teachers from other vocational institutions engaged in the sector, setting up curricula, providing instructions for setting up curricula for other vocational educational institutions, counselling for entrepreneurs and labour market analysis.

By 2003, similar regional vocational educational centres will also have been established in other locations (Kohtla-Järve and Jõgeva county – forest management). Simultaneously with the establishment of the multifunctional centres, the management of other vocational institutions will be consolidated for the purpose of more efficient management.

The further implementation of the reform of vocational education is largely dependent upon improving the qualification of teachers. The staff in vocational institutions is not being replaced by new teachers on a regular basis, which means that the education and working experience of many teachers does not match the requirements of contemporary training. The number of instructors under the age of 30 has dropped. In 1993, the number was 13%, in 1999 only 9%. At the same time the number of teachers and instructors over 50 years of age has increased from 32% to 41%.

Besides the high level of education, practical working experience gained at enterprises plays an important role in improving the quality of education provided by vocational educational institutions and in updating the curricula. At the moment, however, most enterprises are unable to take trainees.

Over several years the main problem of vocational education in Estonia has been the insufficient communication between vocational educational institutions and employers. Over the last couple of years employers have been invited to participate in the supervisory boards of vocational institutions. Further involvement of employers in the development of curricula and in providing teachers with the opportunity of training at enterprises would support the curricula with contemporary know-how matching the requirements of employers.

Continued development of the curricula in vocational schools is related to the ***development of a professional qualification system***. Together they are going to provide the grounds for the setting up of a national curriculum, including the professional competence requirements for a given specialty. Professional standards or a set of agreed skills, knowledge and personal characteristics at a certain level of profession or specialty provide the basis for acting in compliance with labour market requirements. By spring 2000, working groups involving a broad sample of representatives of employers, employees and third sector organisations, working at the Chamber of Commerce and Industry, had completed 80 different professional standards.

Graduates of vocational institutions during the last 10 years make up approximately 12% of the labour force today. Professional initial training is as important as continuing education and re-training for people who have completed

their education considerably earlier. The provision of prerequisites for the implementation of a module-based curriculum on legal level has given vocational educational institutions an opportunity to launch high-level training programs for adults. The ability and willingness of vocational schools to organise such training will help to facilitate the retraining of the labour force of today. In addition to teaching speciality-related subjects, vocational education should pay more attention to the provision of social and language skills, as well as skills related to information technology. In the north-eastern regions of Estonia it is essential to organise Estonian language courses aimed at enhancing the employability and social mobility of trainees not speaking the local language.

The level of infrastructure of vocational educational institutions varies greatly. Most of the training and production facilities have been built in the 1970-1990 period. New school buildings have not been built over the last ten years, although approximately 5% of the buildings have been reconstructed or renovated. The investments made into reconstruction have amounted to 4.14 million euro (64.8 million kroons) in the 1996-2000 period. Ca 0.96 million euro (15 million kroons) is spent per annum for the maintenance of buildings, totalling around 20% of the resources stipulated for management of such facilities. Most problems arise from the fact that the buildings are deteriorating fast, therefore it takes more and more money to improve their infrastructures and carry out daily maintenance.

Further investments in contemporary practical training bases equipped with modern tools and facilities are very important for improving the quality of vocational education. More efficient use of resources is one of the objectives of the reforms in vocational education that could be achieved by providing the students in similar specialities but in different schools with opportunities to make use of the training bases of the best-equipped schools.

Higher Education

Funding provided for higher education during the 1990s has contributed to the increase in the number of students. Since the academic year 1994/95 the number of students in different educational institutions has more than doubled. In 1994/95 the total number of students was 25,483; by 2001/2002 this had increased to 60,409. During the period observed, the increase in the number of students was the largest in the social sciences, business, and law-related specialities, both in the sphere of academic and applied higher education. The number of student places not funded from the state budget had increased more than ten times. In 2001/2002, 53% of the students were getting higher education with the help of funds allocated from the state budget, while 47% of students had chosen paid studies.

Since 2000, the activities undertaken by the ministry and universities in the sphere of higher education have been closely related to the implementation of Bologna declaration. The higher education development plan, "Reform of Higher Education in 2001-2002", endorsed by the Government of the Republic in June, 2001, was used as the basis for curricula reforms implemented in universities and applied universities in line with the Bologna convention. The changes are going to be the biggest in respect to the objectives to be established for bachelor and masters degree studies. Up to now, specialists were prepared on the basis of a one-level program that lasted four years and provided access to professions demanding higher education. Where in case of the old bachelor degree the students obtained final qualification, the new bachelor degree will only refer to the existence of basic skills and knowledge. Although universities of Estonia can choose whether bachelor programs are going to last for three of four years – the restrictions applied by the state only refer to the masters degree programs that are only financed for a period of five years – most of the universities have set the average length of a bachelor program as three years. Special skills and knowledge, accompanied by specialisation, are obtained in two years. The need for such amendments arises from the provisions of the Bologna declaration, characterised by comparable levels of higher education, clearly specified qualification levels, common principles for the assessment of the quality of higher education and the substance of studies. Implementation of these principles is aimed at the facilitation of the mobility of people in the European region.

One of the main problems encountered in maintaining the sustainability of top level research and higher education is the age structure of researchers and lack of top level specialists in areas of strategic importance for the country. Therefore, the activities that are going to take place over the next years should focus on the research and development strategy "Knowledge-based Estonia" endorsed by Parliament. The prime objective of the strategy is gaining of new knowledge, and extra measures are to be taken in order to achieve it. The level at which new skills and knowledge are implemented is seen as the main origin for better competitiveness of Estonian economy and labour and for an improved quality of life. Present measures are not sufficient for producing improvements in the quality and efficiency of academic research. Examples of such measures are: increasing grants earmarked for doctoral-degree studies by the Ministry of Education and Research, contracting for graduates when allocating state funds

instead of financing students, and forwarding doctoral-degree studies to universities abroad as of the academic year 2002/2003. Contracting for training priorities in specialities supporting the development of industry – technology and machinery, environment protection, production and processing, IT – is difficult in academic higher education, where the number of researchers with doctoral degrees is insufficient to support fast developments in this sphere. Not all students who have obtained doctorates go on working at the university, yet the increasing number of MA students in higher education calls for additional number of people with PhD degrees. It is therefore going to be critical over the next decade whether and how the sufficient number of professors is to be obtained. In addition one must not forget about the increasing need for top-level experts in the developing industrial sector and in the specialities needed for maintaining national culture and identity.

As in other European countries, a network of higher professional institutions and vocational schools has been developed in Estonia in addition to academic universities. The aim of higher professional education is to offer university curricula that adapt easily to the changing economy and that stand out for their high level of practical training, requiring from their professors high professional standards and working experience in their respective specialities. Since universities specialising in the applied sciences are characterised by a clear orientation towards the labour market, 3-4 years of studies in applied universities will provide students with an education comparable to a BA, but with different qualifications. At the beginning of 2002, a total of 19,042 students were following the curricula of applied higher education — approximately 32% of students of Estonia. Higher education in applied sciences can be obtained at three different types of institutions: university, vocational schools and regional colleges of universities. In the near future, the priority of the sector of applied higher education is going to ensure the quality of higher education through accreditation and increase contracting for specialities strategically important for the state (IT, technology, health care, services).

Over the next couple of years the sector of applied higher education will carry out the expected consolidation of educational institutions. The merger of relatively small educational institutions dedicated to a narrow and specific area is going to support sustainable development and provide opportunities for a better distribution of resources intended for the development of libraries and technological centres. More attention should be paid to developing co-operative relations with the employers and representatives in these areas. Greater teamwork among educational institutions acting in the same area would not only lessen problems in competing for potential students and choosing curricula that are too similar, but also cut down on the inefficient use of state assets and resources.

Infrastructure in institutions of higher education needs to be improved to ensure better-quality education. In most cases the technical basis for study and research is badly deteriorated and this area urgently needs state support. Libraries are among the most important components in academic education. Because of limited resources, all (especially private) institutions of higher education encounter problems in procuring the most contemporary instruction and research literature. International expert commissions in their curriculum accreditation reports have repeatedly stressed this aspect.

Adult Education

Because the population of Estonia is decreasing, an efficient re-training system for adults, accessible for all, is of utmost importance. For that purpose, professional training programs need to create studying opportunities for people for whom learning is not the basic occupation and improve access to vocational and voluntary training.

Adults in Estonia now have the opportunity to obtain a general secondary education through part-time studies. Adult students are also admitted to vocational educational institutions providing secondary schools graduates with part-time training programs. In both cases the studies are funded by the state budget.

In the academic year 2000/2001, a total of 1,309 people gained basic education in evening classes and by correspondence, 5,062 adults obtained general secondary education and 3,368 secondary vocational education (including post-secondary education). At the moment students are not admitted to part-time studies for obtaining secondary vocational education after they have completed primary school programs. It would therefore be expedient to increase opportunities for adults to study in high schools and open universities.

Reorganisation of complementary and in-service training systems intended for people actively participating in the labour market is a sphere that needs special attention. Up to now, focus is on re-training the unemployed or people with lower qualifications. The real implementation of life-long learning in Estonia calls for the establishment of complementary and in-service training mechanisms extending to all interested parties. Funding should be based upon shared accountability by state, local government, employer and student. The main role of the state should

be the development of opportunities and terms for student loans. Procedures should be developed for judging the potential of a trainee's in-service instruction and work experience prior to professional training.

When it comes to securing opportunities for work-related professional training, the state budget has made allocations for the training of civil servants and teachers in state and municipal education. The legislation also provides for the training of the unemployed within the framework of labour market policy. Complementary training is being established at vocational training centres for the purpose of extending the opportunities for the professional training of adults.

The state supports the development of voluntary training centres by financing those that hold a license and provide training in volumes exceeding 3,600 student-hours with an amount equal to the wages of the manager of the centre and two teachers. In 2001, the number of people learning in centres receiving state support totalled 30,000.

Education Policies

Major shifts have taken place in the education system of Estonia over the last decade. Both the content of training and the system of educational institutions, as well as the organisation of education as a whole, have changed. The national pre-school and general education curriculum and national academic education standards have seen new developments during the transition period. The ratio of fields of training has been modified in both vocational and higher education. A network of schools that matches the changes taking place in number of students is being established, and most of the former institutions of the Estonian Academy of Sciences have merged with the universities. The share of the private sector has increased in education, as has the relative share of paid studies in public universities. A reform of vocational education, aimed at securing Estonian society with well-qualified labour, has begun. Estonia has agreed to international framework agreements that provide its citizens with an opportunity to participate in the educational sector and on the European labour market. Agreements such as the Bologna and Sorbonne Declarations which establish a common European educational space, and the Lisbon Convention which acknowledges academic certificates and provides access to academic education will boost this kind of participation. Also, the Recognition of Foreign Professional Qualifications Act has been passed in Estonia.

The following improvements should be noted among the changes that have taken place at different levels of education.

National framework curricula have empowered schools to develop school curricula that take into account the specific features and regional character of a school as well as the wishes of the students. An external study-results evaluation system has been implemented (standard tests passed at the end of each level, primary school graduation tests, based on common materials, state examinations in secondary schools). Conditions have also been provided for students with special requirements that attend regular schools. Estonian-language training, provided for non-Estonian students from different age groups, has become more efficient.

The application of a national model curriculum, based on professional standards, has been initiated in vocational education. The different social partners involved — employers, employees and educational representatives — participate in professional boards responsible for the development of a professional qualification system. Qualification standards for professional instructors have been passed. In accordance to these standards, all the instructors must have obtained a speciality-related or pedagogic academic degree by 2003.

A national accreditation system, employing foreign experts for more objective assessment, has been established to assure the quality of academic higher education. Opportunities for obtaining higher education have increased, thanks to the growth in number of private institutions of higher education and the establishment of open universities. The state has increased the number of positions in MA and doctoral degree programmes. Most of the former institutions of the Estonian Academy of Sciences have been amalgamated with universities, thus providing better and more efficient opportunities for development and application of intellectual potential. Applied higher education and vocational higher education curricula have been created to meet the labour market requirements and applied institutions of higher education have been established. A general state-secured student loan system has been established to provide all capable students with access to higher education. A national mandate for qualified students is used as a tool for funding public universities from the state budget. In 2000, the state also submitted a similar mandate for certain specialities to private institutions of higher education.

While in the second half of the 1990s the implementation of single projects in educational research was continued, the scope of applying the outcome of such studies has been restricted to a limited number of areas. At the moment, there are no applicable educational research projects that could be implemented within the framework of curricula

for basic and complementary training provided for instructors, simultaneously supporting passing and successful implementation of political decision at different levels of education.

A system of coefficients for regulating the wages of teachers involved in general education, facilitating the maintenance of an optimum school network and providing students with the opportunity to attend a school close to home has been developed. During the past five years, the wages of teachers in schools of general education have increased continuously. Since 1996, the average wage of a teacher has almost doubled; however, the wages of junior teachers have not yet exceeded the national average wage level. Qualification requirements have improved, creating a situation where only teachers with a pedagogic degree are teaching in schools. The relative share of young teachers among school staff has also increased: in the academic year 1999/2000, the respective share of teachers in both the 30-40 and 40-50-year range was 27%.

Perspectives

The situation of education in Estonia compared to the EU is characterised in Table 39.

Table 39

Educational indicators in Estonia and the EU

Indicator	Estonia	EU
The relative share of 4-year-old children in pre-school child care institutions, 1997 (%)	69	79
The relative share of people with at least secondary education among people aged 25-59, 1999 (%)	88	64
The relative share of education-related costs in GDP, 1997 (%)	6.7	5.0
The relative share of students continuing their studies in accordance to vocational education curriculum in 1996/97 (%)	37	

Sources: Key data on education in the European Union – 1999/2000 Luxembourg, 1999; Unity, Solidarity, diversity for Europe, its people and its territory. Second report on Economic and Social Cohesion, Vol. 2. Luxembourg, 2001

More than 2/3 of Estonia's children are undergoing primary education, and the respective indicator has been increasing over the last few years until it approaches the indicator in Sweden. The formal level of education in the Estonian population is higher than the respective EU average (similar to some other countries of Central and Eastern Europe). Over the last years the average expected study period increased to 15.9 years in Estonia[29]; compared to 1992, it has increased by three years. Such an increase can mostly be related to the number of students almost doubling over the period under review. The average expected study period in Estonia is one and two years shorter than in Germany and Finland respectively.

Regardless of the tight budget, the relative share of educational costs in GDP has been increasing over the last five years. In 1999 it totalled 7.7 %. Considering the low level of GDP, the absolute value of the expenditures is still lower than the respective figure in the EU.

The reputation of vocational education has been rather bad in Estonia for quite a while now. Although the relative share of students choosing vocational education has increased over the last years, it is still considerably lower than in most European countries, where the majority of students completing their basic education decide to learn a profession. This is also one of the reasons why Estonia suffers simultaneously from unemployment and lack of qualified labour. Several studies have also revealed the lack of interest in the natural sciences and technical specialities at the universities of Estonia. Such a circumstance does not speak in favour of technical and industrial development.

The labour market needs people with good teamwork and communications skills; capable of independent learning, taking decisions in new situations and handling contemporary technology. A labour force matching these requirements can only be trained if changes are made at all levels of education. Here we could point out improvements in the educational system and the organisation of studies, but above all, development of curricula and teacher training. While learning opportunities are created for adult learners, their previous learning and working experience should be taken into consideration, and they should also provide extended help in combining study, work and family life. It is important to create mechanisms in formal education for taking into consideration previous in-service training and work experience.

1.3.3. LABOUR MARKET[30]

General Overview of Labour Market

During the whole period of independence, the number of employed people has decreased in Estonia, while the number of unemployed and inactive people has gone up. The changes in labour market during the second half of the 1990s are characterised by the main labour market indicators (Table 40).

Table 40

Population aged 15-64 by economic activity and sex, 1997-2002

	1997	1998	1999	2000	2001	2002
Population aged 15-64	925.8	919.0	915.6	915.9	916.5	916.3
men	441.7	438.5	436.8	437	437.5	437.8
women	484.1	480.6	478.9	478.9	478.9	478.5
Labour force (ths.)	669.8	658.7	643.8	645.2	642.1	632.1
men	346.7	339.3	331.7	332.5	328.9	324.6
women	323.1	319.5	312.1	312.7	313.2	307.5
Employed (ths.)	604.1	593.0	563.8	555.9	560.1	565.6
men	311.1	302.1	286.3	283.1	285.5	289.0
women	293.0	290.9	277.5	272.7	274.6	276.6
Unemployed (ths.)	65.7	65.8	80.0	89.3	82.0	66.5
men	35.6	37.2	45.4	49.4	43.4	35.6
women	30.2	28.6	34.6	40.0	38.7	30.9
Inactive (ths.)	256.0	260.3	271.8	270.7	274.4	284.2
men	95.0	99.2	105.0	104.5	108.7	113.3
women	161.0	161.1	166.8	166.2	165.7	171.0
Labour force participation rate %	72.3	71.7	70.3	70.4	70.1	69.0
men	78.5	77.4	76.0	76.1	75.2	74.1
women	66.7	66.5	65.2	65.3	65.4	64.3
Employment rate, %	65.2	64.5	61.6	60.7	61.1	61.7
men	70.4	68.9	65.6	64.8	65.2	66.0
women	60.5	60.5	57.9	57.0	57.3	57.8
Unemployment rate, % (by ILO)	9.8	10.0	12.4	13.8	12.8	10.5
men	10.3	11.0	13.7	14.9	13.2	11.0
women	9.3	8.9	11.1	12.8	12.3	10.1

Source: Statistical Office of Estonia, Labour Force Survey

After a relatively stable period in 1995-1998, tensions surfaced on the Estonian labour market, caused mainly by the economic crisis in Russia, cutting down Estonia's exporting opportunities. At the beginning of the year 2000 the unemployment rate increased to a record 14.9% among people aged 15-64. The average unemployment rate that year was 13.8%.

The transition period can be characterised by increased numbers of people dropping out of the labour force. While 230,000 of people aged 15-64 were inactive in 1990, the respective figure in 2001 was already 274,000. The main reasons for this phenomenon are increasing numbers of students, as well as health problems. In the nineties the number of people inactive due to handicaps or disease has doubled. The increased inactivity caused by health problems can be ascribed to generally deteriorating public health and the poorer labour market competitiveness of people with health problems. The share of discouraged persons among inactive people has increased. These are people who have given up their search for work, but who would still be interested in working when given the chance. The number of discouraged people accounted for 22,000 in 2001 (that is, 5.8% of the inactive people).

Employment

In 2001, a total of 560,000 people in the population aged 15-64 were employed in Estonia, 8% of them in part-time jobs. Of those employed, 51% were men and 49% were women. Male workers dominated age groups 15-39 and 55-64, while women dominated age groups 40-54 and over 65. Due to the raised retirement age, the relative share of employed women older than 55 years has increased. One third of the employed were non-Estonians, working mostly in Tallinn or Ida-Virumaa.

The distribution of employed people by economic activities is approaching the employment structure of developed countries. The relative share of agriculture and industry in employment has decreased considerably, while the share of the services sector has increased. In 1991, 16.4% of the employed were working in agriculture, but in 2001 the figure was only 6.5%. Such a sharp and rapid decline in employment in agriculture has caused constant unemployment in rural areas, especially in southern Estonia. In the service sector, the number of employees has grown both absolutely and proportionately. Due to the development of private business, jobs have increasing most rapidly in the fields of trade, finance, business and real estate development.

The relative share on white-collar workers has increased simultaneously with a decline in the relative share of blue-collar workers. This is due to the fact that as the economy was re-structured, labour with low qualification, especially men, were made redundant. As white-collar workers have a higher level of education, their position on the labour market is also stronger, and on losing jobs it is easier for them to find a new position.

Although the number of employed has decreased all over Estonia during the transition period, the decline has been bigger in rural areas. In towns, 57% of the age group 15-74 are employed; in rural areas the respective figure is 51%. The number of people employed in areas other than their place of residence (city or municipality) has increased. In 2001, their relative share was 23% of the employed population. In rural areas the respective indicator was 43%.

The education level of the employed population is relatively high. The share of the workers with higher education among the total employed amounted to approximately 21% in 2001 (Table 41). In total, 32% of employed people had third-level education. The respective figure is going to increase in future, since the number of educational institutions and opportunities for learning have increased over the last few years. Vocational education, not flexible enough to meet the labour market requirements, is still a problem.

Table 41

Labour force (aged 15-74) by education and sex, 2001

(annual average, in thousands)

Education level (ISCED 97)	Employed	%	Un-employed	%
I level and less	**53.9**	**9.2**	**14.0**	**20.9**
men	33.4	5.8	9.4	14.0
women	20.5	3.5	4.7	7.0
II level	**338.0**	**57.7**	**41.3**	**61.5**
men	188.6	32.2	21.5	32.0
women	149.5	25.5	19.8	29.5
III level	**193.6**	**33.1**	**11.8**	**17.6**
men	75.5	12.9	5.3	7.9
women	118.1	20.2	6.5	9.7
Post-secondary technical after secondary education	66.0	11.3	5.9	8.8
men	19.5	3.3	2.2	3.2
women	46.5	7.9	3.8	5.7
Higher education	127.6	21.8	5.9	8.8
men	56.0	9.6	3.1	4.6
women	71.6	12.2	2.8	4.2
TOTAL	**585.5**	**100.0**	**67.1**	**100.0**

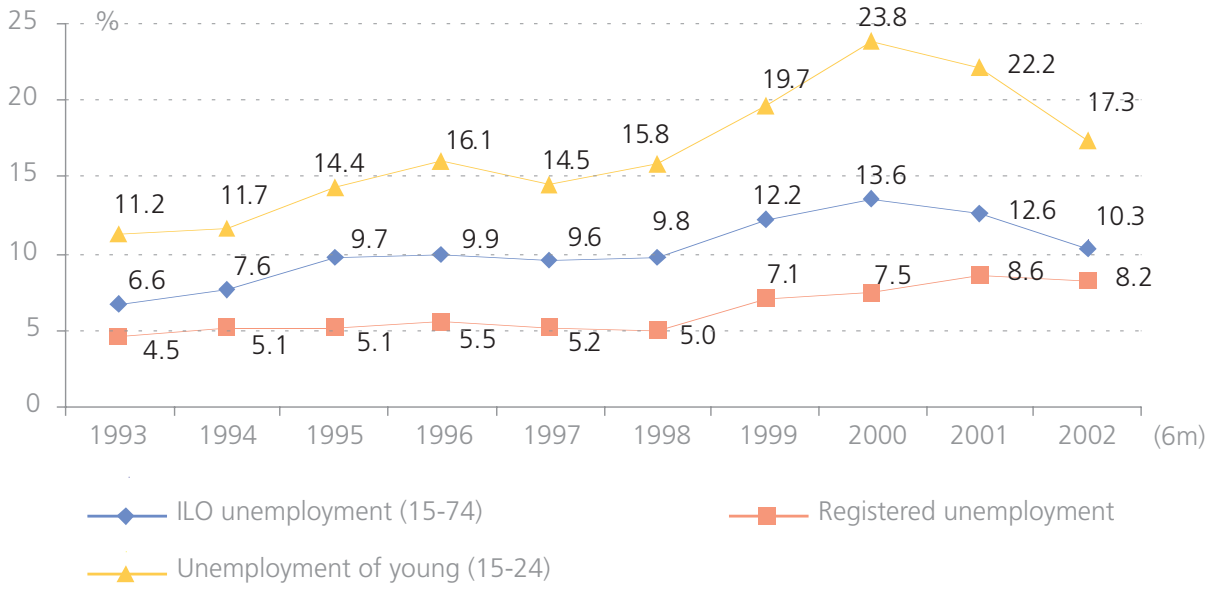
Source: Labour Force Survey ESA 2001

Unemployment

In 1999-2000, the general unemployment rate in Estonia went up from 10% to over 13%. In 2001 the unemployment rate started to drop and the average unemployment rate decreased to 12.6%. Due to the improved economic situation, unemployment continued to decline during the first half of 2002. In the second quarter of 2002, the unemployment rate dropped to the lowest level in the last five years, down to 10.3 (Figure 37).

Figure 37

Unemployment rate dynamics in 1993 - 2002



Source: Statistical Office of Estonia, Labour Force Surveys; Data of Labour Market Board

There are several reasons for becoming unemployed. According to survey data on the labour force, most of the unemployed (55%) have lost their jobs as a result of becoming redundant, or the enterprise being closed down. Some 18% of people left their jobs on their own initiative, and 11% of the unemployed are former students. The latter group includes mostly young people aged 15-24 who have not been able to find a job after graduation or on terminating their studies.

According to the Living Conditions Survey of 1999, approximately one half of the unemployed men had formerly been employed in the processing industry or in construction. One half of the unemployed women had also been employed in the processing industry, or in a trade known for its high labour turnover. The number of employed women is also the largest in these areas. Numerous former transport and agricultural workers are among the unemployed as well, while the number of representatives of other economic activities is considerably smaller.

As we analyse previous employment figures, the number of former blue-collar workers stands out among unemployed men: 82% of them were former craftsmen, machine builders or operators, or unskilled workers. As for unemployed women, the largest group is among former service and sales workers, unskilled workers, technicians and associate professionals.

In Estonia, unemployment rates are higher among men, even though their employment rate is actually higher by eight percentage points. In 2001, 13.2% of men and 12.3% of women among people aged 15-64 was unemployed. Unemployed women give up more easily and become inactive. It is most difficult to find a job for men and women over 45 who have no special education, or whose skills do not match the requirements of today's labour market.

The unemployment among young people (aged 15-24) starting out in a career, being higher than in other age groups, is also a problem (Figure 35). In 2001, young people accounted for more than one fifth of the unemployed and their unemployment rate was 22.2%.

Insufficient Estonian language skills often become an obstacle for job seekers. In 2001 the unemployment rate among Estonians was 10.4%, while among non-Estonian speakers it was 16.8%. The unemployment rate is especially high among young non-Estonian women, reaching 28.6%.

The length of time spent in searching for employment is of special importance (Table 42).

Table 42

The unemployed by duration of the unemployment period and sex, 1997-2001

(annual average, in thousands)

Year	Up to 6 months	6-11 months	Over 12 months (long-term unemployed)		TOTAL	% of the unemployed
			total	24 months or more		
1997	21.7	14.0	30.1	17.8	65.8	45.7
men	12.1	8.1	15.5	8.6	35.6	43.5
women	9.6	5.9	14.7	9.1	30.2	48.7
1998	22.9	12.1	31.1	17.1	66.1	47.0
men	13.2	7.2	17.0	9.4	37.4	45.4
women	9.8	4.9	14.1	7.7	28.7	48.8
1999	27.6	16.0	36.9	21.3	80.5	45.8
men	15.2	9.0	21.6	12.4	45.7	47.3
women	12.5	7.0	15.3	8.9	34.8	44.0
2000	35.7	13.4	40.8	24.0	89.9	45.4
men	19.2	6.8	23.5	14.1	49.5	47.5
women	16.6	6.6	17.3	9.9	40.5	42.7
2001	29.9	13.0	40.1	25.6	83.1	48.3
men	13.6	7.3	22.8	14.7	43.7	51.2
women	16.3	5.7	17.3	10.9	39.3	44.0
2002	21.3	10.4	35.5	23.0	67.2	55.7
men	10.4	4.5	21.3	14.3	36.1	59.0
women	10.9	5.9	14.3	8.8	31.0	46.1

Source: Statistical Office of Estonia, Labour Force Surveys

The proportion of people looking for work for 6 months on average has been around 1/3 over the years. The exception was 2000, when a large number of new job seekers increased the relative share of short-term unemployment to 40%. In 2001 there were 40,000 *long-term unemployed* (people searching for a job for 12 months or more), amounting to 48% of the total number of the unemployed. Comparison of 1995 data with those from 2000 shows that the absolute number of the long-term unemployed has almost doubled. Long-term unemployment is a problem for both Estonians and the non-Estonians. The relative share of men and women among long-term unemployed was respectively 52% and 44% in 2001. A sharp increase in the share of long-term unemployment was observed in the first half of 2002, when the number of new job seekers shrank.

The difference in the unemployment rates of rural and urban populations has been circa one percentage point over the last few years. The only exception was 2000, when unemployment rates were high both in towns and in the countryside: 13.7% of rural and 13.5% of urban workers were unemployed. In 2001, unemployment rates differed notably by counties, extending from 7.7% on the island of Hiiumaa to 20.6% in Jõgeva County and 18.1% in Ida-Virumaa. Comparison of 2001 data with those of 2000 shows that during the year reviewed, unemployment increased in Jõgeva, Lääne, Valga and Viljandi counties.

The low educational level of the unemployed and skills not matching the labour market requirements also pose a problem. Although the unemployment rate is high, there is also a lack of qualified labour. We are therefore speaking mostly about structural unemployment. As a developing economy needs specialists and skilled workers with high qualifications, education obtained years ago fails to be competitive in the labour market of today. Comparing the education of the employed and the unemployed shows that the educational level of the unemployed is considerably lower. Therefore it can be said that a higher level of education means competitive advantages in the labour market. According to the Labour Force Survey, completed in 2001, the unemployment rates of people with basic and higher education were respectively 21% and 5.6%.

Registered unemployment data and data provided in labour force surveys differ considerably, mostly because people lack the motivation to register as unemployed. The number of registered unemployed went abruptly up after the Employment Service Act, which provided all registered unemployed with an opportunity to apply for labour market services, took force on October 1, 2000. In November of the same year, the number of registered unemployed exceeded 50,000 and reached a peak level by March 2001– approximately 59,000. Both the registered and LFS unemployment have consistently decreased in the first half of 2002.

Comparison with the EU average shows that in Estonia the unemployment level is higher, while more or less matching the average respective indicator of Central and East European countries (Table 43).

Table 43

Labour market indicators of EU and Estonia (population aged 15-64)

	EU 2001	Estonia 2002
Employment rate %	64.1	61.7
Men	73.2	66.0
Women	54.9	57.8
Unemployment rate %	7.4	10.5
Men	6.5	11.0
Women	8.7	10.1
Youth unemployment rate %	13.9	17.6
Share of long-term unemployed from unemployed %	43.7	52.9

Source: Statistical Office of Estonia, Labour Force Survey 2001; OECD Employment Outlook, July 2002.

Labour Market Policies

Next, the labour market policies of Estonia will be characterised around five Policy Fields implemented by European Social Fund.

Developing and promoting active labour market policies to combat and prevent unemployment (ESF Policy Field 1)

The task of developing a labour market policy lies with the Ministry of Social Affairs. On October 1, 2000, two legal acts took force: the Social Protection of the Unemployed Act and the Employment Service Act. The Unemployment Insurance Act took force on January 1, 2002.

The following strategic documents are used as guidance for promoting employment:

- Joint Assessment of Employment Priorities in Estonia, developed in co-operation with the European Commission;
- National Employment Action Plans for 2000 IV quarter – 2001, 2002 and 2003, based on employment strategy of the European Union and guidelines for employment;
- National Employment Programme for Ida-Virumaa, developed under the guidance of the Ministry of Economy and in co-operation with the Ministry of Education and Ministry of Social Affairs.

In Estonia, the responsibility for the implementation of labour market policies lies with the Labour Market Board, administrating 16 regional employment offices. Employment offices provide labour market services, register the unemployed and pay them unemployment benefits.

The state allocations for labour market measures have been increasing on a consistent basis, but their relative share in GDP is still rather low. In 2001, it only amounted to 0.22% while the respective rate of funding amounts to 3-4% in EU. A major share of such an increase has been used to fund the increasing need for benefits.

The dynamics of labour market expenditures in Estonia is given in Table 44 (shown as a relative share in GDP).

Table 44

State expenditures of active and passive labour market measures, 1997-2001

(% in GDP)

	1997	1998	1999	2000	2001
Passive measures	0.08	0.08	0.16	0.14	0.13
Active measures	0.09	0.08	0.08	0.08	0.09
Relative share in GDP, %	0.17	0.16	0.24	0.22	0.22
Relative share in GDP, % (with social tax paid on unemployment benefits)				0.34	0.34

Source: Ministry of Social Affairs

Compared to the situation in the EU, labour market policy is rather passive and insufficiently funded in Estonia. In 2001 only 38.5% of the total expenditures on labour market measures were spent on active measures. The review of state expenditures on different labour market measures in 1995-2001 is given in Table 45.

Table 45

Expenditures on labour market measures in 1995-2001

(thousand euros)

	1995	1996	1997	1998	1999	2000	2001
Unemployment benefits*	1,749.04	2,510.32	3,198.96	3,650.22	7,689.88	7,567.32	8,194.11
Labour market training	1,121.45	1,474.05	1,783.07	1,774.17	2,044.73	2,077.58	2,713.82
Stipends	301.94	316.94	343.31	260.21	384.74	411.62	492.12
Emergency work	70.33	142.44	147.67	120.26	211.61	213.38	-
Employment subsidy to unemployed	232.40	239.32	252.27	236.70	270.67	304.54	287.60
Employment subsidy to employer	21.83	51.30	61.44	69.40	115.25	142.59	220.88
Administration costs	817.05	871.61	979.82	1,210.99	951.50	1,141.55	1,419.22
IN TOTAL	4,314.04	5,605.98	6,766.54	7,321.95	11,668.36	11,858.57	13,327.75

** social tax not included*

Source: Labour Market Board

National Employment Action Plans for 2000 IV quarter – 2001, 2002 and 2003 are based on European Employment Strategy and employment guidelines. To increase employability, state labour market institutions provide active labour market measures – labour market training, labour market subsidies for the unemployed to start business and employment subsidies to employers willing to employ less competitive, unemployed people. In 2001, only 14.1% of registered job seekers participated in active labour market measures. According to employment guidelines, the goal is to achieve a participation rate of 20% of unemployed.

In 2000, the average labour market training lasted for 24.7 days; the re-training courses lasted for 41.5 days. According to the adult training survey, in 2001 63% of people having passed the training found themselves jobs.

Participation of unemployed in active labour market measures in 1995-2001 is shown in Table 46.

Table 46

Participation in labour market measures in 1995-2001

	1995	1996	1997	1998	1999	2000	2001
Total number of registered unemployed per year	77,294	93,649	85,890	81,638	105,782	120,921	136,861
Passive measures:							
Receiving unemployment benefit	39,789	44,421	46,679	48,428	63,610	67,412	70,438
Active measures:							
Labour market training	9,809	9,343	8,241	7,956	7,027	8,150	10,233
men							3,388
women							6,845
Employment subsidy to employer	121	249	216	136	265	189	366
Employment subsidy to unemployed	459	456	434	380	433	413	425
men							172
women							253
Community placement	5,741	4,089	4,661	3,771	3,667	4,177	125
Vocational counselling						2 055	8 159
Active measures in total:	16,130	14,228	13,552	12,243	11,366	14,795	19,308
Relative share of job-seekers participating in active measures	20.9	15.2	15.8	15.0	10.7	12.2	14.1

Source: Labour Market Board

Several steps have been taken to make the implementation of the national employment schemes more efficient. A number of new consultants have been employed at the Labour Market Board and its regional agencies, vocational counselling services have been developed, and a new labour market information system is to be completed and implemented in the near future. Nevertheless, there's still a lot of space for development, as the number of registered unemployed per one employee of public employment service is still high in Estonia (228 per month) and vocational counselling is not available to all those needing it.

In August 1999 the Government, employers and trade unions concluded an agreement on establishing tri-partite employment councils at regional employment offices to encourage local initiative to solve regional unemployment problems. Employment councils are intended to counsel regional labour market offices in planning and implementing active labour market measures. Up to now, 5 regional employment councils have been established.

Promoting equal opportunities for all in accessing the labour market and improving social inclusion (ESF policy field 2)

The analysis undertaken in preparation of the Joint Inclusion Memorandum identified that factors such as age, low or disrupted educational achievement, outdated qualifications and skills, disability or insufficient knowledge of Estonian language predetermine vulnerability in the labour market. In the Estonian labour market, vulnerable groups include young people, unemployed people with a low level of education, long-term unemployed, disabled people, people in pre-retirement age and people not speaking the Estonian language. Similar risk groups have also been highlighted in many other countries.

In most countries, unemployment rates have been traditionally higher among the ***young people*** (aged 15-24) than the total unemployment rates. In Estonia, the unemployment of youth has been increasing on a constant basis. In 2000, more than 6,000 young unemployed persons were added to the list of job-seekers; by the end of year the total number of young unemployed amounted to 25,000. In the IV quarter of 2000 the unemployment rate among youth was 26.4%, while at the same time the respective figure in the European Union was 15.8%. In 2001, the unemployment of the young dropped to 22.2%; the decline continued in 2002 in line with the decline in total unemployment rates, amounting to 17.3% during the II quarter of 2002. In Estonia, the situation of the youth is made even more complicated by the fact that the retirement age is being raised every year and the number of job vacancies is decreasing. The number of jobs created is limited, and as new employees are hired, they are expected to have some previous working experience, often absent in the case of the graduates.

Regional unemployment offices implemented nine pilot projects for youth within the framework of the implementation of National Employment Action Plans for 2000 IV quarter – 2001. The pilot projects were aimed at decreasing unemployment among the young and increasing employment by adjusting and implementing the existing labour

market services (vocational counselling, information concerning training opportunities and the labour market situation, labour market training and job mediation). These projects involved more than 291 young people; 210 of them got jobs.

At the end of 2003 a Phare project, "Support to the youth employment", will be launched. Within the framework of the project, intentions are to design and implement active measures aimed at better integration of the young people into the labour market in Ida-Virumaa, the south-eastern part of Estonia and the islands. The final output of the project will be guidelines for the combined implementation of different labour market measures in compliance with the actual needs of the young unemployed.

Long-term unemployment is one of the most persistent and serious problems faced by many developed industrial countries. As the period of unemployment extends, it becomes more difficult to bring a person back to working life. It also becomes more expensive for the state. Elderly unemployed and people with low levels of education are at greater risk of becoming long-term unemployed. In 2001, the long-term unemployed amounted to 48% of the unemployed.

Regional employment offices have launched the project "Support for the employment of the long-term unemployed through labour market training and labour market subsidies to employers" for bringing the long-term unemployed back to the labour market. The aim of the project is the provision of labour market services to the long-term unemployed, considering the specific features and individual needs of respective target groups (individual counselling, labour market training, and labour market subsidies to the potential employers). So far, of the 480 long-term unemployed in Estonia who have taken part in the project, 354 have got themselves a job. The project activities were continued in 2002, with the emphasis on labour-market training that lasts up to 12 months in the case of the long-term unemployed.

The employment rate of ***disabled*** people, retired people and people in pre-retirement age has decreased considerably. While in 1990, 24.2% of disabled people in receipt of incapacity for work pensions were working, the rate had dropped to 13% by 1999. At the same time the number of people becoming inactive because of disease or disability has increased from 26,500 in 1991 to 48,100 in 2000. In 2002, according to the Labour Force Survey, 25% of working age population with long-standing health problems or disabilities were in employment as compared to 61% of their non-disabled counterparts.

Projects aimed at increasing employment among disabled people have been implemented in Tallinn and five counties (Ida-Virumaa, Jõgeva, Valga, Põlva and the island of Hiiumaa). The projects were called "Creating subsidised jobs for disabled youth in Estonia" and were meant for people aged 18-45 who were unable to compete in the labour market independently because of their health and had lost their working ability and were able to remain employed without a support network. In co-operation between the state (county councils and local municipalities), the private and third sectors, teams have been created to help the disabled enter the labour market and to support their work efforts once they are employed. According to the model already in place, the creation of subsidised jobs will continue in 2002 within the framework of the programme "Increasing employment, preventing long-term unemployment and forestalling the exclusion of the risk groups from working life".

In addition, the PHARE funded project "Enhancing employment opportunities for disabled persons" (2003-2004) in partnership with the UK Department of Work and Pensions aims at helping disabled persons into the labour market through reviewing employment, rehabilitation and benefit services to achieve better match with the needs of disabled; promoting joint working among employment offices, vocational and rehabilitation institutions and benefit departments; designing work place adaptation scheme; working with employers to raise their awareness of disability issues and provide assistance in recruitment and disability management.

When it comes to age groups, in addition to young people the situation is the most difficult for those ***aged 50-54.*** The number of unemployed in this group has been increasing very fast over the last three years – by 78%. These are people who have not yet reached retirement age and lack the right to get a preliminary pension. For them it is difficult to find a new job, as employers prefer to hire younger people. Many men and women aged 50 or more have given up job-seeking and have become inactive. Therefore it can be expected that unemployment among the elderly is higher than demonstrated by statistics.

On January 15, 2002 the national programme for the implementation of the basics of the elderly people policy in Estonia in 2002-2005 was endorsed. The IV sub-objective in the programme – greater opportunities for self-realisation of the elderly and active participation in public life – is aimed at improving the situation of the ageing labour force. Two measures are applied to achieve the objective: supporting the implementation of actions specified in the national employment action plan, and facilitating access to the Internet. In the 2003-2005 period the following

activities have been planned: promoting employment among people of pre-retirement age, creating conditions for a smooth transition from working life into retirement and fostering part-time work at retirement.

The unemployment rate is also very high (16.8%) among ***ethnic minorities*** who do not speak the Estonian language. Insufficient knowledge of Estonian is often an obstacle for these people when looking for employment outside their home area. A large number of them are living in Ida-Virumaa, where unemployment rates have been among the highest since the beginning of the transition period. The Government of the Republic on April 10, 2001 approved the Ida-Virumaa national employment programme. The aim of the programme is to ensure focussing of state resources through the comprehensive implementation of entrepreneurial, social and educational resources in order to decrease unemployment in Ida-Virumaa. To draw investment, it was deemed necessary to offer the companies investing in the region additional benefits through the development of infrastructures and training of employees. Parallel to contacts with investors, the programme also emphasises supporting local entrepreneurs, modernising the vocational education system, creating a vocational guidance system and organising continuing training and retraining of the unemployed**.**

The Joint Inclusion Memorandum highlights the need to expand and resource active labour market measures so as to support the reintegration into the labour market of those who are unemployed, especially the long-term unemployed and other vulnerable groups. The JIM emphasis the importance of providing more individualised and tailor-made help through developing and implementing individual action plans.

Promoting employability, skills and mobility through lifelong learning (ESF policy field 3)

During the transition period vocational education has been forced to shift its focus from preparing labour for large-scale industries to training skilled labour for small enterprises and specialists capable of operating more complicated technologies (see also 1.3.2. Education). Vocational education has been converged with the requirements of the employers by involving the representatives of employers in the boards of vocational educational institutions. Here problems arise from the lack of knowledge among entrepreneurs concerning the number and skills of employees to be needed in future. Nevertheless, as the economic environment stabilises, entrepreneurs are going to be able to make more specific long-term plans.

Further training and re-training of people who have obtained their education more than 10 years ago is essential for the alleviation and prevention of structural unemployment. Regional employment offices are providing unemployed people with training courses lasting up to 6 months, but until now no professional training system meant for people actively participating in the labour market exists. The training system for working people should take into account learners' previous education and working experience. It should also create conditions for reconciling learning, work and family life.

Since October 2000, regional employment offices are providing a new employment service – ***vocational counselling.*** This aims at helping both the adults and young people entering the labour market for the first time to find a job or training course matching their education, professional experience and personal characteristics. To date, 18 vocational counsellors are working at 16 regional employment offices all over Estonia. In 2001, vocational counselling was provided for 8,159 job seekers. The target group of persons in need of vocational counselling includes above all the following people:

- unemployed young people, because of their lack of vocational or professional training or working experience, limited knowledge about the world of labour and their lack of job-seeking skills;
- long-term unemployed, because of the loss of their vocational or professional skills and their social dejection related to the long absence from the labour market;
- unemployed people in need of retraining, because of the need to choose a new profession in demand on the labour market.

In their daily work the counsellors use the career information distributed by the Labour Market Board, materials introducing job seeking and the situation on the labour market, and the information gained by employment offices and the counsellors themselves. One of the most important sources of information is Internet database Rajaleidja – the Pathfinder – that includes the most frequently used educational and labour market information.

To make the professional counselling service more efficient, it is planned to create additional positions for vocational counsellors at regional employment offices, and improve the availability of systematic and regular information concerning the situation on labour market (describing, for example, the demand for labour by fields and occupations). Plans are also to prepare occupational profiles for the clients, translate counselling materials and manuals from English and publish leaflets introducing young people to the principles of choosing a job. Vocational counsellors must be provided with continuing training to keep their knowledge and skills up-to-date.

Promoting a skilled, trained and adaptable workforce and developing entrepreneurship (ESF policy field 4)

The development of entrepreneurship is mostly the task of the Ministry of Economic Affairs and Communications and its agencies. The business support structures developed in the administrative area of the Ministry provide newly established small and medium-sized enterprises with several support measures, from improved funding opportunities to the provision of continuing training and retraining for the employees of such enterprises (see also 1.2.5 Business, 1.2.6 Research & Development activities and Innovation). Unemployed people with experience as entrepreneurs, or having passed a special training, can apply for an employment subsidy for starting their own business from the employment offices. In 2001, 425 unemployed people started a business of their own.

Among other things, attention is paid to the development of social dialogue at enterprise level and related possibilities of flexible work, aimed at the adaptation of enterprises and their employees.

Improving women's access to, and participation in, the labour market (ESF policy field 5)

As the overall employment has decreased, the employment rates of both men and women have dropped as well. However, the employment rate of men has stayed higher, remaining for those aged 15-64 at 65.2%, while the respective rate among women was 57.3% (in 2001). Women drop out from labour more frequently, becoming inactive and staying at home. In 2001, the relative labour force participation rate of women was 65.4% while the respective figure for men was 75.2%.

Women are mostly concentrated in fields with wages lower than average and the number of women in higher positions is also considerably smaller. While in 2001, 15.1% of men were managers, the respective indicator for women was 8.6%. Nevertheless, the relative share of women is 2-3 times higher among top-level specialists, mid-level specialists, civil servants and services and sales persons. At the same time, the relative share of men on the lower levels of classification system was considerably larger. While 61% of men are working as craftsmen, the same can be said for about 28% of women. Therefore, both vertical and horizontal gender segregation can be observed in Estonia. It is common that women do most of the domestic work, take care of the elderly people and the children. As a rule, this is done in addition to their paid work because either regional location or their own economic situation prevents them from making use of child-care or care services for the elderly. According to a Time Use survey carried out by Statistical Office in 1999-2000, the average time spent by men on household work and family is 2.41 hours a day, while the same indicator for women is 4.47 hours.

On average, wages received by women are ¼ lower than wages for men. In 2000, the average hourly wage for female workers amounted to 75.4% of the men's wages. Research has shown that women are constantly paid lower wages in all the professions. In the 1990s in Estonia there was no profession in which women received wages equal to men. Smallest differences are in the civil service, where women earn approximately 90% of the wages earned by men.

The problems related to the wage difference between men and women can only be solved if both the private and public sector employers were to recognise the principle of paying workers equal wages for equal work, regardless of the gender of their employees.

In 2001, the share of entrepreneurs among men was 10.2%, while the respective share among the women only amounted to 4.6% (in 1997 the respective indicators were 9.1% and 3.0%). Over the last couple of years, however, the relative share of female entrepreneurs has increased 1.5-fold. Men and women aged 25–45 are the economically most active group, and the share of entrepreneurs in this group is the largest. Business opportunities are being used mostly in agriculture and trade. The next popular activities for men are industry and construction; for women, catering and industry. Going into business depends very much on the confidence and positive attitude of people. Research has shown that women have less self-confidence and belief in their opportunities to manage a business.

As we compare the gender disparities between Estonia and the EU countries, the overall situation in Estonia indicates slightly smaller differences between men and women. The gender differences both in employment and unemployment rates are not that big in Estonia. As women leave the labour market for different reasons more frequently than men, the higher unemployment expressed by statistics, should be considered as a serious problem.

Gender equality can only be promoted by raising people's awareness of gender issues and implementing related measures in labour market policy. Special attention should be given to matters related to reconciling work and family life, an issue not yet sufficiently recognised neither by employers nor employees.

1.3.4. HEALTH CARE

Factors Influencing Health

The World Health Organisation (WHO) defines "health" as not only the absence of disease or infirmity, but also the state of a person's physical, mental, and social wellbeing. In accordance to the concept adopted by WHO in the 1980s, the state of one's health is mostly influenced by one's lifestyle, behaviour and habits (50%). The contemporary approach to health also includes the recognition and consideration of a person's living environment (approximately 20%) and hereditary factors (20%). Organisation and availability of health care services only account for 10% of the population's state of health.

Aggravated social problems and problems with the environment increase the risk of health damage. In Estonia, risk groups for poverty have clearly emerged that lack a proper awareness of health, or behaviour that puts one at bigger health risk. People belonging to lower socio-economic status often suffer from health problems, lack the opportunities for healthy eating and have poor access to health care services[31]. In comparison to EU, the living environment in Estonia is worse in the quality of food and water and in air pollution, but when it comes to radiation and atmosphere, we are better off. Intestinal infections are more often spread through food than water. Allergies caused by food additives have also become a common problem.

The positive changes in the lifestyle of Estonian population during the second half of the 1990s can be characterised by the increased relative share of people considering their health to be good, or relatively good, according to health self-assessment. The dropping number of smokers characterises this period, and healthy eating habits and exercising are becoming more popular among the population as well. Unfortunately, alcoholism has not decreased over the last decade, and drug addiction rates have increased considerably in the last five years. Statistically this is evident from an abrupt growth in the number of cases of alcoholic psychosis, which went up by 20% in the 1990s. Furthermore, surveys do not reveal any positive changes in the alcohol consumption among young people. According to the European School Survey Project on Alcohol and Other Drugs (ESPAD) survey, 90% among 15-16-year old pupils have used alcohol and about 20% of them have used some drug. The high levels of alcohol abuse are also reflected in the growing number of traffic accidents and injuries. To combat the alcohol and drugs consumption, the Government of Republic has approved the National Alcoholism and Drug Abuse Prevention Programme for 1997- 2007.

The availability of medical assistance as a factor affecting people's health is discussed later.

Mortality and Incidences of Disease

In 2000, in Estonia the ***average life expectancy*** at the birth was 70.7 years which is 7 years less than the respective average indicator in the EU countries. In Estonia, the life span of women is considerably longer then for men (in 2000, the difference was 11 years). The main reason for the low level of life expectancy among men (in 2000 – 65.1) is the high level of diseases of circulatory system causing early death.

As in other developed countries, diseases of the circulatory system are ***the main reasons for death*** in Estonia, rating for more than a half of all deaths. Cancer and external factors (accidents, injuries and poisonings) come next. Comparison with North- and West-European countries shows a considerably higher death rate caused by injuries and poisonings in Estonia. The mortality rates for both women and men relating to the diseases of the circulatory system are more than three times higher than the average of the EU. Although the number of deaths caused by external factors have been decreasing since 1994 for both men (4 times) and women (2 times), the respective indicator for Estonia is still twice as high as the EU average.

In Estonia the number of people who die in traffic accidents is almost twice as large as the average in EU countries. Over the past year the number of people injured in the workplace and the amount of benefits paid to such people has increased considerably. One reason for such an increase is probably the more efficient control mechanisms and implementation of new methods of risk analysis. Comparison to developed countries shows that in Estonia the number of occupational diseases registered is smaller; and the study and registration of occupational diseases is complicated.

The infant mortality rate has decreased in Estonia but is still higher than the average indicator in the EU (in 2000, 8.4 and 4.9 respectively). The slight improvement is accountable for the decrease in the early neo-natal mortality (0-6 days) that refers to the improved medical care.

As in most developed countries, non-infectious diseases dominate the ***structure of disease***. The most frequent are diseases of the circulatory system. According to statistics, the incidence of diseases of the circulatory system is

considerably higher in Estonia than in the EU. Over the past few years, lung cancer has increased, especially among women. Other respiratory diseases have also increased.

As for ***infectious diseases,*** the rapid distribution of HIV-infection in Estonia since the second half of 2000 is the most serious problem. In 2001, 1,067 new cases of HIV-infection per one million people per annum were registered in Estonia, while the respective EU indicator was 54 new cases per one million people. In most cases, it is the injecting drug addict that gets infected; nevertheless, spread by sexual intercourse is becoming increasingly common. The next risk group includes young people – 71% of registered HIV cases are people aged 13-24 years. The Government of the Republic has approved the National Programme for Prevention of HIV and AIDS for the years 2002-2006.

Another serious problem is the incidence of tuberculosis, exceeding the respective EU indicator almost fourfold. The incidence of venereal diseases has dropped somewhat, but is still considerably higher that the respective EU level.

Availability and Applicability of Health Care

The Estonian health care system has undergone major changes in the 1990s. These are reflected, above all, in the attempts to rationalise the organisation of health care and put the resources available into more efficient use. The reorganisation of the health care system, started when the country regained its independence, is mostly working in two directions. First, creating awareness of public health as an independent sphere and organisation of related activities, and secondly, replacing centralised health care services with a decentralised model that includes market economy elements.

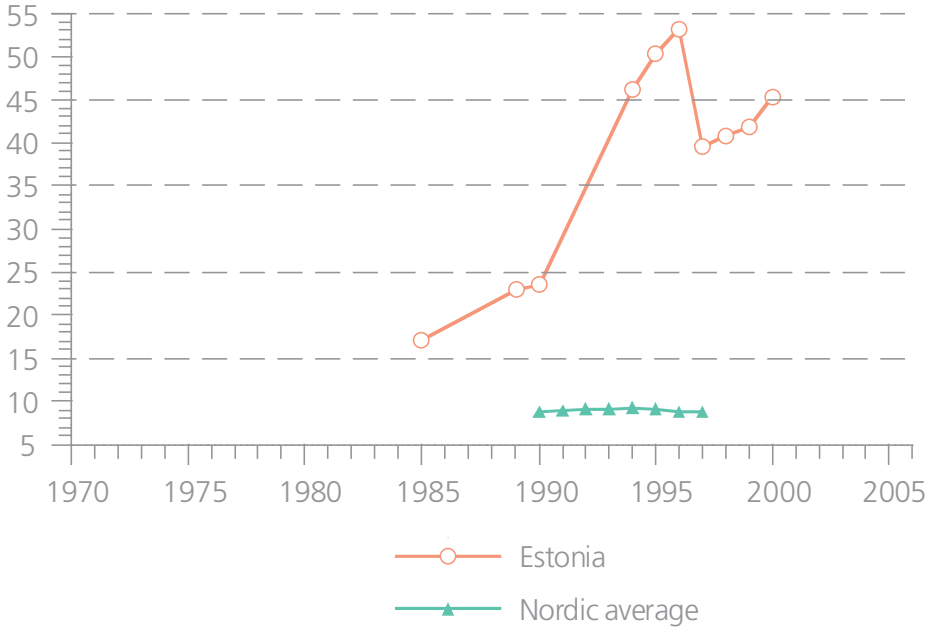
Social health insurance was introduced in 1992, and 95% of Estonia's population have valid health insurance. Health insurance funds are used to cover roughly 80% of people's health-care costs.

In 1998, a family-practitioner system was implemented in order to smooth out the initial level of medical care and ensure that first-level care services were consistently available. Today, medical reforms have gone smoothly. The number of institutions providing first-level medical care per 100,000 inhabitants grew abruptly in Estonia over the last decade, overtaking the respective average European indicator by almost half. Compared to the Nordic countries the difference is fourfold (Figure 38). Some differences are obvious in the organisation of the system since in Estonia the number of out-patients received by family practitioners is close to the average EU indicator. More than a half of ambulatory health care institutions are units run by family practitioners.

Figure 38

Number of first level medical care institutions

(per 100,000 inhabitants)

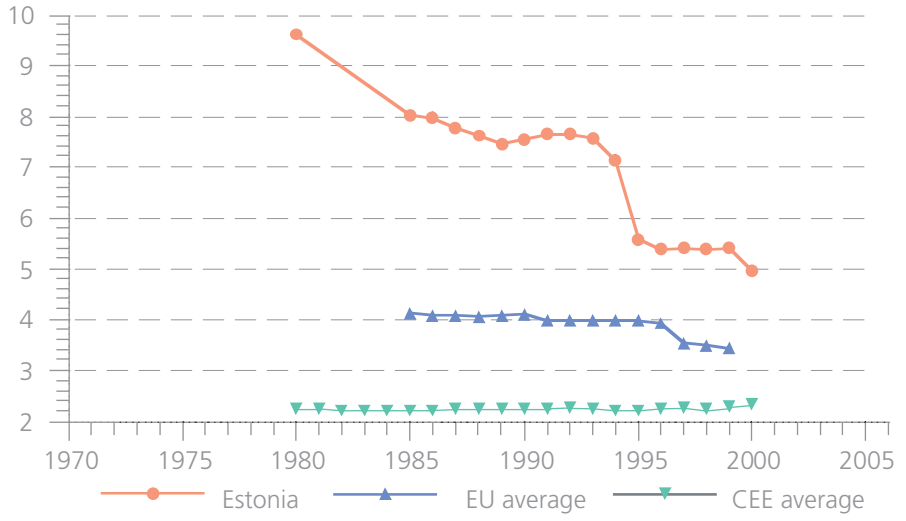


Source: WHO Health for All Database, June 2002

Figure 39

Number of hospitals

(per 100,000 inhabitants)



Source: WHO Health for All Database, June 2002

The number of hospitals decreased by a third in the 1992-1999 period (from 118 to 78), mainly because of the closing down of small hospitals because of their low efficiency both in the medical and economic sense (Figure 39). Several small hospitals have been reorganised into nursing homes, some have been replaced by ambulatory or health centres. According to data from the Ministry of Social Affairs, there were 67 hospitals in Estonia at the end of 2001, of which 36 were devoted to general care, 11 to specialised care, 14 to chronic care and six to other types of care. Because of administrative reorganisations carried out in 2001, the number of hospitals has dropped even more, and in the beginning of 2002 there were 52 hospitals in Estonia.

While the number of beds has decreased twofold, there have been no considerable changes in the number of people treated in hospitals. This is mostly attributable to shortened period of hospital stay, which has been facilitated, among other things, by the implementation of more efficient methods of treatment.

The relative share of the private sector in the health care system has increased. This is especially notable in stomatology and in first level medical care, where the major share of family practitioners work as sole proprietors or as heads of a private business.

The share of total expenditures on Estonian health care as a percentage of GDP increased in the 1997-1999 period, but has started to drop again over the last couple of years. In 2001, total health care costs amounted to 5.5% of GDP. Although the relative share of health care expenditures in GDP is comparable to the respective indicator of some European Union countries (for example, Ireland), the health care expenditures per capita – expressed as purchase power parity – are still three times lower than the respective EU average.

Regardless of the fact that considerable changes aimed at improving the efficiency, availability and quality of the Estonian health care system have already been implemented, the poor optimisation of the hospital network and poor conformity with requirements can be still seen as a problem.

During the last thirty years of the Soviet period, big hospitals accommodating 300-400 beds were built in most of the large county towns. The capacity of such hospitals apparently exceeds real needs and capacities. Therefore, several hospitals have cut down on facilities and beds over the last decade. Unfortunately, neither rehabilitation care nor long-term nursing opportunities were extended simultaneously with the cutting down of the number of beds. Therefore, hospital facilities are being used in an inefficient way for in-patients not really in need of hospital treatment.

This has also caused several problems attributable to the hospital network:

- too low number of in-treatment beds (the average per 100,000 inhabitants is higher than in most EU countries);

- too large a rate in bed occupancy (in 2000 – 66.1%, considerably lower than the respective EU average);
- too long a period of stay in in-patient hospitals (in 2000 – 7.3 days, considerably higher than the respective EU average);
- several hospitals have a servicing area too small to maintain a desirable level of medical care;
- limited share of day-care and surgery;
- limited opportunities for nursing and rehabilitation services (9.8% of all the beds).

Most Estonian hospital buildings were built more than 20 years ago and their technical condition has deteriorated, with the result that the facilities are inefficient or functionally unsuitable for a hospital. The size, location and condition of the hospitals do not match the real needs, as medical care was organised according to different principles when the hospitals were built. The present poor status of the hospitals is attributable to the fact that no considerable investments to improve the status of buildings have been done over the last 10 years, or the investments have been random and not focused on future needs. The depreciation costs of hospitals are currently not accounted for in Estonia, to say nothing of improving the material basis of the hospitals, and the material assets held by the system are systematically deteriorating. The relative share of capital costs in health care costs in total has dropped annually, and in 2000 and 2001 it accounted for only 2.1% and 1.3% of the total health care costs respectively.

An Estonian hospital network development plan for 2015 has been devised for optimising the hospital network needed to provide uniform quality in medical services, the availability of such services and their compliance with the needs and sustainability of the hospital network. According to the plan, 19 in-treatment hospitals are necessary for providing the population of Estonia with a suitable number of hospital services. These include three regional hospitals, one of which is going to be the university hospital, four central hospitals and 12 general or local hospitals. The choice of locations for the hospitals take into consideration demographic indicators, infrastructure and the size of the serviced area. As for geographical availability, the principle of locating a hospital within the radius of 70 km, or 60 minutes, of driving from any settlement is kept in mind. The restructuring of hospitals is going to take place step-by-step over the next 10 years, accompanied by the substantial reconstruction of hospital facilities. The estimated expenditures related to the implementation of the development plan, accompanied by the reconstruction and renovation of in-treatment hospitals, is 4.4 billion Estonian kroons. Concentrating expensive medical care services into a limited number of in-patient hospitals saves on resources and maintains the qualification level of doctors. The reconstruction of hospital networks is intended to contribute to the efficient management of hospitals and provide for the sustainability of hospitals within the limits of the health insurance budget.

Perspectives

The potential exists for development in both public health and health care in general.

Public health should be strengthened. For that purpose all children should be provided with the opportunity to learn in a healthy school environment. Establishing positive social support networks should help choices in health behaviour for the whole population; everybody should be given the chance to live in a secure, health-promoting environment. Political decisions that influence public health and involve people in activities and decisions that support health will create prerequisites for making decisions that promote health. An efficient promotion of health will bring along changes in both health-influencing factors and in individuals, both in the environment and in the social and economic spheres. Investments in programmes based on previous evidence, devised in accordance to the health-promotion principles and aimed at the prevention and early detection of diseases will ensure an improvement in the quality of life for the population.

The health of people depends to a great extent on the ***environment they live in***. Supporting social networks creates a feeling of security and enables them to cope with the problems and challenges of life. Extension and development of the third sector has a direct impact on the development of the health potential of the whole population. The risks proceeding from factors damaging the physical environment should also be decreased to improve public health.

We should keep to the final goal of ***the health care system***: providing those in need with optimum availability and keeping better health-care quality and services in mind when reforming the system. For ensuring a high-quality, well-balanced health care system, efficiency must be improved by improving the hospital network, developing human resources and putting the funds available to a more efficient use. General medical care, brought to the patients through the services of a family practitioner, should be the core of health care system. A well-organised family-practitioner system also means a smaller burden for the other components of health care system – emergency and special care.

1.3.5. SOCIAL PROBLEMS

Poverty and Social Exclusion

The number of households living in poverty has been decreasing as a result of favourable economic developments and strengthening social protection system. However, the risk of poverty rate at 18.3% (2000) in Estonia is higher than the EU average rate of 15% (1999) and also higher than the average for accession countries (14%) when using the EU agreed indicator on relative income poverty (60% of median income with equivalence scales 1:0.5: 0.3). By 2002 the relative poverty rate after social transfers decreased to 17.9%

Income disparities remain the highest of the accession countries and significantly higher than the EU-15 average. The ratio between the national equalised incomes of the top 20% of the income distribution to the bottom 20% was 6.3 in 2000 as compared to 4.4 in EU-15 and 4.6 in accession countries.

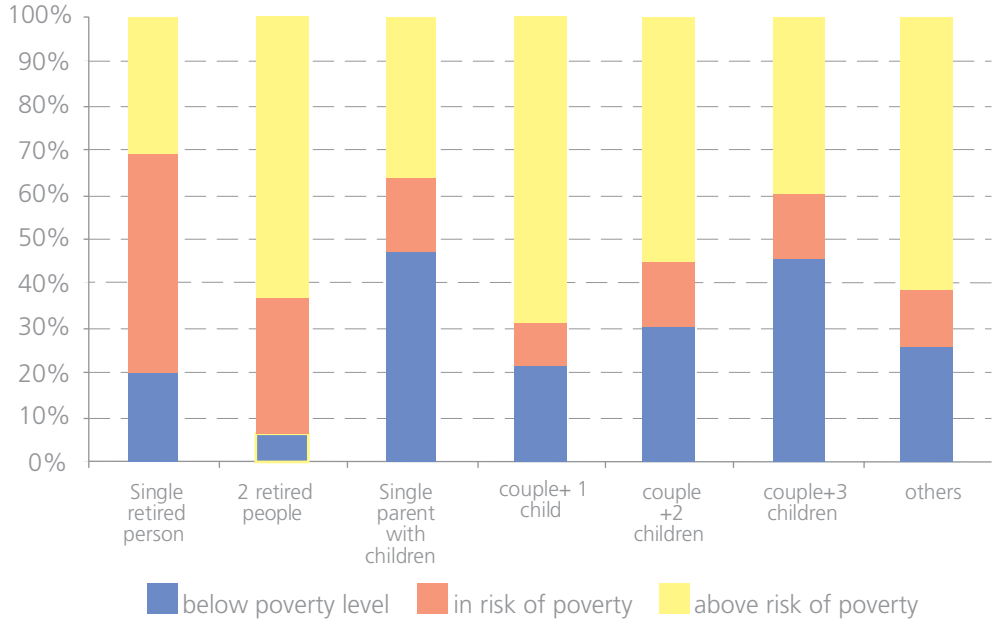
Using the nationally agreed indicator on absolute poverty shows that even though the poverty rates are falling with each year, in 2002 still 25% of population were living below the absolute poverty line. The most concerning fact is that over a third of children up to 16 years old (33.7%) lived in households with incomes below the absolute poverty line meaning they achieved only a minimal living standard.

Irrespective of the poverty line (relative or absolute) applied the groups at highest risk of poverty are: unemployed (in particular long-term unemployed), large families and single-parent families. According to the study on effectiveness and impact of social benefits (PRAXIS, 2002) 62% of jobless households, 37% of families with 3 and more children and 35% of single parent families were poor. The same groups are identified to be with substantially higher risk of poverty also EU-wide.

The relative-at-risk-of-poverty rate after social transfers (including pensions) among the population 65+ has decreased from 18.1% in 2001 to 15.8% in 2002. However, elderly people living alone are often among the most vulnerable.

Figure 40

Distribution of households of different type by income deciles in 2000



Source: Household Income and Expenditure Survey, Statistical Office of Estonia

The Joint Inclusion Memorandum (JIM) draws particular attention to the link between poverty and unemployment, especially long-term unemployment, but also the high risk of poverty faced by large families and single parent families. The analysis carried out for JIM demonstrates how low level of education or skills mismatch with the requirements of the labour market, living in areas with high levels of unemployment, an increase in the number of dependants in the household, the loss of the ability to work due to poor health or age — often accumulate and produce a chain of unemployment, poverty and social exclusion.

The chain often starts with the lack of opportunities for acquiring education. Though the number of learners has increased, both amongst youth and adults, the share of people with basic or incomplete basic education has

increased as well (it is estimated that up to 10,000 young people at age of 17-24 have not achieved the basic education yet). Increasing early school leaving poses a serious risk of unemployment and, thus, poverty. The rate of unemployment by the level of education was between 6.6% (higher education) and 24.5% (basic education) in 2002. The Poverty Study in 1999 showed that low education level was associated with higher individual poverty risk. 31.3% of working age population with primary education lived in absolute poverty. For working age population with basic education the poverty rate was 26.5%, while among persons with secondary or higher education 17.9%.

The adult training survey (Adults in classrooms, 2001) indicates that the acquired level of education determines the possibilities for life-long learning as well: mainly workers with higher education and better position (managers, specialists, etc) have had the possibilities for updating their knowledge and skills (they have paid for it either themselves or it has been done by their employer).

From the regional perspective, poverty and social exclusion problems appear usually in regions with higher rates of unemployment. The rate of unemployment in the counties extends from 9.5% in Hiiu County to 22% in Ida-Virumaa. The differences are often caused by the uneven distribution of new jobs. The rate of unemployment has been higher in Ida-Virumaa and in South-East Estonia for years.

Wages have risen more quickly than the overall productivity of the Estonian economy. The increase in wages has not been homogeneous. The gap in wages has increased between those of managers, specialists, engineers and skilled labour, as has the gap between men's and women's wages. The average salary increased from 2,375 kroons in 1995 to 5,510 kroons in 2001, mostly due to the rise in the income of high-salaried employees. Wages are the lowest in high-unemployment regions, in agriculture, but also in public social and health services and welfare institutions.

The minimum wage rate is increased gradually as agreed between the social partners. In 2003 the minimum wage stands at the level of 2,160 kroons (138 Euros) per month, comprising only 34 % of the average monthly wage in Estonia (6,333 kroons /406 Euros in the 1st quarter of 2003). In 2001, social partners concluded an agreement on principles of reviewing minimum wage. The objective is to raise the minimum wage at least to the level of 41% of the average monthly wage by 2008. According to the Household Income and Expenditures Survey of 2000, roughly 8% of all employees had earnings below the level of minimum means of subsistence.

The Estonian social security system provides mostly universal coverage and protection in the case of social risks. There has been a significant improvement of social protection in cases of unemployment and disability – respectively through the introduction of earnings-related unemployment insurance and social benefits for disabled persons to compensate for the extra costs of living with disability. Within the universal family benefit scheme targeting has been increased on more vulnerable families such as families with small and/or with many children and single parent families. Social transfers make an impact on poverty reduction – in 2002, the relative poverty rate before social transfers (pensions included) was 25.3% and after social transfers 17.9%. However, the benefit real values are relatively low and do not always prevent poverty or lift recipients out of poverty.

For example, the low state unemployment allowance (400 kroons) means that the unemployed who do not qualify for the unemployment insurance benefit (80% of newly unemployed do not meet the eligibility criteria) need to additionally apply for social assistance or rely on support from other household members. In the 1st half of 2002, altogether 28,000 households with an unemployed member received social assistance; families with an unemployed member form 54% of all families to receive social assistance, and more than a half of these families have children as members.

Based on the trends presented above, the following risk groups can be defined as the most endangered by poverty and social exclusion:

- unemployed, especially the long-term unemployed
- low paid employees
- single parent families and large families (with 3+ children)
- elderly, especially those living alone
- non-employed disabled persons

Challenges in Alleviating Poverty and Social Exclusion

The Joint Inclusion Memorandum (JIM), the document prepared jointly by the Commission and Estonia to outline the main challenges and actual or envisaged policy responses in relation to tackling poverty and social exclu-

sion, emphasises the need for a strategic approach. This means mainstreaming a concern with poverty and social exclusion across all relevant policy domains – economic, social and employment – and ensuring that policies and programmes are co-ordinated and integrated at the different levels of governance and that all relevant actors are mobilised in their support.

The JIM highlights the concern for magnitude of long-term unemployment, and the high risk of poverty faced by large families and single-parent families, the increased number of young people dropping out of school and the variations in poverty and social exclusion on a regional basis. The JIM also highlights a number of particular problems in relation to health inequalities, housing and homelessness.

The most urgent challenges in relation to tackling poverty and social exclusion set out in the JIM are as follows:

- to increase labour market participation, focusing in particular on the long-term unemployed and others who face difficulties with finding or maintaining employment;
- to ensure an adequate income for people who are not able to support themselves due to old age, incapacity for work or unemployment;
- to ensure adequate financial and other support to families with children to prevent and alleviate child poverty;
- to tackle problems of educational disadvantage so as to increase the ability of all citizens to participate in civil society and the labour market;
- to achieve a better integration of education, employment, social protection, health care, housing and other policies at national and local levels so that those in need of assistance can receive more individualised and integrated supports related to their particular situation.

According to the JIM the most ***immediate policy priorities*** for Estonia in relation to tackling poverty and social exclusion should include:

- to expand and resource active labour market measures so as to support the reintegration of those who are unemployed, especially the long-term unemployed and other vulnerable groups, into the labour market and in particular to provide more individualised and tailor-made help through developing and implementing individual action plans;
- to increase support for larger and single-parent families through the family benefits system as well as social services and other provisions;
- to ensure that social assistance benefit, as a help of last resort, should be at a level that satisfies the basic needs to live in human dignity, and integrate financial support more closely with rehabilitation, activation, employment, care or other provisions in order to tackle the causes of living in poverty and prevent dependency on benefits;
- in the context of developing lifelong learning opportunities for all to reduce educational disadvantage by ensuring every child a "sure start" at school through expanding pre-school education with provision for children with a disability and from disadvantaged backgrounds, to put in place integrated responses to prevent school drop out and to improve the employability of graduates by developing an education system that is responsive to labour market needs.
- to increase the supply of affordable housing and accommodation through public private partnerships and to extend support for local municipalities in developing and implementing their housing strategies.
- to ensure coordination and integration of relevant policies at both national and local level and continuous monitoring and evaluating process in the reduction of poverty and social exclusion.

The JIM is to be approved by the Commission and the Estonian Government and signed jointly on 18 December 2003. The process of drawing up the JIM prepared the Estonian Government to full participation in the EU social inclusion process, the Open Method of Coordination (OMC) in the field of combating poverty and social exclusion and, in particular, for the preparation of Estonia's first National Action Plan on Social Inclusion which is due to be submitted to the Commission in 2003.

Crime

The main sources used for describing the crime situation are the crimes registered in police statistics and crime victim surveys held among the population. Instead of absolute values, one should use a relative scale (growth/decline, higher/lower level) for describing crime, as crime is a relatively hidden phenomenon.

Most of the crimes committed (approximately 4/5) are thefts and other criminal offence against property. In the 1990s, two periods of development can be distinguished:

- until 1994 (included) – abrupt increase in all types of criminal offence;
- during the 2nd part of the 1990s – decrease in violent criminal offences, moderate increase in criminal offences against property. Rapid increases in drug addiction and related criminal offences.

Social and proprietary grouping can be seen as the background factor facilitating the general increase in crime. At the same time, there are more opportunities and temptations for committing crimes and benefiting from them. The crime level is not necessarily correlated to unemployment or poor living standard, but these problems can easily become considerable factors for facilitating crime in some regions. For example, in Ida-Virumaa the unemployment rates are high; in such an area the number of thefts of metal is rather high. Drug addiction is also a problem in this area. In south-eastern Estonia we can also see a combination of high unemployment and forest thefts. In accordance to estimates by the juvenile police department, approximately 70 – 75% of all the minors committing crimes come from problem families (this means parents with alcohol problems, unemployment, poverty and other social problems).

One important root cause for violent offences is alcohol (most crimes are committed in a state of intoxication). Drug abuse, rapidly increasing among young people living in Tallinn and in the north-eastern part of Estonia, has become an important determinant in robbery and theft (at least 1/3 of people committing thefts are on drugs). Among middle-aged men, alcohol continues to be a strong factor.

Men commit approximately 9/10th of all crimes. The relative share of women is high (1/3) in criminal offences of an economic character. The most active crime-committing age group is that of young people aged 16-17 who commit thefts. The relative share of Estonians is high in criminal cases involving professional and economic offences, while the share of non-Estonians is high in cases of violent criminal offences and crimes committed under the influence of drugs.

During the second half of the 1990s, the crime level (based on the number of registered crimes per 100,000 inhabitants and the number of victims of crime among respondents in a survey) was the highest in Tallinn and the lowest on the islands Hiiumaa and Saaremaa. The high crime level in Tallinn reflects mostly the large numbers of thefts in the city. Violent criminal offences (murder, violent attacks, robbery) are committed most often in the towns of Ida-Virumaa and in Tallinn.

According to several surveys, crime levels in Estonia are higher than in the countries of Western Europe when it comes to criminal offences against property (robbery, theft from apartments and cars). The number of assaults and attacks involving the threat of violence is also greater in Estonia than in the countries of Western Europe, but the difference is not striking.

In speaking of future developments, we can predict that a steady decrease in the number of serious violent criminal offences will take place, while the number of thefts (related to the increase in drug abuse) will continue to increase. Organised crime groups will attempt to achieve their objectives through legal business and the corruption of civil servants (in contrast to the violent methods used in the beginning of the 1990s).

In 2000, the Government approved the "National Crime Prevention Strategy until 2005", which established the main guidelines for crime prevention in the years to come. The strategy entails greater public involvement, a more efficient protection of property, lowering the number of crimes and other legal offences committed by young people, improving the availability of victim assistance and preventing repeated criminal offences.

1.3.6. ADMINISTRATIVE CAPACITY

An important sector in human resources deserving special attention is the civil service. The strength of Estonia's administration system, including its capacity to implement structural policies, depends on the general arrangement of the administrative system as well as on the level of preparedness in its public servants. In the context of the current plan, the capacity to utilise EU Structural Funds efficiently and effectively is of primary importance, but building up its general administrative capacity forms the basis for it.

Over the years, Estonia's public administration has shown considerable development in sector-specific areas, but less progress has been made in enhancing its administrative capacity. The main shortcomings are weak co-ordination in the development of public services, and policy-making that is fragmented and lacking in coherence. Implementation of sectoral policies on regional and local levels has been insufficiently developed, which indicates a necessity

to strengthen co-ordination between levels of government. A central co-ordinating unit is being established to introduce united values and principles into public service.

Big budget and income differences per capita between regions point to differences in administrative ability in counties and parishes/towns. Providing citizens with the most important public services relies on the development of the general economic environment, as well as on the quality of the personnel who administer local life. Administrative competence varies most on the local government level. Only 83% of local self-governments have development plans (EMI ECO 2001), while the rest have none. Even in cases where the plans exist, they do not always fulfil the role of a strategic document. At the same time, qualified specialists at the local level are in short supply, and co-operation between local self-governments in distributing resources is often insufficient. Systematic efforts to stimulate regional initiative have been moderate.

One important way to raise administrative capacity at all levels is to improve the training of civil servants. The European Commission has brought to Estonia's attention the necessity to improve training standards and co-ordination[32] of public administration. The existing training system does not promote the implementation of the mentioned tasks.

Central arrangements for and financing of instruction make up only a small part of the training (the State Chancellery orders approximately 3% of the volume of training for state institutions). The distribution of rest of the training resources is decided by the institutions themselves. According to law, state institutions should allocate 3% of the salary fund to training.

Although the Centre for Public Service Training and Development is a central state training institution, it does not get funds from the state budget and therefore competes on the market with others in the field.

Up to now the orientation in filling training needs has been directed at finding solutions to everyday work-related problems, but has proved to be insufficient in preparing people for strategic management.

At local self-government levels a similar scheme is applied, although local self-governments have limited possibilities for ordering instruction that meets specific needs. This is because of insufficient resources and also because no training institution is specialised in meeting their needs[33].

In view of the facts mentioned above, one can conclude that it is necessary to improve the structure, system and quality of in-service training for civil servants.

1.3.7. SUMMARY

- The ***population*** of Estonia is ageing and decreasing, mainly because of the low birth rate (total fertility rate 1.34 – 2001). This means that the decrease in the number of children should be taken into consideration as the school network is planned. Longer life spans will inevitably increase the need for a long-term social security system that includes care services for the elderly. The relative share of the labour force will increase up to the year 2010, probably creating considerable tensions on the labour market. Above all, increased family allowances and creating equal opportunities for women and men on the labour market are necessary to improve the natural reproduction of the population.
- The level of formal ***education*** in the adult population is quite high. The share of the population with secondary education among people aged 25-59 was 88% in 1999, higher than the respective indicator in the EU. The share of educational costs in GDP has been increasing over the last five years, totalling 7.7% in 1999, again higher than the EU indicator. The number of students doubled in the 1993-2001 period, while the number of students of vocational educational institutions has increased by one-fourth.

  The relations between education and the labour market present a number of problems. In 1999/2000, 1,616 students, or 0.89% of the total number, dropped out of elementary school. The relative share of dropouts is also high at the secondary school level. The dropouts lack the preparation necessary for entering the labour market. The reputation of vocational education is poor, and vocational schools lack young teachers with good education (in 1999, the relative share of instructors under the age of 30 was only 9%). Business companies lack opportunities to take on trainees, and buildings and facilities for practical training are old (over the last 10 years, only 5% of buildings have been renovated). The popularity of natural and technical sciences is relatively low in universities of Estonia. And the adult education system lacks the state-administrated, in-service training system needed by adults who are actively participating in the labour market.

  Several opportunities exist for improving the relations between education and the labour market. Implementing professional training programmes and career counselling in secondary schools would help to decrease the

number of young people who find themselves on the labour market, totally unprepared. Improvements in both curricula and basic teacher training are paramount in perfecting educational content. A better physical learning environment also plays an important role in improving the quality of education. The establishment of regional multi-functional vocational educational centres, which provide opportunities for adult professional training, has a central role in reforming vocational education.

- As for the Estonian ***labour market,*** the share of employed has consistently decreased over the transition period, while the number of unemployed and non-active people has increased. The general labour market situation was less auspicious in 2001 than in the EU. The employment rate was lower – 61.1% (EU 64.1%), while the unemployment rate was higher – 12.7% (EU 7.4%). The rates of long-term unemployment and unemployment among young people have also increased considerably. The unemployment rates in towns and countryside are approximately equal, but there is a big difference between the unemployment rates of Estonians (10.4%) and non-Estonians (16.9%).

  As we look at the gender dimension of the labour market, gender inequality is somewhat lower than the EU average as reflected by some core indicators. In 2001, male employment rate in Estonia was higher by eight percentage points than female employment (EU – 18%). The unemployment rate among men, however, was somewhat larger than that of women. In Estonia (as in other European countries), women are concentrated mostly in jobs paying lower than average wages; the number of women in top positions is also considerably smaller.

  The Government expenditures on labour market measures amounted to 0.22% in 2000, whereas the respective average EU indicator was 3.4%. In 2000, only 36% of the total costs related to labour market standards were spent on active labour market measures. In 2000, only 10.7% of the registered job seekers were a part of active labour market measures. In Estonia, the labour market risk groups include young people, unemployed with low levels of education, the long-term unemployed, disabled people, people attaining retirement age and people not speaking the Estonian language.

  Active labour market measures, based on the principles of the European employment policies, facilitation of entrepreneurship, improvement of vocational education and in-service training, are measures implemented by the state to improve the employment situation. Increasing the share of active labour market measures and custom-made programs for target groups will help to involve a larger number of the unemployed and people in danger of losing their jobs, lessen the risk of unemployment and improve the competitiveness of the unemployed.

- ***Health*** depends above all on life-style and the living environment. The 1990s in Estonia can be characterised by a drop in the number of smokers and the fact that exercise and healthier eating habits became more popular. Nevertheless, alcoholism has not decreased, drug addiction rates have gone up considerably, and the number of people injured in the workplace remains relatively high. In Estonia the number of people dying in traffic accidents is almost double the respective average in the EU countries. In comparing the living environments in Estonia and the EU, one can say that the quality of food and water is poorer and the air more polluted in Estonia. When it comes to radiation and the quality of the ambient air, however, we are better off.

  During the 1990s Estonia has undergone rapid political, economic and social changes that have brought along more infectious diseases of social kind. Death through injuries and poisoning occurs more often in Estonia than it does in the EU, and the incidence of tuberculosis exceeds the respective EU indicator almost fourfold. The rapid distribution of HIV-infection in Estonia serves as a most challenging problem for Estonia.

  Although the relative share of health-care costs in GDP has been increasing over the last few years (in 2001 – 5.5%, comparable to the respective indicator in Ireland), limited resources have resulted in the amount of money spent on health care per capita (based on purchase power parity) being almost three times lower than the respective EU average. At the moment, Estonia does not even provide for the depreciation costs of hospitals, to say nothing of improving the infrastructure of hospitals. The material assets held by the system are deteriorating rapidly.

  Public health needs to be reinforced. For that purpose, children should be provided with an opportunity to learn in a healthy school environment. Establishing positive networks of social assistance will support the entire population in making choices leading to healthy behaviour. Everybody should be given the opportunity to live in a secure, health-promoting environment. For ensuring a high-quality and well-balanced health care system, efficiency should be improved by optimising the hospital network, developing human resources and putting the funds available to a more efficient use.

- In 2002, 25% of all population (including 33.7% of children) were living below the absolute ***poverty*** line. Groups endangered most by poverty are unemployed, people earning low wages, large or single-parent fami-

lies, elderly people and non-employed disabled people. The Joint Inclusion Memorandum has outlined immediate policy priorities for tackling poverty and social exclusion: expanding and strengthening active labour market measures, increasing support to families at risk, ensuring certain minimum level of social assistance benefits, ensuring access to education for disadvantaged people, supply of affordable housing and co-ordination and integration of all relevant policies.

- The ***crime level*** is not necessarily correlated to unemployment and poor living standards, but these problems can easily become factors that facilitate crime in some regions. The crime level of Estonia is higher than in the countries of Western Europe, when it comes to crimes involving property. The number of assaults, or attacks accompanied by the threat of violence is also higher in Estonia than the respective numbers in the countries of Western Europe. The differences, however, are not really noteworthy.
- The main insufficiencies in ***administrative capacity*** are the weakly co-ordinated development of public services, lack of promotion of common values, fragmented elaboration of policies and a limited strategic thinking that is characteristic of all the different spheres. Assessment of the impact of legislation and of implemented policies is weak, and the implementation of sectoral policies at regional and local levels is poorly developed. One important option for increasing administrative capacity on all levels would be improved efficiency in public administration and in the training system of the civil service.

1.4. NATURAL ENVIRONMENT AND ENVIRONMENTAL INFRASTRUCTURES

1.4.1. BIO-DIVERSITY

From the point of view of climate, Estonia is located in a transition zone between marine and continental climates, and in regard to natural vegetation, on the borderline between mixed and coniferous forest zones. The land surface, shaped after the Ice Age, includes diversified forms. There are many inland bodies of water and the coastline is jagged with abundant inlets. All these aspects, in combination with extensive well-preserved forests and marshes and long-term agricultural land use, have created conditions for diverse natural habitats.

One of the most important factors for maintaining bio-diversity is the condition of natural habitats of rare and endangered species. The inventory of natural habitats has shown a considerable decline in the area of grassland habitats (mainly wooded meadows, alvars, wet alluvial floodplain meadows and coastal grasslands). This is attributable to abandonment of traditional agricultural technology (mowing, moderate grazing) in the rural areas of Estonia (Table 47).

Table 47

Decline in the area of some of the habitats[1]

Type of the habitat/community	Area in the middle of the 20th century	Area in the end of the 20th century
Wooded meadow	800,000	200 (in use)
Alvars	43,500	5,000
Alluvial floodplain	100,000	10,000
Coastal grasslands	200,000	5,000

[1] Inventories were made in the middle of the 1990s

Source: Talvi, T. 2001. Semi-natural habitats. - Centre of Ecological Technologies, Viidumäe – Tartu

In recent years drainage has been the main factor damaging swamp and fen habitats. The state of forest habitats is relatively good, but the area of swamp forests has shrunk over time.

In the 20th century, three Red Data Books were compiled in Estonia. The last one, completed in 1998, enlists 1,318 different life forms. Major risk factors have been identified for each of the different habitats. There are 401 endangered species in the forests threatened by changes in the balance of tree species, the draining of woodlands and a reduction in the relative share of rotting wood in forest management. Some 314 species are endangered in bodies of water, threatened by pollution in water and areas of eutrophication, as well as by extensive construction activities. In meadowlands 114 species are under pressure from the overgrowth of bush-land, which takes over when mowing and grazing come to an end. The number of endangered species in other habitats is relatively smaller.

As of January 1, 2001, there were 312 protected areas in Estonia in accordance with the Protected Natural Objects Act. The total of protected areas – 462,200 hectares – comes to more than 10% of Estonia's mainland, includ-

ing inland bodies of water. This act also regulates the protection of fossils and minerals, individual natural objects (1,207 in 2000) and either endangered, or rare, species of plants, fungi and animals.

The history of bio-diversity protection in Estonia goes back to the year 1910. The first nature protection act in Estonia came into force in 1935. Bio-diversity protection is regulated by a variety of acts, such as the Sustainable Development Act, Protected Natural Objects Act, Coast and Shore Protection Act, Animal Protection and Utilisation Act, and Deliberate Release of Genetically Modified Organisms Into Environment Act. The principles of protection of bio-diversity are taken into consideration also in legal acts regulating use of natural resources.

The use of natural resources and the extent of nature protection prescribed by law is monitored according to the stipulations of the Environment Supervision Act and the Environmental Impact Assessment and Environmental Auditing Act.

The Riigikogu (Parliament of Estonia) has ratified the following international conventions: the Bern (1979) Convention on Conservation of European Wildlife and Natural Habitats, (implemented in 1992); the Ramsar (1971) Convention on Wetlands of International Importance, Especially as Waterfowl Habitats (implemented in 1993); the Washington (1973) Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (implemented in 1993) and Convention on Bio-diversity (ratified and implemented in 1994).

Goals related to the protection of bio-diversity are also reflected in the Environmental Strategy of Estonia (1997) and the consequent Estonian Environmental Action Plans (1998 and 2001). The Strategy and Action Plan for Protection of Bio-diversity (1999) were prepared for the implementation of the Convention on Bio-diversity.

The selection of Natura 2000 protected areas has started for the organisation of protection of species and habitats under the nature-protection directives of the European Union. The selection is implemented in accordance with the approved national programme "NATURA 2000 in Estonia" for 2000-2007. The Programme is divided into two stages. The first stage was implemented in 2000 – 2002 and as a result of this 419 proposed Sites of Community Importance (pSCI) and 78 Special Protection Areas (SPA) have been preliminarily selected in Estonia.

The second stage will be carried out in 2003 – 2007 and the main activities of this are as follows:

- Compilation of list of Estonian Natura 2000 sites (pSCI and SPA) and Natura 2000 database (will be completed by accession).
- Organisation of actual protection of Natura 2000 sites to ensure the favourable conservation status of the habitats and species occurring in the sites.
- Raising public awareness and capacity building.

Both national and EU financing will be involved in implementation of the Natura 2000 programme. The land management support programme was started in 2001 and 1.2 million euro is paid to farmers annually to support the traditional management (grazing and mowing) of valuable semi-natural grasslands. Upon accession the favourable conservation status of the semi-natural habitats of the Natura network will be supported using ***inter alia*** the EAGGF Guarantee section funded measure of agri-environment as far as possible. Funding from the Cohesion Fund and the Structural Funds will be used for eligible activities.

In comparison with several central EU member states, bio-diversity has survived relatively well in Estonia. The different types of protected habitat amount to more than 10% of the territory of the country. Estonia has remarkable numbers of large game animals: bear - 500 specimens (the highest population concentration in Europe), lynx - 1000, wolf - 150, and approximately 10,000 beavers. The abundance of protected areas in almost untouched natural condition is one of the essential and increasingly important resources of Estonia.

In addition to bio-diversity, natural landscapes are an important aspect of the environment. The natural scenery of Estonia has been shaped as a result of the historically changing interaction of man and nature and is, therefore, largely contingent upon socio-economic changes. Landscapes represent different values: cultural, historical, aesthetic, natural, recreational and tourist values, but also those involved with identity. Picturesque landscapes are also an important resource in economic development, and any reduction in the value of a landscape is a loss for society.

Today, natural scenery in Estonia is most seriously endangered by damage, or complete ruin, brought about not only by the mining of mineral resources and the establishment of industrial enterprises, but also by land falling out of use.

Problems related to industrial waste and mining are most frequent in Ida-Virumaa, but the number of smaller sand, gravel and limestone quarries that nobody really owns is relatively large all over the country. These have all come into being during the last century, in most cases during the Soviet regime. Abandoned quarries and dumping sites of industrial waste have been maintained with state resources over the past decade (financed by the programs of the former Environmental Fund, presently the Centre of Environmental Investments).

Pursuant to the provisions prescribed by the Earth's Crust Act, in force in the Republic of Estonia, the mining companies are obliged to rehabilitate areas damaged by the mining activity at their own cost.

In addition to regulations concerning existing and on-going spatial planning, regional schemes are needed (for example, the areas surrounding Tallinn, north-east Estonia, etc.) for utilising and protecting the earth's surface and landscapes (primarily, regulating extraction of mineral resources). This would help to avoid senseless damage and destruction to the landscape, while providing for the conservation of valuable land — including geological formations — in future.

Production output in agriculture has dropped considerably since 1980. This means that decreased use of fertilisers and crop protection chemicals, as well as reduction in the numbers of livestock, have considerably diminished the negative impact of agricultural activities on the environment. At the same time, leaving agricultural land out of use has brought along a new environmental problem: valuable agricultural landscapes have started to disappear.

The growth of bush-land and other forms of visual pollution connected to the abandonment of production facilities and buildings have become a common problem in large agricultural areas over the past few years.

Stock has been taken of valuable landscapes as part of a county-level planning process, and as a result, regional landscapes have been divided into areas designated as landscapes of special local value. A specification of ethnic landscapes is also being planned. Such inventories will be taken into account in future general planning. Maintenance plans for valuable landscapes are also of great importance.

Landscapes with cultural-historical value in Estonia (incl. semi-natural habitats) are endangered most of all by the drop in agricultural activity, by the fact that many people are leaving villages, and by the consequent growth of bush in open areas and the slow dilapidation of abandoned buildings. These landscapes are also threatened by extensive clear-cutting of forests and by construction activities, especially in attractive coastal areas or on the outskirts of towns. In certain areas also, afforestation of agricultural land could cause initial problems. Existing and potential recreation areas in larger towns, suburbs and scenic coastal areas are, above all, threatened by harsh economic exploitation (extensive construction, the razing of forests), but also by simple lack of maintenance. The same problems are relevant in the protection of landscapes of aesthetic value. On the one hand, conservation of cultural landscapes presumes careful planning of economic activities and new constructions to avoid disintegration of existing values. On the other, cultural landscapes can only be protected by expedient maintenance. For this purpose it would be beneficial to expand the application of landscape maintenance subsidies and promote local initiatives in landscape maintenance, supporting thereby the overall development of villages.

Maintaining cultural heritage in the form of traditional settlements and land use patterns, as well as conserving valuable landscapes and creating awareness of their existence, will help to invigorate local identity and promote tourism in rural areas. The preservation of cultural landscapes will also help to maintain landscape and biological diversity.

1.4.2. WATER

Water supplies in Estonia consist of ground and surface water bodies. More than 7,000 rivers exist in this country, only 420 of them longer than 10 km. There are 935 lakes, 225 of them between 10 and 100 hectares in area. The annual surface water supply is approximately 7,040 m^3 per inhabitant. Most of the bodies of water (rivers, lakes and coastal waters) are rather shallow and therefore sensitive to pollution. Ground waters in Estonia are divided between five aquifers, the uppermost being insufficiently protected in most areas. The ground water supply in the country amounts to approximately 2000 km^3.

Water abstraction has decreased in Estonia by 40% since the beginning of the 1990s, mostly because of the decline in water-consuming industrial production. The more economical attitude towards water use, both by industrial and conventional users, has been brought about by increased prices and improved systems for measuring water consumption. Extensive reconstruction of pipelines has also helped to cut down water losses caused by leaks.

According to data from the Ministry of the Environment, water abstraction was 1,494 million m^3 in 2000, approximately 80 % of this amount being surface and approximately 20 % ground water. A large share of water abstraction in Estonia is related to the oil shale and energy industries and is therefore concentrated in Ida-Virumaa. Surface water is mostly used as cooling water in electrical power plants (approximately 92%) and the major share (approximately 80%) of water extracted from ground water is pumped out in oil-shale mining areas.

In 2001, water consumption totalled 1,265 million m^3. Water consumption was divided into types as follows: domestic (3.6 %), industrial (3.4%), cooling water (87.3%), agriculture (0.3%), fish-farming (4.5%) and for other purposes (0.9%).

Estonia gets its ***drinking water supply*** from:

- ground water (all the rural settlements and most towns – 65% of inhabitants)
- surface water (two biggest towns, Tallinn and Narva – 35% of inhabitants)

Surface water is cleaned and disinfected before it reaches consumers. Ground water is, as a rule, used with no treatment. The main dangers for water quality are pollution from large sources; settlements in insufficiently protected areas; landfills not meeting environmental requirements; industrial enterprises (mostly in the north-eastern parts of Estonia) and pollution from diverse sources (agriculture and pollution from atmosphere).

The main problems related to drinking water, are:

- the natural parameters of ground water in numerous areas do not meet the quality requirements established for drinking water;
- sporadic contamination of ground water with oil products and other types of contamination;
- depreciation of water supply systems and insufficient treatment of drinking water in several areas.

In southern Estonia, the natural parameters of ground water fail to meet the quality requirements established for drinking water (high iron content). In the western part of the country, a high level of fluorine content is seen as a problem. The water supplies in these areas can be used only after treatment (iron removal). The ground water of Estonia is hard, corroding pipelines and thus also having a negative influence on the chemical composition of drinking water.

Intensive industrial and agricultural activities have caused contamination, impairing the quality of ground water in some areas in Estonia. The natural content of nitrates in the ground water, which should amount to 1-3 mg/l, in reality totals 10-30 mg/l in the uppermost aquifer of half of the territory of Estonia. Pesticides, trace/residual contamination, declining number of waste water treatment facilities, etc. are also dangerous for groundwater. SO_4 contamination is a major problem in the north-eastern parts of Estonia (oil shale mining area). Mining activities lower the ground water level, while acidification of pyrite increases the SO_4 content in ground water to 500 mg/l (20 mg/l as a rule).

Approximately 77% of the population of Estonia can use water from public water supplies. In bigger settlements, 80-95% of the inhabitants has the opportunity to use public supplies. But the status of the public water supply systems in Estonia does not meet contemporary requirements.

The drinking water treatment stations in Tallinn, Kuressaare, Pärnu, Rapla, Valga, Paide etc. have been modernised, while the major share of the remaining 23 water treatment stations in Estonia are outdated and ineffective. Distribution networks consist of iron pipes, many of which have corroded, causing leaking, major water losses and deterioration in the quality of drinking water from public water supplies.

In Estonia there are approximately 1,700 wells used as common water sources. Before 1994, the poor quality of drinking water used to cause illnesses. Today, this is no longer the case.

Decreased consumption of water also brings about decreases in ***wastewater,*** including wastewater that requires treatment. In 2001, the amount of water discharged into bodies of water and into the ground or into groundwater totalled 1,509 million m^3. Approximately 79.7% of the discharged amount did not require treatment (cooling water), 19.7% of the total amount was treated and 0.53% was left untreated. Treatment was insufficient in approximately 2.3% of the treated water.

As a rule, the wastewater from industries and households is treated in water-treatment facilities of different settlements. The total length of sewage systems in Estonia is 3,280 km. At the end of 1999, there were 826 wastewater treatment facilities in Estonia. Only 30 of them could be characterised as large (treatment capacities exceeding 1,000 m^3/per day). In addition to the treatment facilities mentioned above, there are also 500...600 site-specific treatment facilities for preliminary treatment of industrial waste waters and approximately 70,000 treatment facilities for users' own consumption (absorbing wells, filter ditches, etc.) that can treat up to 10 m^3 of waste water on a daily basis. Approximately 77% of the population can discharge their wastewater into a public sewage system, which then flows into water-treatment facilities.

Water pollution has been going down in Estonia since 1992, thanks mostly to the decreased emission of pollutants and improved treatment efficiency (Table 48). In the 1994 – 2001 period, more than 100 water protection facilities were completed, bringing about a decrease in the organic pollution load by 71% during this period. Between 1992 and 2001, new wastewater treatment stations were built in Tallinn, Tartu, Haapsalu, Rapla, Tapa, Valga and several smaller settlements.

Table 48

Pollution load from point pollution sources, 1992-2001

(tons)

Indicator	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
BOCD7	18,080	11,250	5,710	4,480	4,174	3,838	3,122	2,307	2,051	1,674
P_T	673	445	353	321	304	303	279	256	230	193
N_T	5,640	4,240	3,610	3,500	3,200	3,173	2,976	2,739	2,810	3,148

Source: *Ministry of Environment*

Although pollution has lessened considerably, the aquatic environment in Estonia is still far from perfect. The situation is very serious in the north-eastern part of Estonia, where the sources of pollution via wastewater are the towns of Kohtla-Järve and Narva.

The annual water consumption per inhabitant in Estonia (1,080 m^3) exceeds the comparative EU average (796 m^3) twofold. This can be related to the big relative share (87.3%) of cooling water used for producing electricity (total consumption in 2001 - 1,265 million m^3, of which cooling water makes up 1,104 million m^3 and water intended for human consumption 46 million m^3). At the same time, the consumption of water in households (per inhabitant) is three times smaller than the respective indicator in EU (in 2001 in Estonia – 42.7 m^3, in EU - 112 m^3).

In Estonia, the amount of untreated wastewater (2.6%) is smaller than the respective average indicator in EU (19%), but the quality of cleaning is insufficient in some cases. To meet the requirements arising from the European Union and Estonian water protection requirements, the total nitrogen and phosphor us amounts emitted into the natural environment should be decreased respectively by 1,420 tons and 82 tons. Wastewater treatment should be improved to meet this objective.

The investments required for raising the Estonian water economy to a level that meets the requirements set forth in national legislation and respective EU directives amount to approximately 830 million euro (13 billion kroons) (until 2013). The major expenditures arise from the implementation of the directive on the requirements for waste water from settlements, amounting to 320 million euro (5 billion kroons), and the drinking water directive - 260 million euro (4.1 billion kroons). Big expenditures are also related to the implementation of the Nitrate Directive - ***270 million euro*** (4.5 billion kroons). These funds are spent mostly on the construction/renovation of manure storage facilities and the purchasing of related agricultural equipment.

It is planned to enforce the legal requirements related to water protection through the implementation of large and complex investment projects by river basin catchment areas. So far, two project applications have been devised and approved by ISPA: the TA project for the elaboration of a small settlement water project for Pärnu sub-basin, and the TA project for water protection in the eastern part of Harju County and Keila-Vasalemma. At the moment, technical assistance application for the pilot water management project of the Harju sub-basin is in the preparation stage. From 2004 on, water protection and utilisation will be managed on the basis of the River Basin Management Plans, to be developed for each sub-basin.

The situation of water management in Estonia can be classified as satisfactory when considering the good natural status of our bodies of water and ground water, as well as the fact that the consumption of water has notably dropped. Further developments in water handling will be based on water management plans and should change the principles of water protection and consumption in the coming years. Future plans should also strengthen the competence of the officials who co-ordinate the issues related to water management by involving the public in the decisions related to water use and disposal.

1.4.3. AMBIENT AIR

In 2000, 59,500 tons of particulate matter (PM) were emitted into the atmosphere from stationary sources of pollution. Additional major pollutants were 91,300 tons of sulphur dioxide (SO_2); 15,300 tons of nitrogen dioxide (NO_x); 19,400 tons of carbon oxides (CO) and 7,500 tons of volatile organic compounds (VOC); and 1,100 tons of other pollutants. In comparison with 1990, the amounts emitted from stationary sources of pollution have dropped, while the amounts emitted by mobile sources of pollution, including transport, have increased steadily since 1993 (see Table 49).

Table 49

Distribution of emissions from Sources of Pollution in Estonia

(thousand tons per annum)

Year	Amounts of pollutant emitted								
	PM	SO_2		NO_x		CO		CnHm	
	S	S	T	S	T	S	T	S	T
1980		275.0	12.3						
1987				28.4					
1990	268.5	238.8	13.1	22.6	45.1	59.9	374.2	14.7	70.4
1991	277.8	232.7	12.7	20.9	42.4	56.8	342.4	14.5	64.9
1992	240.8	179.2	8.2	14.9	24.5	32.5	175.3	11.2	34.4
1993	189.0	145.0	8.7	12.0	26.0	27.8	182.4	5.7	35.9
1994	161.5	141.1	8.1	14.6	26.5	31.8	209.3	4.7	39.9
1995	113.1	110.3	8.3	14.8	27.2	27.2	215.1	6.5	41.0
1996	98.9	117.2	8.0	16.3	28.1	29.4	238.3	5.7	44.6
1997	78.3	111.0	8.0	15.6	29.2	26.7	256.1	6.3	47.6
1998	69.8	100.9	9.2	14.9	31.1	26.4	254.3	5.7	48.0
1999	70.5	94.6	7.8	14.4	25.2	20.9	194.4	5.0	37.3
2000	59.5	91.5	1.3 +3.1	15.3	23.8 +5.2	19.4	99.3 +0.9	7.6	13.7 +0.3

***S** – stationary sources of pollution; **T** – transport*

Source: Information and Technology Centre of the Ministry of Environment

Stationary Sources of Pollution

Regardless of major decreases in atmospheric pollution in the last decade, Estonia can still be seen as a serious air polluter – mainly because of the technological level of its production of oil shale energy. The main sources of pollution with SO_2 and PM are electrical energy and heat production, as well as oil shale chemistry enterprises in Ida-Virumaa. Ida-Virumaa is responsible for 85% of SO_2, 90% of PM and 66% of NO_x emission from stationary sources of pollution. This latter form of pollution has decreased since the 1990s, thanks to the decline in industrial production volumes and the implementation of better treatment facilities and of cleaner technologies.

In accordance with international conventions and the Directive of the European Council 88/609/EEC on the limitation of emissions of certain pollutants into the atmosphere from large combustion plants (currently replacing directive 2001/80/EC), a National Programme on Reducing Pollutant Emissions from Large Combustion Plants has been adopted in Estonia. The relative share of big combustion plants (installed heating capacity 50 MW_{th} or more) in aggregate emissions of SO_2 and NO_x is respectively 92% and 79%. Within the framework of the programme, the following measures will be implemented to reduce the emission of pollutants:

- technological measures, including reconstruction of facilities, implementation of new combustion technologies;
- changing of existing fuels, for example for renewable energy sources and natural gas;
- usage of fuels with low sulphur content.

Different national strategies and action plans are aimed at a combined generation of heat and electricity, and at limiting the relative share of oil shale. After integration with the EU, Estonia is expected to apply strict environmental-protection and electricity-production requirements according to directive 2001/77/EC as well. This move will be aimed at increasing the share of renewable sources of energy (water, solar energy, wind and organic fuels, including landfill gas) to at least 12%, and the share of renewable electricity to 21.2% of the total electricity production.

Transport

As a result of the increasing number of vehicles, the amount of pollution emitted by transport has increased in the 1992-1999 period. Only lead emissions decreased over this period. Since January 1, 2001, only unleaded gasoline can be used in Estonia. This relatively normal situation can be credited to the increased share of new (environmentally friendly) vehicles and the improved quality of fuels (see also 1.2.4.).

Climate Changes

Estonia has ratified several international conventions aimed at limiting air pollution and has adapted its ***air protection policy*** to the respective EU directives. Estonia has already met the requirements of the United Nations Framework Convention on Climate Change and the 1997 Kyoto Protocol, establishing the mandatory requirement for reducing the emission of greenhouse gases in the 2008-2012 time frame by 8% in comparison to 1990.

In Estonia, energy production is also responsible for the production of greenhouse gases endangering the global climate[34], being the source of approximately 91.8% of the amounts of CO_2 emitted, while the respective indicator in transport is 6.4%. Industry is responsible for only 1.8% (mostly production of cement). In the 1990-1998 period, the amount of greenhouse gases (CO_2, CH_4 and N_2O) emitted, expressed as a CO_2-equivalent, totalled 46.6% in Estonia. This was caused both by the decrease in the relative share of fossil fuels used and the decline and reorganisation of industrial and agricultural production.

In comparison with the respective EU average, the amount of CO_2 per inhabitant emitted in Estonia is almost twice the amount in the EU (Estonia - 14 t/year, EU – 9 t/year) while the respective amounts of SO_2 are six times bigger (Estonia – 0.18 t/year, EU – 0.03 t/year).

At the moment, Estonia is developing a national programme for the reduction of the emission of greenhouse gases, based on achieving the main objectives established in its environmental strategy. The strategy involves the environmental action plan, the Long-Term Development Plan for the Estonian Fuel and Energy Sector, the National Energy Conservation Programme and the action plan for restructuring oil shale energy in Estonia. The main aim of the programme is to reduce harmful impacts on the environment by applying the following tools:

- Improving the efficiency of transport and production of energy, using fuels that are more environment-friendly and reducing special consumption of energy in all the economic sectors and domestic households;
- Giving preference to the principle of diffused production of electric energy when establishing new power stations and facilitating combined production of heat and energy;
- Ensuring improved efficiency of oil-shale based energy production simultaneously with the essential reduction of harmful environmental impacts by implementing contemporary combustion technologies.

Long Range Air Pollution

In 2000, Estonia adopted the Convention of Long Range Trans-Boundary Air Pollution and its three protocols referring to sulphur compounds, nitrogen dioxides and volatile organic compounds. The requirements arising from the protocols have already been met in Estonia as a result of reduced industrial production. The act on joining the Co-operative Programme for Monitoring and Evaluation of Long Range Transmission of Air Pollutants in Europe (EMEP), being a part to the convention, has also been adopted. In accordance with plans made for 2002-2004, Estonia intends to join with other protocols, including the protocol on the further reduction of sulphur emissions.

Petrol Stations and Terminals

According to the Directive of European Council 94/63/EEC, terminals used for the storage and loading for petrol stations must apply measures aimed at reducing the emission of volatile organic compounds. Estonia will be able to implement such requirements by the year 2007; the transitional period was gained after negotiations with the European Union. In 2002 Estonia intends to enforce the Directive of European Council 1999/13/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations.

Environmental Noise

The European Union directive 2001/C297/04 on the assessment and control of environmental noise requires the member states to perform continuous monitoring of the level of atmospheric noise and to review the situation. The monitoring includes the development of action plans and the mapping of noise pollution in such areas as large railway stations, airports, roads and densely populated areas with more than 100,000 inhabitants (Tallinn, Tartu). At the moment, neither necessary equipment nor the knowledge or skills for the monitoring of environmental noise are present.

1.4.4. WASTE MANAGEMENT AND PAST POLLUTION

The waste generation in Estonia is characterised by the following data (Table 50):

Table 50

Generation of waste in Estonia, 1996-2001

(thousand tons)

	1996	1997	1998	1999	2000	2001
In total	14,687	14,398	12,984	10,848	11,616	12,839
Of which hazardous waste	7,679	7,361	6,272	5,860	5,966	6,206
- Incl. oil shale ash generated in power plant, volatile ash waste from oil shale pitch, "fuses" and oil shale semi coke	5,933	5,819	5,193	4,963	4,930	4,918
- oil shale semi coke and coking coals	1,293	1,374	931	631	1,015	1,122
Oil shale deposits and crushed stone screenings waste resulting from exploration, mining, dressing and further treatment of minerals and quarrying	5,885	5,999	5,271	3,807	4,930	4,496
Municipal waste in total	565	593	557	569	544	376
Generation of municipal waste kg/year/ inhabitant	383	406	383	393	378	275

Sources: "State of Environment of Estonia on the Threshold of XXI Century", Estonian Environment Information and Technology Centre of the Ministry of Environment, Tallinn 2000; "Review of Waste Management in Estonia", Estonian Environment Information and Technology Centre of the Ministry of Environment, Tallinn 2001; Tallinn 2002

In Estonia, a major share of waste generation is attributable to oil shale mining, oil-shale chemical industry and oil shale based power generation. Over the last years the general amount of waste, generated as a result of oil shale production and processing, has dropped. This is due to reduced production, as the sector accounts for approximately 90% of the annual waste amount generated in Estonia. In 2000, the relative share of municipal rubbish in the total amount of waste was 4.7 %, while in 2001 the respective figure was 3%. The decrease in the amount of municipal refuse in 2001 can be explained by an improved and more accurate reporting system that avoids double recording of the amounts of waste.

Before 1990, trash was merely disposed of in landfills. None of the high-priority environmental protection requirements in effect today were observed – for example, the protection of soil and of surface and ground waters, the collection of landfill gases as a result of decomposing waste. In many landfills, no institution was responsible for handling, supervising or monitoring landfill activities and their impact on the surrounding environment. At the end of 1999, 221 operating landfills for depositing mixed municipal waste and 47 landfills for depositing industrial waste were registered in the Waste Register. Most of them had no designed project and were established randomly. Today there are no technical facilities for avoiding or reducing the negative environmental impact caused by landfills. The biggest landfills for depositing industrial waste are disposal sites for oil shale waste in Ida-Virumaa. Oil shale bottom-ash and fly-ash (produced by oil shale based power production), and oil-shale semi-coke (produced by the oil shale chemical industry), are, according to legislation, hazardous wastes polluting surface and ground water.

The first landfills meeting the EU requirements have been opened only in the past couple of years. (Vaivara hazardous waste landfill, Väätsa landfill in Järva County, Uikala landfill in Ida-Viru County, and Torma landfill for non-hazardous waste in Jõgeva County).

In the 1990s, the ***environmental policy*** of Estonia was used to establish a legal framework for a transition to contemporary waste-handling management. EU and bilateral foreign assistance is being used to initiate the updating of the municipal waste-treatment system, and a national system for collecting hazardous waste has been established.

All the activities related to waste management are regulated by the "Waste Act" and related regulations. The legislation concerning waste management is based on the European Union waste management directives and the decision issued by the European Commission. The National Waste Management Plan for the years 2010-2013 was approved by the Parliament on the 4th of December 2002. The plan will serve as a basis for drafting waste management programmes at county levels. 10 programmes of such kind were elaborated in 2002. In addition, some rural municipalities and towns have already completed their plans for waste management.

In accordance with the requirements established for landfills, waste must not be deposited in landfills not meeting the requirements. This provision will take force in July 2009 and presumes the development of a network of waste treatment facilities and closure of the existing landfills not meeting the requirements. Environmental requirements must be observed during the closing process. According to plans, in 2009 there will be in total seven regional

landfills for depositing municipal waste on the Estonian mainland. So far, three new landfills for depositing municipal waste that meet all the requirements have been opened (two regional and one municipality landfill). In Järva Country, the Väätsa landfill, built in compliance with all the environmental requirements, was opened in 2002. In January 2002, Uikala landfill in Ida-Viru County, also meeting all the requirements, was opened. Construction of the Jõelähtme landfill for collecting waste from the town of Tallinn and Harju County, has been started. In 2002-2006, three regional landfills – in Pärnu County, South-east Estonia and West Estonia, will be built in accordance with plans. In 2000-2001, 210 landfills not matching the requirements were closed. Remaining are 44 landfills meant for municipal waste, 14 landfills meant for industrial, construction and demolition wastes and one landfill for hazardous waste in Estonia. This year a decision will be taken on all the operating landfills – whether they should go on operating or close down. In accordance with objectives, 1-2 landfills will go on operating in each county for the period preceding the completion of new, contemporary regional landfills.

The ***recovery of packaging-waste*** has been promoted in Estonia. The Packaging Act, imposing the provisions arising from EU 94/62/EEC on packaging and the waste created by it, established that by June 30, 2001, at least 50% of the total weight of packaging-waste generated on the territory of Estonia had to be recovered, while 25% to be recycled. The Packaging Excise Duty Act, applied on packaging for hard liquor, soft alcohol and non-alcoholic beverages, also supports the recovery of this sort of waste. The excise duty is imposed in case the companies producing or importing such drinks fail to organise the collection and recycling of at least 60 % of their packaging-waste. A national system for the collection and recovery of packaging and its waste, extending to all types of packaging-waste, is being developed.

As for ***hazardous waste,*** legislation has been revised and improved to include contemporary provision for both domestic and international shipment of waste. Attention has been given to specific types of hazardous waste, for example batteries and accumulators, oils and (taking into consideration the directives of European Union), waste containing PCTs and PCBs.

Funds from the national budget, the European Union and Danish bilateral programmes have been used to finance the establishment of a national hazardous waste management system, supposedly reducing the expenditures made on waste treatment by institutions responsible for waste generation. The general principle "polluter pays" will most naturally stay in force. Hazardous waste is being treated in the collection centre of Tallinn and, since 2000, in the hazardous waste management facility in Vaivara, which includes a collection centre, loading station and landfill for hazardous waste. A hazardous waste laboratory was opened on the territory of the Vaivara management facility. Collection facilities, a final depositing site and a laboratory for hazardous waste have been opened in both Tallinn and Ida-Viru County (Vaivara). Local governments have established 91 collection stations for recovering hazardous waste from the population. In accordance to the plans, in 2003-2004 collection facilities and a facility for burning hazardous waste will be built in Tartu, and the Pärnu municipal regional collection centre will be extended into the West-Estonian collection facility. The establishment of a treatment plant specialising in hazardous waste is at the planning stage.

Up to now, too little attention has been paid to waste management and its respective areas of activity have been provided with insufficient funds. While the collection of waste has been transferred to private hands over the last decade and the respective systems have developed fast, the waste management infrastructures fail to meet contemporary requirements.

The responsibility for waste management development lies with the local governments, but without state support their funds are not sufficient to fulfil the requirements of the task.

Depositing of waste of the oil-shale based chemical industry and power generation meeting all the environmental requirements is one of the most challenging tasks. The oil-shale semi-coke, volatile ashes as well as the oil shale ash from the power plants are hazardous waste subject to especially strict depositing requirements. From July 2009 it is prohibited to deposit the waste in landfills not meeting requirements. This presupposes very expensive changes in the depositing technology.

Past Pollution

Heavy pollution is still to be found in remnants of former Soviet Union territories: military facilities, factories, power stations, mining areas, railway yards, concrete factories and liquid fuel terminals. There are heavily polluted ground water zones around the landfills for industrial waste. A large number of chemical and liquid fuel terminals no longer in use are the legacies of large-scale agricultural production, which are still in need of cleaning up. Deteriorated boiler houses and liquid fuel terminals in the care of local governments have also caused the contamination of soil and ground water.

Groundwater in surface layers is irreversibly damaged due to earlier contamination on extensive areas surrounding industrial regions in Northeast Estonia and Tapa. Smaller contaminated tracts can be found all over Estonia. Areas damaged by past pollution are a danger to the health of the population, not just from polluted drinking water but also from direct contact with poisonous substances. Emission of toxic dust can pollute the atmosphere and inside buildings. Use of contaminated areas means serious economic risks for entrepreneurs, as legislation does not provide for any regulations concerning accountability for the elimination of earlier contamination.

As energy production is brought into conformity with environmental requirements, measures taken for controlling past pollution gain special importance. Extensive areas, ruined because of quarries, mines and landfills for industrial waste, can no longer be brought back under cultivation because of lack of funds. Elimination of past pollution was started in the process of renovations on the Narva power station. These activities included the closing of landfills for industrial waste and covering fields of ash with greenery. A lot of work needs to be done to close landfills used for the dumping of waste from the oil-shale chemical industry, and feasibility studies are being carried out in this area.

As for past pollution created by the transport sector, the contamination left by a number of asphalt concrete factories has so far been liquidated, but this work needs to be continued. Considerable expenditures are related to the obliteration of past pollution in areas surrounding ports and railroad junctions. A system for the prevention of, and fast solutions to, environmental emergencies should be set up as a part of the transport sector's development process. Bringing agriculture into compliance with environmental requirements presumes environmentally sound destruction of old poisonous substances, chemical and liquid fuel terminals. Local governments are responsible for maintaining the boiler houses and fuel terminals within their respective administration areas.

Risks related to past pollution are inevitable when it comes to economic development. It is important to make surroundings safe for the inhabitants and facilitate the re-use of damaged areas. It would be appropriate to start the projects for the re-use of extensively damaged districts in areas surrounding Tallinn and Paldiski (Maardu and Männiku quarries, former military area in Pääsküla and former industrial regions). These areas could be used for the establishment of new industrial zones and to a certain extent also of residential areas. The programme for putting formerly contaminated territories back into use should be subsidised to cover the costs of the cleaning activities, and by relieving landowners of any economic accountability related to former pollution. Such a policy will help to ease the stress on natural and agricultural areas surrounding towns, which are slowly being built up.

Each year, the Center of Environmental Investments contributes by ca 640 thousand euro (10 million kroons) from the funds of its water protection program for the liquidation of past pollution. In the case of some of the projects, foreign-assistance funding is also used, and the Eesti Energia Ltd contributes approximately equal amounts for the same purpose. Several enterprises and real estate businesses in Tallinn have also cleaned large tracts of land at their own cost. In considering the progress made by all these activities, it can be said that the influence of past pollution is being relieved, but not eliminated. The estimated amount of expenditures necessary to liquidate past pollution up to the year 2006 is shown in Table 51 below.

Table 51

Estimated costs necessary for the cleaning of polluted zones in 2003 –2006

(million euro)

Object	Estimated costs
North-east Estonia – closing of ash field No 2	7.2
Liquidation of the pitch lake of Kohtla-Järve coke landfill	5.1
Stage I of the adjustment of coke mountains	6.4
Liquidation of past pollution on the territory of ports	0.6-3.2
Past pollution at Tallinn Airport	0.3
Primary localisation of Tapa etc. railroad junctions accompanied by the railroad project designs	3.2
Liquidation of pollution of 10 asphalt concrete factories accompanied by road project designs	1.9-3.2
Poisonous substances, fertilisers and old liquid fuel terminals of former collective farms	1.0
Minimum maintenance work required to eliminate past pollution caused by the objects owned by local governments in order	1.3
Total	27.0-30.9

Source: Ministry of Environment

1.4.5. RADIATION PROTECTION

In accordance to the Radiation Act, the Estonian Radiation Protection Centre, established in 1996 within the administrative area of the Ministry of Environment, fulfils the national tasks related to radiation protection. The Radiation Protection Centre issues licenses for activities involving radiation, supervises the dose-register of radiation workers, registers radioactive sources, performs radiation monitoring, ensures the operation of the early-warning system for trans-boundary exposure, fulfils responsibilities arising from international nuclear safety and radiation protection agreements and conventions, and is the co-ordinator for IAEA technical co-operation in Estonia.

Estonia has been a member of the International Atomic Energy Agency (IAEA) since 1992. The priorities of technical co-operation between the IAEA and Estonia are medicine, radioactive waste and the strengthening of the regulative infrastructure.

The establishment of a legal framework, based on international standards and in compliance with the requirements set pursuant to EU legal acts, has been one of the priorities of the Radiation Protection Centre over the last years. A national radiation protection policy and a development plan need to be devised. The Radiation Protection Centre is in need of further strengthening. Special emphasis should be placed on modernising the laboratory for analysis of radionuclides and a technical basis for personal dosimetry.

As Estonia becomes a European Union member state, our eastern border will also become the eastern border for the European Union. Radiation control on this border should therefore be made more efficient to avoid illegal traffic of radioactive and nuclear materials.

In contemporary Estonia, the amounts of radioactive waste generated as a result of using radioactive substances in industry, medicine and for scientific research are small, and their activity level is rather low. The only activity, related to large amounts of waste containing naturally occurring radionuclides (NORM-waste[35]), is in the production of rare earth elements by Silmet Grupp Ltd. Large amounts of waste will also be generated in the course of decontaminating and dismantling the former Paldiski nuclear site.

The objective of the long-term action plan for the decontamination and dismantling of the former Paldiski nuclear site is to transfer most of the territory of the site into the possession of the local municipality, so that they might make free and unrestricted use of it after the work has been completed. To achieve this objective, all the radioactive waste and contaminated components, including the nuclear submarine reactors, must be removed from the site. Simultaneous with the practical cleanup taking place at Paldiski are efforts within the framework of co-operation projects with EU to analyse alternative opportunities for the further handling of the nuclear reactors. The reactor sarcophagi, handed over to Estonia by the Russian Navy in 1995, were designed to match the requirements arising from a depositing period of 30-40 years. Since in Estonia no disposal facility meeting all the mandatory requirements for the disposal of large amounts of radioactive waste exists, an interim storage for radioactive waste was established in the main building of the former Paldiski nuclear site.

The radioactive waste depository near Tallinn in Tammiku (Saku municipality) was shut down in 1996, as the facility did not meet the radiation protection and environment safety requirements. ALARA Ltd is presently devising a plan for retrieving waste from the Tammiku depository and transporting it into interim storage at Paldiski. In accordance with initial plans, the project should be implemented in the 2003-2006 period.

The Sillamäe uranium ore processing and rare-earth production tailings pond is located in the western part of the town of Sillamäe in Ida-Virumaa, on the coast of the Gulf of Finland. The tailings pond covers an area of approximately 40 ha and is used for depositing approximately 12 million tons of production waste and oil shale ashes. The Government of Estonia, in co-operation with Silmet Grupp Ltd, initiated the project for the remediation of Sillamäe tailings pond in the summer of 1997. Ökosil Ltd, involving both state and private capital, manages the project. EU EL Phare LSIF and the Nordic countries provide financial support for the liquidation, and the work must be completed by the end of the year 2006.

1.4.6. OPPORTUNITIES FOR IMPROVING ENVIRONMENTAL POLICY

Compared to the European Union countries, the overall environmental status of Estonia can be described as good. This is related to low density of population, a less intensive economy and efforts made in the environmental sector. Nevertheless, the negative impact on water and air from economic activity is quite extensive, considering the number of inhabitants and economic efficiency.

On average, Estonia is a clean country, but the environmental status of some of areas in Northeast Estonia, Tallinn and regions with intensive agricultural production is not entirely satisfactory. This should be taken seriously, since a

large share of the population lives in these areas. Further concentration of economic activities will be accompanied by increased pressure on the environment, especially in industrial or agricultural regions and along transport corridors. Lasting efforts should be made in these areas to achieve and maintain a good environmental status.

A considerable amount of Estonia's territory is damaged by past pollution and is a danger to the environment surrounding the pollution zones. A high probability exists for the occurrence of frequent environmental emergencies. At the same time, the environmental awareness on the part of both the population and entrepreneurs is low. Conservation of valuable landscapes and habitats calls for continued implementation of necessary measures, since traditional land use is decreasing. Opportunities for using the natural environment for recreational purposes are going down - some of the recreational areas surrounding towns have become construction sites or waste dumps. In other places private landowners have started restricting access to scenic landscapes upon their own initiative.

All this points out the fact that in addition to the investments made to eliminate immediate damage to the environment and to reduce further contamination, more attention should be paid to preventing such kind of problems in future. The following actions offer possibilities for this:

- raising environmental awareness and developing sense of responsibility among the population;
- structuring environmental legal acts and their clear compatibility with other areas of legislation;
- integrating environmental policy with other sector policies (energy, transport, agriculture);
- improving administrative capacities of the public sector, including in preparation and implementation of environmental projects;
- implementing environmental management systems and the best available technologies in enterprises;
- supporting the development and marketing of environment-friendly products;
- planning and guiding land use.

When implementing Structural Funds, these fields of activity should be considered as much as possible in the sectors supported, as well as in the national measures not co-financed by the EU.

1.4.7. SUMMARY

- In comparison to several central EU countries, bio-diversity has survived relatively well in Estonia. Different types of protected habitats together amount to more than 10% of the territory of the country. Estonia has remarkable numbers of large game animals: bear - 500 individuals (the highest population concentration in Europe), lynx - 1000 individuals, wolf - 150 individuals; and there are about 10,000 beavers in Estonia. The abundance of landscapes and protected areas maintained in their natural condition has become one of the increasingly important resources for Estonia. Decline in agricultural land use is diminishing the value of landscapes.
- Water abstraction has decreased in Estonia by 40% since the beginning of the 1990s, being per capita 1,080 m^3, which is nevertheless higher by 35% than the respective indicator in EU (796 m^3). The greatest share of water abstraction in Estonia is related to the oil shale and energy complex in Ida-Virumaa. Surface water is mostly used as cooling water in electrical power plants (approximately 92%) and a major share (approximately 80%) of the water extraction from ground water relates to ground water pumped off from oil shale mining areas. Water consumption per household is three times lower than the respective EU indicator. The main problems of Estonia, related to drinking water are the poor quality of the ground water, sporadic contamination and the depreciation of water supply systems. In Estonia, the amount of wastewater left untreated (2.6%) is smaller than the respective average indicator in EU (19%), but the quality of the cleaning process is in some cases low.
- The investments required to take Estonia's water management to a level that meets the requirements set out by national legislation and the respective EU directives (waste water from settlements, drinking water and nitrate directive) amount to approximately 830 million euro (until 2013). Further development in water management will be based on planning and should change the principles of water protection and consumption over the next few years while strengthening the competence of the officials who co-ordinate the issues related to water management by involving the public in decisions related to water administration.
- Regardless of a major decrease in air pollution during the last decade, Estonia can still be classified as a serious polluter. The amount of CO_2 emitted in Estonia per inhabitant is twice the amount in the EU (Estonia - 14 t/year, EU – 9t/year). The amounts of SO_2 emitted are larger by six-fold (Estonia – 0.18t/year, EU – 0.03t/year). The main sources of pollution of the atmosphere with SO_2 and particulate matters are energy, heat production and the oil-shale chemical enterprises in Ida-Virumaa. The energy sector is responsible for 91.8% of the

CO_2 amounts emitted in Estonia. The implementation of EU legislation in these sectors is the biggest problem for Estonia, as these installations belong to the state or to municipalities, and neither has the resources for the required investments. The only way for them to obtain investment would be to raise the price of electricity and heat. This would lead to rising prices in all economic sectors. Because of the considerations mentioned above, the Development Plan focuses mainly on air pollution problems connected with electricity and heat production. Different national strategies and action plans are aimed at a combined generation of heat and electricity, the use of renewable energy sources, energy saving and limitations of the relative share of oil shale.

- Over the past few years the general amount of waste generated has dropped. This is due to reduced levels in industrial production as this sector accounts for more than 90% of the annual waste generated in Estonia. In 2001, municipal waste amounted for approximately 3% of the total. In 1999, 221 operating landfills for municipal waste and 47 landfills for industrial waste were registered in Estonia.

The collection of waste has been transferred to private operators over the last decade and the system has developed fast. The renovation of the municipal waste management system has been started, as has the national scheme for the collection of hazardous waste. The responsibility for waste management development lies with local governments, but without state support their funds are not sufficient to fulfil the requirements of the task. So far, only three landfills that meet EU standards have been opened.

- In Estonia, pollution from the past is an important problem in addition to the generation of waste. Past pollution involves landfills for industrial waste, former military facilities, transport junctions and warehouses for agricultural chemicals. This older pollution is a threat to the health of the nation and prevents the economic use of contaminated areas. So far, only limited work has been done to liquidate past pollution. Elimination work was started as the part of the Narva power stations' renovation process, and related activities include the closing of landfills for industrial waste and the covering of ash fields with greenery. According to estimates, 27.0-30.9 million euro are required until 2006 to liquidate past pollution.
- In future, more attention should be paid to the prevention of environmental problems in addition to the immediate eradication of environmental damage. Investments into environmental technologies and the reduction of further contamination should also be priorities. This can be done by increasing the environmental awareness and accountability of the population, by converging environmental policies with economic policies, by improving the public sector's administrative capacities and implementing environmental management systems and best available technologies in enterprises.

1.5. LOCAL AND REGIONAL DEVELOPMENT

1.5.1. LOCAL LIVING ENVIRONMENT

Local governments are the providers of immediate physical and social living environments for people, as well as the business environment and technical infrastructures required for supporting such environments. Local living and business conditions are depending, above all, on the investment activities of local governments. Involvement in the administrative areas of local governments is often beyond the scope of national territorial strategies. Such activities are designed in line with development plans and general plans for rural municipalities and towns. Harmonising with national priorities is carried out at regional level.

The task of local governments, provided by law, is to organise the following: social welfare and related services, care for the elderly, youth work, housing and public utilities, water supply and sewage, property maintenance, territorial planning, public transport within a municipality or town, garbage collection and street cleaning in municipalities or towns. The function of a local government is to organise the maintenance of pre-school child care institutions, basic schools, secondary schools, hobby schools, libraries, community centres, museums, sports facilities, shelters, care homes, health care institutions and other local agencies if such agencies are in the ownership of the local government.

The total amount of local budgets was 699 million euro (10.933 billion kroons) in 2001, amounting to 21.7% of the consolidated state budget. The main sources of income for a local budget are state taxes paid into local budgets (proportional share of personal income tax and land tax) and allocations from the state fund, supplemented by funding from a variety of sources.

The financial resources allocated from the state budget for supporting local budgets can be observed as replenishing and balancing the revenues of local budgets and national investment support to municipal investments.

The total amount of national investment support to local governments exceeded 25.36 million euro (396.8 million kroons) in 2001. Approximately 10% of local budget is allocated for investments annually. The major share of this amount is the local contribution, being the prerequisite for receiving national investment support. Two main mechanisms are applied for allocating national investment support:

- funding for educational and cultural objects, allocated from the budget of the Ministry of Education and Research and Ministry of Culture;
- project-based funding from different foundations established by the state (the most important being the Centre of Environmental Investments)

In investments, given high priority by local government units, loans are seen as an important financial instrument. Loans are used for both funding investments not supported by the government and for providing the financial contribution required for obtaining national investment support.

Local governments are, above all, responsible for providing for education, social welfare services and certain technical infrastructures. Some of the institutions can also be run by non-profit organisations or private companies.

In the academic year 2000/2001 there were 715 schools devoted to general education in Estonia, of which 30 were private schools, 48 schools for children with specific requirements (mostly state-owned schools) and 637 elementary, primary and secondary schools, mostly administrated by local governments. At the end of 2000 there were 646 pre-school child-care institutions in Estonia, 599 of them were owned by local governments.

Buildings and facilities used by schools of general education, child-care institutions, hobby schools and in-training schools belong, as a rule, to the local governments. The relative share of buildings maintained by private and non-profit organisations is rather small. The support for large-scale investments, allocated from state funds, is channelled through the Ministry of Education; support for funding objects that are smaller and of multi-functional character can also be obtained from different foundations and regional development programmes.

Social welfare objects – nursing homes, security homes and shelters, rehabilitation centres, social houses, make up an important part of the infrastructures of local governments.

Infrastructures for leisure include the following institutions:

- cultural and community centres, libraries, sports facilities – these are traditional infrastructures meant to provide cultural services for the local population;
- public recreational areas, museums, natural and historical objects with tourist value, open air stages, information desks, village centres. The establishment of sites and objects meant for both tourists and the local population that have development potential has become a part of the agenda in the past decade.

In 2000 there were 183 museums in Estonia, 29 of which were national museums while the rest were mostly municipal museums. Of the 585 libraries, most belonged to municipalities. In 2001, there were approximately 350 cultural and community centres and approximately 150 choir and open-air stages in Estonia, most of them municipal property.

Most of the objects related to leisure and recreation belong to municipalities, but the importance of local non-profit organisations is increasing. The Ministry of Culture channels support from state funds into the objects listed in the first group; for other objects necessary amounts of funding are provided by the Regional Development Agency.

Local governments are also the owners of a number of ***technical infrastructures:*** water and sewage networks, water and wastewater treatment facilities, waste handling, heating networks, local roads and streets and local ports/marinas. In 1999 the length of local road networks totalled 24,356 km; 21,356 km of these were roads belonging to rural municipalities and 3,000 km were city roads. City roads are mostly covered with blacktop or some other hard material, while the same can be said in the case of only about 9.3% of rural municipality roads. In addition to municipal roads local authorities also owned 4,242 m of bridges in 1999.

State support for environmental objects is provided through the Centre of Environmental Investments. The Ministry of Economic Affairs and Communications and different foundations provide limited amounts of additional funds for road and port development.

While providing the basic services, local government units have very few ***assets required for promoting local development activities*** (local marketing, organisation of events with major economic impact, promotion of information society, supporting voluntary development initiatives, business training and counselling, mobilisation of the unemployed, etc.). Capital for developing related structures (facilities, office sites for enterprises, industrial parks,

etc.) is also in short supply. Limited funding can be obtained from different state-owned foundations, supplemented by mandatory municipal contributions.

All the local government units must have development plans and comprehensive plans for years to come. These documents serve as the basis for making decisions related to regional development, but the availability and quality of such documents is not ensured at the moment.

The present ***situation*** of local infrastructures and development activities implemented by local governments can be characterised as follows:

Most of the existing local infrastructures were built during the Soviet period. Some of them fail to meet the functional requirements of today – the buildings and facilities have lost their original function, their value has changed or decreased. The technical systems and technical infrastructures of such buildings and facilities are often out-dated. They are being mismanaged and do not meet contemporary technical, environmental and health-care requirements and are in urgent need of modernisation. The condition of technical systems and general constructions of schools and pre-school child-care institutions is often poor, and therefore the buildings have lost their functionality. Since the number of schools has dropped considerably over the last few years, one must ask what the future of these empty and unused buildings will be. The number of students is dropping in schools still in operation, therefore additional functions should be given to the schools not being used to their full capacity.

The technical situation of local infrastructures is well illustrated by the fact that in the beginning of 2001, only 27% of 677 school cafeterias and 33% of 621 lunchrooms in pre-school child-care institutions met food hygiene requirements.

Municipal infrastructures often do not meet fire safety requirements. As shown in the annual reports on the compliance in schools and pre-school child-care institutions with fire safety regulations, the main problem is the lack of alarm systems and lightning safety fixtures. In Estonia, only 20 child-care institutions meet the fire safety requirements in force.

The excessive size and limited functionality of cultural and sports facilities built during the Soviet period has also become a problem. In the meantime however, local governments and the state lack necessary funds for building new cultural and sports facilities.

The information provided above points to the urgent need for investments and the extensive modernisation of existing infrastructures. In addition to readapting and renovating existing facilities, one also needs to build totally new buildings.

With this background for extensive investment needs, economic opportunities for investments were very scarce in the 1990-1995 period. In relation to the current budget, investments made to develop and maintain local infrastructures are relatively large (approximately 20%), but the budgets are rather tight and it is not possible to increase the relative share of investments. So far, financing has mostly been aimed at halting the deterioration. At the moment unfortunately, deterioration itself is faster than the creation of new values.

Since the investments needed by local governments to provide the basic services (schools, child-care institutions, local communications and roads, infrastructures for leisure) have not received help to achieve the satisfactory condition of these infrastructures over the last decade, the financing needs in these spheres are still very large. Considering the situation of local budgets (and the contributions necessary for obtaining state support), the alternatives for making investments into infrastructures related to development (setting up the necessary environments for tourism and business) are very limited. In many areas all over Estonia the wisdom and efficiency of investments made in infrastructures related to development is largely dependent upon the quality of basic services provided in people's homes. Since people prefer to live in urban centres, there will be no people capable of efficient management of tourism and business investments left on the territories of local governments. Therefore, the investments essential for bringing the local basic infrastructures into conformity with requirements cannot be replaced for investments made for development purposes. Estimates have shown that local government units could increase their contribution to investments made into local development if the support they received to develop basic infrastructures were doubled up to the year 2008.

The Role of Civic Organisations in Local Development

Besides local government units and in co-operation with them, citizens' associations are influencing the development of local living and business environments. Almost one half of all the organisations registered are apartment associations. Many people take part in the activities of associations devoted to the arts, hobbies and sports. A self-

help system has been successfully set up, leaving charity associations, environmental protection and heritage conservation organisations in the background. Social services, health care and education are spheres more or less covered by services provided by civic organisations. The number of services is most limited in economic development, environment protection, management and empowerment. As a rule the services match the current priorities and requirements of regions and are provided for both the members of the organisations and other target groups.

Organisations involved with ***local development activities*** have many different forms. Examples are societies devoted to home, city and family, women's groups, associations of the elderly, youth organisations, welfare associations, sports clubs, foundations, interest groups, co-operatives and associations involved in health care, education, environment, culture and charity. Each of them has a social, religious or ethical mission of its own and is attempting to promote citizen participation and social initiative.

It is difficult to give an exact number of organisations involved in local development activities, as thousands of civil law partnerships, not necessarily registered, are active at village levels. However, according to data gained from different sources their number can be somewhere between 1,300–2,000. The biggest associations involved in local development activities are the Estonian Informal Adult Education Association, the Estonian Association of Cultural Societies, the Estonian Co-operative Association and the village and small town movement, Kodukant.

1.5.2. REGIONAL DISPARITIES

The spatial structure is based on the ***population system***. In Estonia, the relative share of urban population is 67.4% (2002). Although most towns were established already before the industrial revolution, urbanisation took place mostly in 1950-1970. This is mostly attributable to immigration from the territory of the former Soviet Union.

The population system is dominated by the capital city – in 2002, 398,000 inhabitants were living in Tallinn. Approximately 40% of Estonian population lives in Tallinn and within its sphere of influence (Harju County). The second largest town – Tartu (101,000 inhabitants) – is the regional centre for six counties. Tartu is important as a university town and science, business and service centre. The largest towns of Ida-Virumaa – Narva (68,000 inhabitants) and Kohtla-Järve (47,000 inhabitants) – are industrial towns providing rather weak central functions for the surrounding area. Pärnu (45,000 inhabitants) is an important resort town. The remaining 35 towns, some of which also perform the tasks and functions of a county centre, are relatively small (1,000 – 20,000 inhabitants).

Around 30% of the population is living in rural areas, the average population density being 10 inhabitants per km^2. Low population density is rather characteristic of the major share of rural areas in Estonia. During the Soviet period the former agricultural large-scale collective farms became remarkable rural settlements with up to several of hundred inhabitants.

The regional socio-economic disparities existing before Estonia regained independence did not reveal themselves in the classical form of the market economy, that is in different levels of income and unemployment rates. They can rather be described as regional differences in living standards that channelled migrations to the bigger towns and their surroundings and therefore undermined the age structure of the population in outermost regions.

During the transition period a pattern of successful and less successful centres and regions characteristic of a market economy has developed. The following processes described below have most strongly affected regional development:

- *A re-orientation of foreign trade towards the West and an increasing inflow of foreign investments* have been positive, above all, for Tallinn and its surroundings and for West-Estonia. Approximately 80% of foreign investments have been made in Tallinn. Problems with access to the eastern market have had the most negative impact in South-eastern Estonia and in Ida-Virumaa.
- *Private business* has been more active in Tallinn and other large towns (Pärnu, Tartu) and West-Estonia. Entrepreneurship has been rather low in Ida-Viru County, where the population is still mentally attached to large-scale industry. This county should be considered as being in a special situation both culturally and linguistically (the relative share of Russian-speaking population totals to 80% in the area).
- In most areas, the reorientation of economy has been facilitated by *the rationalisation of product processes and privatisation of companies.* At the same time, in some mono-functional regions local crises have emerged as a consequence of enterprises shutting down.
- *Agricultural production and employment in agriculture have dropped drastically.* This process has caused decreases in income and unemployment in rural areas. In the counties where the development

of other economic sectors has failed to compensate for the regression of agriculture, the socio-economic situation has become quite adverse, especially in Põlva, Jõgeva, Valga, Võru and Viljandi counties.

- *The development of transit trade* has, above all, facilitated the development of the area surrounding Tallinn and the transit corridor to St. Petersburg. The development of tourism has greatly aided the development of Tallinn and West-Estonian counties.
- *Development of education and culture* has increased the number of opportunities for self-realisation and entertainment in Tallinn and other larger centres. Simultaneously, the availability of high-quality education and opportunities for enjoying cultural life has become rather scarce in the outermost regions.

Increasing regional socio-economic differences are attributable to the combination of the processes listed above and they are characteristic for the period following the regaining of independence.

In looking at the settlement types, one notes the emergence of big towns (Tallinn, Tartu, Pärnu) and other county centres. In these towns the levels of income and entrepreneurship are higher and unemployment rates lower than in other regions. Large industrial towns in Ida-Viru county (Narva and Kohtla-Järve) show a considerable development gap in comparison to the centres mentioned above. The shrinking of agriculture has had a negative impact on the development of rural settlements and the smaller towns that serve rural areas. The situation has also become worse in former collective farm areas, where the economic basis has greatly weakened. The development of the service sector in small towns is restricted by the low purchase power of the rural population. At the same time the establishment of new and successful enterprises is a good example of a positive development in rural settlements and small towns.

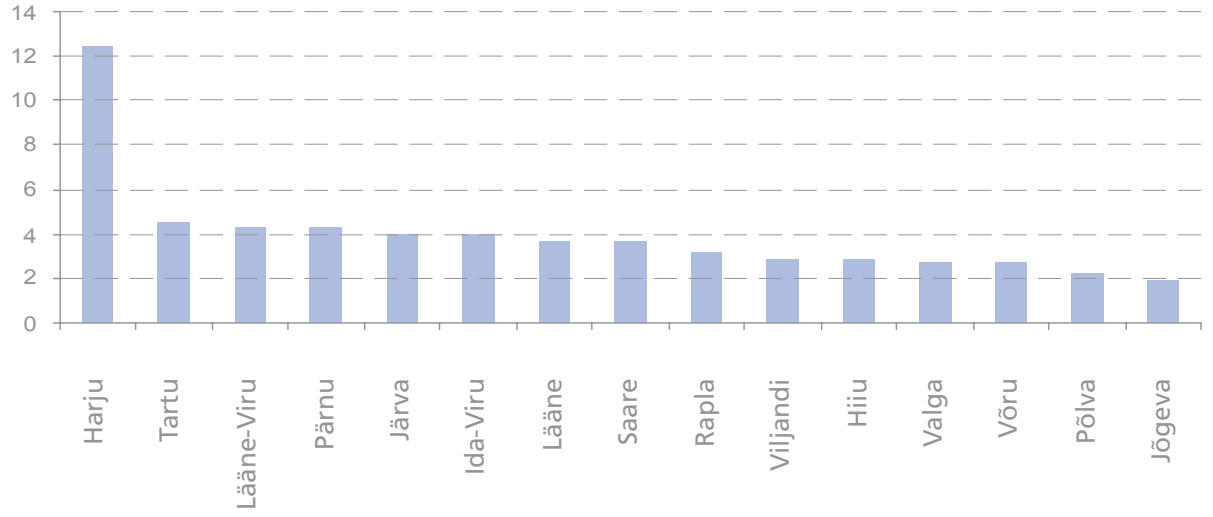
On observing regional development in a section of *local government units*, it becomes obvious that the status of rural municipalities also shows some contrasts. One can see well-established disparities between county centres in neighbouring and outmost rural municipalities, since the faster development of some county centres has had a positive effect on their hinterlands by providing additional investments and access to new jobs and services.

A review of regional development by counties presents a general review of socio-economic development in settlements and local government units. In the following, counties are compared based on indicators characterising their economic potential, income level and unemployment (see Figures 41, 42, 43).

Figure 41

Enterprises' net turnover per inhabitant by counties, 2000-2001

(thousand euro)



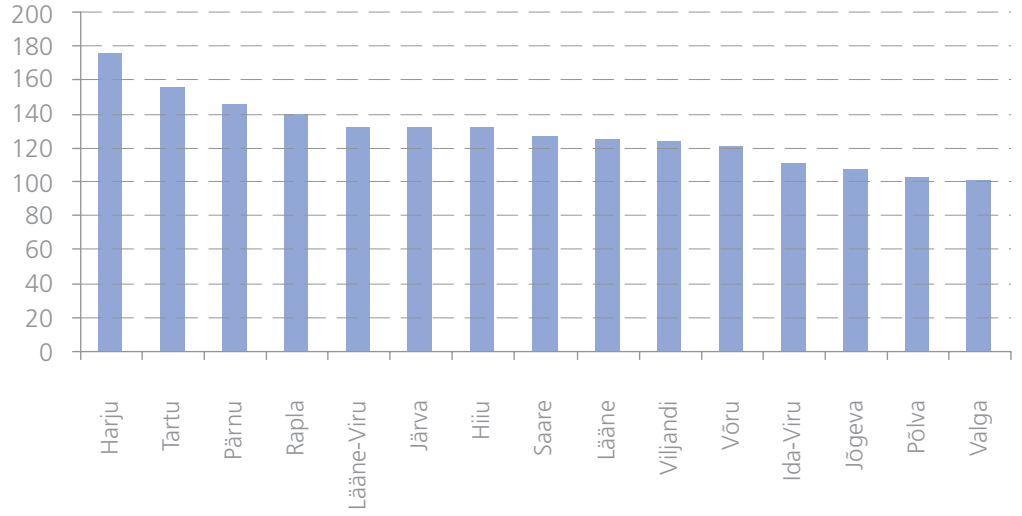
Source: Statistical Office of Estonia

Net turnover of enterprises is comparable to regional GDP and this clearly shows the economic leading position of the capital city. In Harju County the respective indicator is more than twice as high as in other counties.

Figure 42

Average income per member of household by counties, 2001

(euro)



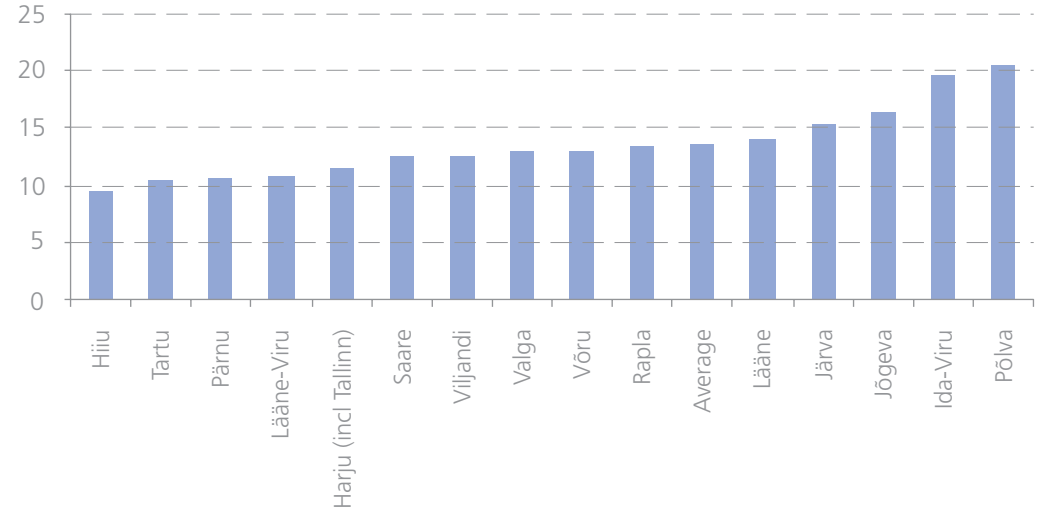
Source: Statistical Office of Estonia

As we look at the income of the population, Harju County holds the leading position, but the regional differences in income levels are smaller than in the case of business turnover. The income level in the poorest county (Valga) amounts to approximately 59% of the respective indicator for Harju County. The more unified level of income compared to the business turnover is related to social benefits and redistribution of wages as due to commuting (periodic migration) to work.

Figure 43

Average annual unemployment rates per county, population aged 15-74, 2000-2001

(as percentage)



Source: Statistical Office of Estonia

In most counties the unemployment rates remain between 10-13% and therefore the distribution of this information is rather level. Põlva, Ida-Viru, Jõgeva and Järva counties stand out with high levels of unemployment.

For a better expression of disparities by counties, the indicators can be transformed into a county development index. The development index was elaborated by adding up net sales revenues of enterprises, investments made into capital assets, monthly income of members of households and employment rate indicators. The smaller the value of the county development index, the better is the socio-economic situation in the respective county. In the table the counties have been listed according to the value of the county development index (Table 52).

Table 52

Regional disparities by counties

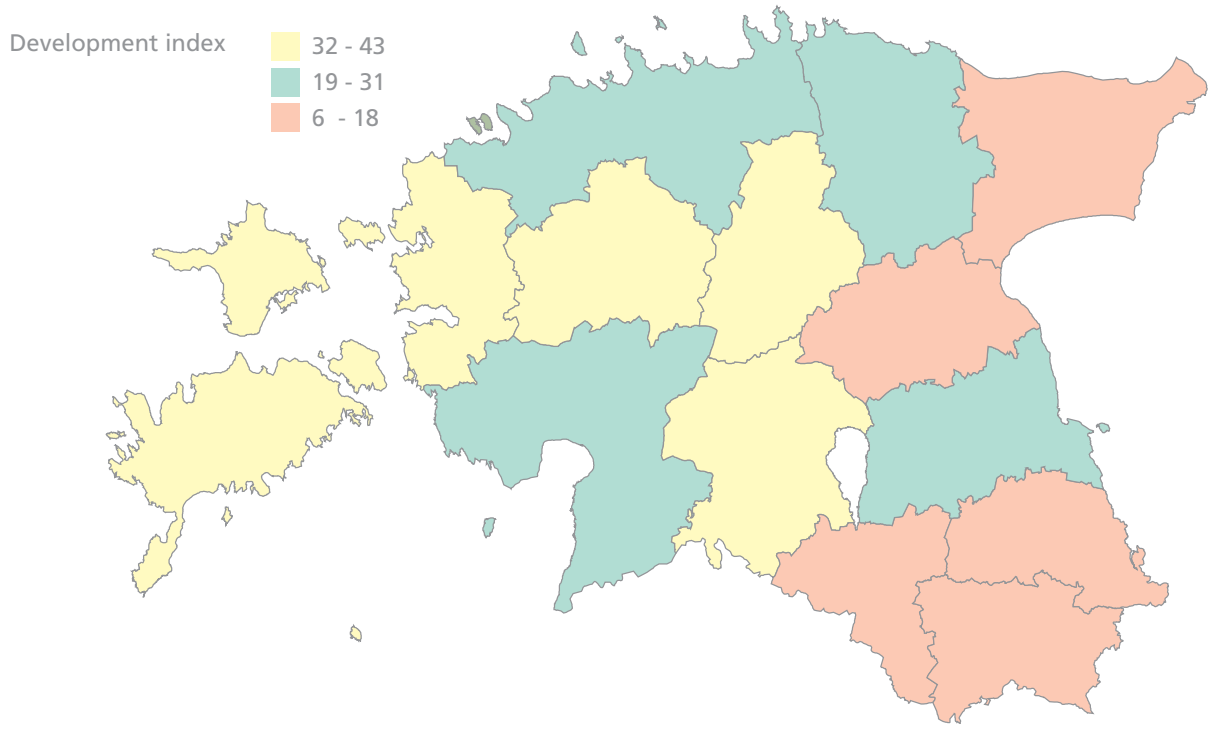
County	Net sales turnover of enterprises (euro per capita, 2000-2001)	Average monthly income per member of household (euro, 2001)	Unemployment rate (% of population aged 15–74, annual average 2000–2001)	Development index
Tartu	4,546.8	156.14	10.3	6
Harju	12,418.1	174.82	11.4	7
Pärnu	4,259.1	145.74	10.6	10
Lääne-Viru	4,273.9	132.34	10.7	12
Hiiu	2,825.2	131.55	9.4	19
Saare	3,625.1	127.70	12.5	22
Rapla	3,163.9	139.18	13.3	23
Järva	3,984.4	131.72	15.3	23
Viljandi	2,870.9	123.51	12.5	27
Lääne	3,681.5	124.73	14.0	27
Ida-Viru	3,958.7	110.78	19.7	32
Võru	2,679.8	120.62	13.0	33
Valga	2,681.6	101.53	12.9	35
Jõgeva	1,932.4	107.21	16.3	41
Põlva	2,237.9	102.40	20.5	43
Average	3,942.6	146.28	13.5	

Source: Statistical Office of Estonia, Ministry of Internal Affairs

The spatial expression of the development index is shown in Figure 44.

Figure 44

County development indexes



Source: Ministry of Internal Affairs

The analysis shown above does not include the isolated status of the two counties located on islands (Saare and Hiiu). The isolation of these two counties is their greatest structural weakness. The time required to crossing the sea straits (approximately 1 hour for getting to Saaremaa and approximately 2 hours for getting to Hiiumaa) equals at least 70 and 140 km respectively if travelled by car.

The subsidies should provide for more frequent plane connections with the islands, as the present air connections are insufficient for promoting business and tourism. Poor connections impair the potential for development and deteriorate economic stability on the islands. The amount of subsidies should be sufficient to provide for at least 10 journeys per week on the Tallinn-Kuressaare-Tallinn and Tallinn-Kärdla- Tallinn lines.

The following conclusions can be drawn about the regional development of Estonia in the 1990s:

The following ***main disparities*** strike the eye when comparing the capital city region (Tallinn and Harju County) and other parts of Estonia. Harju County, accommodating 40% of Estonia's population, also gives 60% of GDP; 80% of foreign investments are concentrated here. The Harju GDP per capita totals approximately 51% of the respective EU average, while the respective indicator in other counties stays between 22-25%. The disparities between the regions left out of the capital region can be explained by their geographic location and/or different potential of their county centres. The most successful are Tartu and Pärnu counties with their strong town centres. The counties bordering on Harju county can also be considered as regions with strong or average status. The situation of the islands can be described as average for the moment, as their isolated status lowers their potential for development.

The situation is the most unfavourable in the counties located on the eastern border (with the exception of Tartu County). Ida-Viru County is also rather special, being the only industrial region suffering from difficulties in adapting to the present situation. In other counties the difficulties are mostly related to the regression of agriculture, made more complicated by different factors of local character (state border having the effect of an economic barrier, problems with local transport, etc.).

Regional disparities increasing over the transition period have also started to have some effect on the ***migration of the population***[36]. Unfortunately there are no detailed or trustworthy statistics available on migration in the 1990s. When comparing the data from the census in 1989 with those from the census of 2000, it can be said that the concentration of population has decreased a little in the 1990s. This is mostly the result of a number of former citizens of the Soviet Union in Tallinn and towns of Ida-Virumaa leaving Estonia at the beginning of the decade. After emigration issues lost their importance, the population pattern has been influenced by internal migration, mostly into towns, especially bigger towns. Economic and social motives cause young people to choose bigger towns, above all Tallinn. Such a trend is somewhat levelled out and balanced by the movement of elderly people from towns – with high residence costs – to rural areas. Commuting has increased by approximately 40% when compared to the Soviet period. Here the towns have also become dominant. Approximately 1/3 of labour force living in rural areas has jobs in town.

There is no reason to predict any great changes taking place in regional socio-economic disparities. The main factors having impact on regional development will be the capacity of regions to adjust to international competition and the orientation of new investments. These factors will become, in their turn, dependent upon research and development activities, qualification of labour, regeneration capacities of the economy – that is, factors that clearly stand in favour of bigger towns.

Transit routes and tourism areas, as well as bigger towns and county centres – for example, Tallinn and its surroundings, larger cities and county centres – will continue to be more attractive for investments.

In addition to living standards and a new meaning attached to attractive living environments in general, other factors having influence on regional development are education, culture and the environment. These factors also work in favour of Tallinn and some other bigger centres, thus adding to the regional disparities.

Improved transport and communication, the cost of land and labour in the bigger towns and a new importance attached to attractive living environments are all factors that may easily make investors decide in favour of other accessible areas instead of Tallinn. Unfortunately, market economy mechanisms are not strong enough to increase the competitiveness of the more distant areas that are held back by development disparities.

Attempts have been made in Estonia to balance development with some assistance from regional policy. Since 1996, regional development programmes channelling financial assistance into rural areas, mono-functional settlements and several outermost regions (islands, border areas, Ida-Viru County, south-east of Estonia) are being implemented.

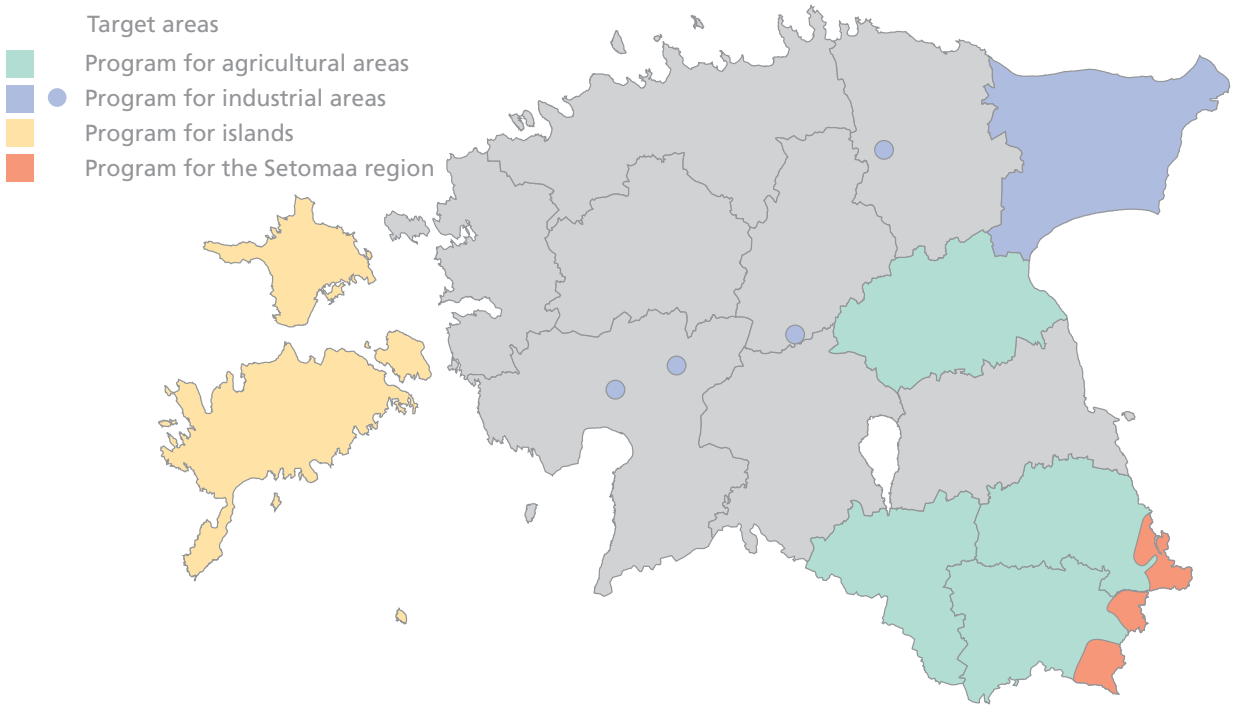
In 1996-1999, the total amount of support provided to different projects through the programmes was 14.51 million euro (227 million kroons).

The opportunities for notably influencing regional development have been restricted by insufficient funding available and the strategic weaknesses of the current regional policy: weak programming, insufficient concentration, limited scope of partnership, insufficient monitoring and evaluation.

The ***Strategy for Regional Development*** (1999) includes a well-defined nomenclature for programmes and the areas they target. In accordance with the strategy, the Government of the Republic has approved seven regional development programmes to be implemented currently in Estonia: programmes for agricultural areas, industrial areas, the islands and the Setomaa region. Other programmes on the list are for local initiative, cross-border co-operation and the network of centres. The target regions are shown in Figure 45 below.

Figure 45

Target regions of regional development programmes



Source: Ministry of Internal Affairs

Counties not included in the target area of regional development programmes can influence their development by devising and implementing plans and strategies at the county level. For this purpose, county governors have given regional development funds for disposal. Simultaneously, contributions from the Estonian cross-border co-operation programme and Phare CBC funds were available for such activities. County governors are also entitled to co-ordinate the activities of different state institutions in a county.

During the elaboration of the Strategy for Regional Development, in Estonia a national spatial plan, ***"Estonia 2010",*** was developed in the year 2000. The plan and strategy are based on the same vision of balanced development of human settlement patterns and options for achieving the objectives established. The plan is not legally binding on parties, as it can be implemented, first of all, through the implementation of sector and regional policies and co-operation between the state and local governments. However the Government has approved a corresponding action plan for the implementation of the main goals established with the plan. Implementation of the action plan has already started.

The European Union has influenced the regional development of Estonia, above all through a Phare Cross-Border Co-operation Programme (Phare CBC). In 1994-2000, different regions in Estonia received assistance from Phare amounting to 26 million euro (more than 400 million kroons), which is twice as much as the amounts received by Estonian development programmes for national regions. The target areas for cross-border co-operation in Estonia

lie mostly out of Tallinn. However, they do not match the preferences established in the national programmes developed in Estonia. Considering the character of cross-border co-operation, this is inevitable. Since 2000, the preferences of national regional policy were observed through the implementation of Phare social and economic cohesion investment funds. The SAPARD-programme is also expected to balance regional development, as the investment support provided within the framework of the programme is aimed at rural areas and is allocated at county level. The ISPA support to investments made into transport infrastructures and environment protection has improved the situation in the regions out of capital city region.

The disparities in Estonia are not very remarkable when compared to the ***regional differentiation in the EU Member States***[37]. When measured at the NUTS 3 level, GDP per capita is twice as high in the capital city area (North-Estonia) as the respective indicator in other regions, but similar or even bigger differences can be noted in several EU member states (at NUTS 2 level). In comparison with some EU member states, the fluctuation of unemployment rates in Estonia is relatively moderate. This is mostly attributable to the high unemployment level in towns. At the same time the general unemployment level is considerably higher in Estonia.

Estonia has also several ***advantages*** for balancing regional development. Here, the small size of the country can be seen as one of the most important factors. Distances between different areas have no importance for the foreign investors in choosing their location. Improved transport connections, or the provision of favourable local conditions can be of considerable assistance in channelling a certain amount of investments into outermost regions. Several road-transport corridors passing through the territory in different directions, as well as telecommunication services available everywhere, also present excellent advantages. Each county has some opportunities for cross-border co-operation.

The development of a balanced pattern in human settlement, which involves improving the international competitiveness of towns on the one hand and avoiding excessive concentrations of the population on the other, is one of the objectives established in the national planning "Estonia 2010".

For achieving these objectives all the areas must ensure the availability of ***education*** and ***employment,*** these being of outmost importance in the choice of a place to live. The availability of these and other conditions depends in turn on the availability of connections (public transport and telecommunications) that provide the population with the freedom of movement they require.

Developing co-operation with neighbouring cities, above all Helsinki and Riga, can strengthen the position of Tallinn in international competition. One of the important components of such process is providing better service on routes that connect Finland and Central and Western Europe and that pass through Estonia (e.g. Via Baltica, including Rail Baltica).

For better compensation of regional disparities and the establishment of a more diversified network of centres, the city of Tartu should be promoted as a second national centre. The same goes for other county centres and bigger towns, located within the distance of pendulum migration in each county. In the case of both Tartu and other centres, maximum advantage should be taken of their special strengths and innovative capacities. Public transport providing good connections between the centres should also be established. One of the most important tools for human settlement pattern development is co-operation between territorial units in different forms. Improved transport connection with both the mainland and foreign countries is one of the priorities for the development of the islands.

Over the last couple of years major changes have taken place in the larger towns of Estonia, above all in Tallinn and towns in Ida-Virumaa (Narva, Kohtla-Järve and Sillamäe). The quality of the living environment and the characteristics of the social problems are differentiating in the suburbs and settlements of Tallinn. The concentration of economically disadvantaged people in certain areas has brought along the ***regression of certain parts of town,*** such as North Tallinn (approximately 53,000 inhabitants, in 1989-2000 the number of inhabitants dropped by 28%). Here, run-down conditions cause social problems that are more acute than those in the rest of the town (for example, 15% unemployment rate compared to 3%; number of drug addicts 1.7 times larger – 1,230 addicts per 10,000 inhabitants). Crime rates are higher (criminal danger indicator 1.7-fold higher, number of crimes committed under the influence of drugs twice as high as in other parts of the city - 23 crimes committed under the influence of drugs per 10,000 inhabitants). Social structures and accommodation are in very poor condition (14% of the buildings are not suitable for habitation, 37% are in very bad condition).

Many of the infrastructures and residential buildings in regions of environmental value have depreciated in Tallinn. The renovation of such areas asks for investments unattainable for the local population. Similar areas can also be

found in other towns (for example, Tartu and Pärnu). The principles of sustainable development should be observed in environmentally attractive regions.

The population living in larger towns of Ida-Virumaa has dropped by 20-25% in 1989-2000. Unemployment rates are high in these areas (this is true also of Ida-Virumaa as a whole) and incomes are only 70% of the average income in Estonia. In the larger towns of Ida-Virumaa the number of non-Estonians is rather large (in Narva even as much as 96%). People here are cut off from the culture and the labour market opportunities in Estonia because of insufficient language skills and a lack of interest. Social problems and limited opportunities for spending one's free time on the part of young people have led to increased drug addiction and crimes committed under the influence of drugs. In Narva, 98 crimes were committed under the influence of drugs per 10,000 inhabitants in 2000, and in Kohtla-Järve the number of crimes committed under the influence of drugs tripled in 2000. In 2001 in Narva there were 400 people officially diagnosed as HIV-positive (that is, approximately 20% of the HIV-positive people in Estonia). The rapid fall in the large-scale economy has left behind a large number of vacant industrial buildings and residential houses, so that the situation of infrastructure as a whole has deteriorated. Environmental problems need to be solved in Narva and Kohtla-Järve.

1.5.3. SUMMARY

- Local governments are the providers of immediate physical and social living environments for people, but also of the business environment and technical infrastructures required for supporting such environments. The existing local infrastructures were mostly built during the Soviet period. Some of them fail to meet the functional requirements of today – the buildings and facilities have lost their original function, their value has changed or decreased. The technical systems and technical infrastructures of common use of such buildings and facilities are often out-dated both and are being mismanaged, not meeting contemporary technical, environmental and health care standards and requiring urgent modernisation. For example, in the beginning of 2001 only 27% of 677 school cafeterias and 33% of 621 lunchrooms in pre-school child-care institutions met food-hygiene requirements. Only 20% of child care institutions all over Estonia are fully in compliance with fire safety standards.

  In the 1990-1995 period, the economic possibilities for investment were rather scarce. Over the last years the investments into the maintenance and development of local infrastructures have been quite large (in 2001, approximately 120 million euro or 20% of the total local budget), but still insufficient to make up for the deterioration of infrastructures.

  In addition to providing for basic services, local government units are very short on the assets required for promoting local development activities (local marketing, organisation of events with major economic impact, promotion of information society, supporting voluntary development initiatives, business training and counselling, mobilisation of the unemployed, etc.). Money for developing related structures (facilities, rooms for enterprises, industrial parks, etc.) is also scarce. Limited funding can be obtained from different state-owned foundations, supplemented by mandatory municipal contribution.
- Various disparities strike the eye when comparing the capital city region (Tallinn and Harju County) and other parts of Estonia. Harju County, accommodating 40% of Estonia's population also gives 60% of GDP and 80% of foreign investments are concentrated here. The GDP per capita in Harju totals approximately 51% of the respective EU average, while the respective indicator in other counties stays between 22-25%. Among other counties the most successful are Tartu and Pärnu with strong town centres. The situation is the least favourable in counties located on the eastern border (with the exception of Tartu County). Ida-Viru County is also rather special, being the only industrial region suffering from adaptation difficulties. In other counties the difficulties are mostly related to the regression of agriculture, made more complicated by different factors of local character.

  Regional disparities increasing over the transition period have also started to have some effect on the migration of population. Economic and social motives cause young people choose bigger towns, above all Tallinn. Such a trend is somewhat levelled out and balanced by the movement of elderly people from towns with high residence costs to rural areas. Commuting has increased by approximately 40%, compared to the Soviet period. Here the towns have also become dominant. Approximately 1/3 of labour force living in rural areas has jobs in towns.
- Besides the general privileged development of towns, the concentration of economically disadvantaged population in certain areas has brought along the regression of certain parts of town. The population in northern Tallinn and towns of Ida-Virumaa has dropped by one fourth. These areas can be characterised by high unemployment, crime and drug addiction rates. In 2001 in Narva there were 400 people officially diagnosed as HIV-

positive (that is, approximately 20% of the HIV-positive people in Estonia). In northern Tallinn more than a half of the buildings are badly deteriorated or not suitable for living.

- Estonia has a number of advantages that could be used for balancing regional development. Due to the small territory of the country, distances are less important for foreign investors and improved transport facilities, or the provision of favourable local conditions, could efficiently help to channel some of the investments into regions out of the capital city. Different international transport routes passing through the small territory of Estonia and telecommunication services available in all parts of the country are also a benefit. Different development policies matching the principles of national plans could be implemented in different centres for the purpose of balanced development.

1.6. DEVELOPMENT PROSPECTS

1.6.1. IMPORTANT INTERNATIONAL TRENDS

An analysis of the internal situation in a country is not sufficient for drawing up a grounded development strategy. For better use of the existing opportunities it is necessary to take into account also economic and social trends in international environment. Estonia's future is shaped by several universal trends. The most important of them are:

- globalisation,
- information technology revolution,
- transition to environmentally sustainable development.

In today's world these streams function in so close mutual influence, that in moving to a more detailed analyses level it often turns out that they cannot be looked at separately.

Globalisation

Economic competition between enterprises as well as between countries is becoming universal. World-wide raw materials, labour force, capital and production markets have been created. Capital and technology mobility and transport opportunities are so big, that it is possible to place every single part of the production cycle to the place on earth where factors of production symbiosis ensure the lowest cost price. Hence, regional specialisation opportunities get wider. At the same time capital mobility creates stability problems to states and regions, because if circumstances worsen, capital outflow may take place. The best and more sustainable development opportunities are in regions where high education level and qualification and continuous training, research and development activities– i.e. innovation – ensure that factors of production adapt quickly to meet the changing market needs. These are factors on which constant and strengthening supreme power of leading countries relies on in world economy. The importance of knowledge, skills and innovation capacity in the developing of countries and regions has even been connected with the change of economic model – transfer form capital-based to innovation-based economic model.

During this decade, North-America, Western-Europe and Japan remain to be the leading developing centres in the world. Some states, remaining outside the core area, succeed to integrate with so-called central economies, taking along also higher qualification demanding economic functions. Others, who cannot develop highly qualified labour force, research and development activities and relevant infrastructure, remain inevitably to be suppliers of raw materials and cheap quantity-production or so-called holiday paradises.

Regionalisation functions in frame of globalisation and as its counter-stream that enables countries and regions to strengthen their position in global economy. In supra-state scale, the forms of regionalisation are forming economic unions (the biggest and strongest of them is the European Union) and economic regions that may not be restricted by nation states' of economic unions' borders (one of such integrating region may become the Baltic Sea region).

Information Technology Revolution

The main basis of globalisation and the competition factor of growing importance remains to be information technology revolution. Although the information revolution and establishment of global ICT infrastructure (including the Internet) proceed from world economic centres, no country will remain untouched:

- The competitiveness of a state and regions will depend more and more on the availability of current global market information and informing others about themselves. Export production is especially dependent on it.

- The presence of contemporary ICT possibilities will become an inevitable precondition for getting international investments.
- ICT becomes more and more an inevitable part of production and service technologies.
- ICT development will become one of the major tools for preventing brain drain and for alluring qualified labour force.
- Decisive ICT application in less developed countries enables to accelerate development or even change development paradigm (for example orientation to software export – in India; tele-working for foreign consumers, etc.).

Information technology revolution is bringing the world best-developed countries to information society (knowledge-based society). The innovation-based economic model and community-based society model are manifestations of the same socio-economic development process. As a result of the process, the key factor of production becomes a man, his educatedness, learning and innovation capacity. Respectively, the importance of human resource development will increase in economic policy. For ensuring fast development capacity and avoiding unemployment, it becomes inevitable to include labour force into life-long learning process. Social relations with economic-development supporting impact will be valued as social capital. Long-term unemployment, accompanied by poverty and social exclusion, has to be acknowledged not only as source of social problems and crime but also as waste of human resources.

Environmentally Sustainable Development

The necessity to protect man's living environment has growing influence on world development. Reducing greenhouse gas, the gas breaking the ozone layer and causing acid rains, remains to be common problem for all states, even if the condition of local environment can be considerably improved. Increasing environmental awareness and growing importance of "green" mentality cause the establishment of more strict environment- and health protection requirements for production processes and products. If the market mechanisms themselves do not create it, business conditions (taxes, royalties, compensations, fines as well as benefits) will be created via other economic policy means, where environmental protection means also higher economic efficiency.

At the same time, the impact of environmental protection is not limited to new restrictions and standards. People's conscious care of their health, healthy life-style, avoiding environmental risks and active participation in ensuring favourable living environment become more and more important.

Environmental sustainability and health protection will become an important factor in economic competitiveness – because the demand for relevant products and services by enterprises and people will increase. In many ways the environment will become a business opportunity. Natural resources, biological diversity and unpolluted environment will be valued as natural capital.

Demand for technologies and equipment enabling to produce and consume in more environment-friendly way will increase. Demand for ecologically "clean" products and services will increase as well. Finally, the demand for landscapes in natural condition or for more rare protected landscapes will increase.

Societies with high ecological responsibility favour increased use of renewable energy sources. Beside that, the structure of fossil fuels will change. For decreasing the waste from greenhouse gas and other contaminants, "cleaner" fossil fuels emerge – petroleum and gas. Nature- and rural tourism, organic farming and active holidays in nature will be more valued. Beauty spots, independent from their locations, will become desired living and holidaymaking places.

Opportunities Stemming from Trends

For Estonia it is important to consider the above-described trends. Ensuring place in international division of labour, increasing the share of products/services with higher added value and in summary, accelerating economic wealth and social welfare in all states depends a great deal on human resource development. Purposeful human resource development is one opportunity that Estonia has not sufficiently used. In the near future, Estonia will be a country with decreasing and ageing population, therefore the skills of every person able to work have to be developed and used. In case of purposeful development policy, Estonia has the makings for changing its economy that still relies too much on simple sub-contracting, into internationally competitive economy. Strategically important, high technology demanding jobs will not become prevailing in Estonia even in case of favourable development. In most enterprises and regions the modernisation of economy appears primarily in bringing traditional production and service branches to new technological and organisational levels.

An important component in modernising economy is accelerating the introduction of ICT. Estonia holds quite favourable position in implementing ICT, however, maintaining this situation demands determined policy.

An important opportunity for ensuring Estonia's competitiveness in global economy is active participation in regionalisation. Close relations with the EU member states, primarily with Finland and Sweden and foreign assistance received form these states, has helped to restructure Estonian economy and solve several problems related to environmental protection. EU enlargement promotes deepened integration in the Baltic Sea region with more than 100 million inhabitants. The EU membership gives Estonia more solid international position, enabling Estonia to participate in economic relations between Russia and EU, including in the North dimension, as a part of the EU.

Increased awareness of health and environmental issues, increasing demand for organic farming products and increasing tourism widen Estonia's nature-related development opportunities. Large forest and mire areas, traditional landscapes and peaceful environment of rural areas, cultural heritage and abundance of agricultural land are preconditions for nature- and rural tourism, practising organic products and extending the use of local renewable energy sources. Clean nature and sparse population offer possibilities for spending holidays in nature and constructing summer-homes as well as establishing nature-friendly places of residence.

Taking into account the balance of primary energy, the social problems arising from abandoning the oil-shale energy in North-east of Estonia and the use of capital and time for creating alternative opportunities, Estonia has made a strategic decision to continue oil-shale based energy production at least until the year 2015. Although the modernisation of oil-shale energy makes burning-technology more effective and less polluting, Estonia should, taking into account world trends, pay attention to using less polluting energy sources and technologies.

The logic of environment as a business opportunity will more extensively influence Estonian environmental policy. In mid-term perspective it is inevitable to make big end of pipe investments into treatment plants to eliminate residuals and rapidly reduce pollution. Besides, increased funds should be directed into best possible environmentally sustainable technology.

1.6.2. INTERNATIONAL ECONOMIC ENVIRONMENT

Estonia's small and open economy is strongly dependent upon changes taking place in the international economic environment. From one hand this is attributable to Estonia's openness to foreign trade – export and import volumes are almost equal to the gross domestic product of Estonia. The dependence of cyclic fluctuation of the world economy is enhanced by the Currency Board system, enabling the external factors to transfer into real economy.

As the trade with the European countries totals to approximately two thirds of Estonia's foreign trade, the dependence upon Europe is also the strongest. The medium term forecasts for economic growth in Estonia are based on the assumption that the world economy growth cycle, and above all, the growth cycle of European economy, will not go into decline during the period reviewed and there will be no major negative shocks. Although the Estonian and European economic growth have the same growth cycles, the respective indicator of Estonia being even higher by a couple of per cent points, the growth would still be lower than the current projections in case the negative scenario becomes a reality.

There was quite moderate economic growth in global economy during 2002. The situation has not improved in the first half of 2003. Quicker growth rates of global economy are expected at the end of 2003 or in the beginning of 2004. Our closest neighbours and trading partners, Finland and Sweden, have done better than other countries in euro area. The biggest countries in EU – Germany, France and Italy – will grow very slowly in 2003 but growth rates will be higher in 2004. It can be expected that the European economy will go into rise again in 2004, supported by reduced taxes, lower inflation rates and restored foreign demand.

Estonia's economy is not directly dependent on the economy of the United States of America, as the relative share of the USA in foreign trade of Estonia is rather small. However, the USA does have a strong effect on the world economic environment as a whole. During the year 2002 the USA recovery was sluggish, because of slow consumption growth and delayed investment upturn. In the first half of 2003 the economy of USA showed quite quick development which was mainly supported by consumer spending. The Fed has promised that monetary policy will be lenient for many years to come, which will stimulate and support the economy.

The government of Russia is expecting economic growth amounting to approximately 5-6% in 2003–2005. The growth is expected to be around 6% in 2003. During the first half of 2003 the economic growth was very quick (7.2% in the II quarter) which was based on strong export growth and consumer spending. Economic reforms should be accelerated for obtaining stable and sufficient economic growth, changes in banking sector, public sector

and legislation curbing monopolies. The objective of the reforms should be to increase the investment inflow to small and medium-sized enterprises in Russia. Although the relative share of Russia in Estonia's foreign trade is not very large, Estonia is nevertheless influenced by economic and political decisions taken by Russia – for example, doubled custom duties and possible re-routing of transit trade passing through Estonia to the Russian ports.

Foreign capital inflow has played an important role as a tool used for maintaining the external balance of Estonia and transfer of technology. Estonia has been one of the most successful countries in the Central and Eastern Europe where it comes to direct foreign capital inflow. It is important to maintain this inflow also after the end of the privatisation process, at the same time the relative share of privatisation in direct foreign capital inflow has been rather modest. Still it should be kept in mind that Estonia competes with many countries in attracting foreign capital inflow, and as the world economy integration becomes denser the competition will also grow tougher. The naturally occurring process of price and wage convergence means that sooner or later Estonia will lose one of the advantages – low production costs – being so far one of the factors motivating foreign capital inflow, therefore it is important to see that the increase in wages is not going to exceed the growth of productivity. Estonia must find new factors to play the role of competitive advantages, for example, qualified labour, well-developed institutions, etc.

1.6.3. ECONOMIC FORECAST[38]

External environment development was mostly still negative in the beginning of the current year. Improvement of economic activity did not materialise. The world economy, including the European Union, is expected to speed up its growth rate only in the beginning of 2004. Estonian economic growth is supported by economic growth in Scandinavia, which is higher than the European average, as well as the quick economic development of Russia, Central and Eastern Europe. In the medium-term economic growth in the European Union should increase, inspired by the expansion of the Union in 2004. However, real growth of the economy in the European Union is expected to remain lower than that of the USA in the medium-term.

Central banks of several big nations, as well as the European Central Bank have cut interest rates to revive the economy, which is at a record low level. However, up to the present moment these actions did not show any results. Starting in 2004 Euro area interest rates should start to gradually rise, bringing growth in Estonian interest rates.

In 2002 Estonian ***private consumption*** and investment showed remarkable expansion in the external environment facilitated by low interest rates, which still continues. Also, growth in individual consumption was triggered by low inflation and high growth in real wages. Quick growth in real wages can also increase private consumption for the next five years, given a low level of interest rates and slow inflation.

Despite the predicted decrease in profitability of investments for the current year, the level of investment will remain high and will exceed 30% of GDP. This is mainly related to the large demand for investment in the Estonian economy, which is helped by annually increasing EU structural aid. Adaptation of investment growth is caused by the diminishing role of big investments in energy sector and railroads in 2005–2007. Growth in the marginal rate of savings with respect to GDP is supported by interest rate growth, new income tax legislation and implementation of pension reform.

A high level of inactive population in the labour market affects the unemployment rate; no substantial improvement in inactivity is expected. Employment growth is primarily achieved through an increase in the retirement age. The overall situation in the labour market is continuously positive, and stabile economic growth facilitates the creation of new jobs, which is expected to decrease unemployment in some manner. Average wage growth will be slower in the medium-term, as the economy's nominal growth will decrease and new income tax legislation coming into power will decrease the upward pressure on wages.

Most of all Estonian ***consumer goods prices*** were affected by freely formed prices, the pressure which had a negative trend. The regulated price growth trend slowed down too, and the current year will not bring big actions. At the same time, most regulatory actions are left for 2004 when EU accession will take place and fuel, alcohol, sugar and electricity prices will rise. Price increase should accelerate at the end of the current year, after the low level of the summer months. Expected consumer price increase for 2003 and 2004 is 1.7% and 3.8% respectively. During 2005–2007 prices will grow at an even lesser rate, affected by the movement of prices in the European Union.

The deferral of foreign economic growth expectations directly affects Estonian ***foreign trade***, where more clear movements will emerge by the beginning of 2004. According to forecasts, export and import show mostly technical growth in 2003, mainly in the sub-contracting sector; normal export and import will continue stabile growth. The export and import growth gap size expresses convergence of domestic and foreign demand by 2004. Recovery of foreign demand will bring higher exports than import growth for the next year, up to the end of the forecast period.

The record high current account deficit in 2002 was not as sudden as its growth was in the previous year. This was due to the slow recovery of the world economy, the gap between income and consumption in Estonia and some ongoing projects with a high demand for imports for the next few years.

The above-mentioned movements cause a small slowdown in the growth of the Estonian economy. Economic growth is expected to recover in 2004 along with recovery of foreign demand. During the medium-term economic growth is expected to reach 6%[39], supported by implementation of structural reforms and infrastructure and other investments sponsored by EU structural funds. Economy's growth potential is increased by structural reforms, aimed mainly at improvement of the supply side of the economy.

Table 53

Growth and associated factors, 2002–2007

(%)	2002	2003	2004	2005	2006	2007
Main economic indicators						
GDP real growth	6.0	4.5	5.6	6.0	6.0	6.0
GDP (bln EUR)	6.9	7.4	8.2	9.0	9.8	10.7
GDP deflator	4.1	3.2	4.3	3.5	3.2	3.0
Consumer price index	3.6	1.7	3.8	3.4	3.2	2.8
Employment (15–74 years old, thousands)	585.5	586.9	589.9	591.5	594.9	595.4
Employment growth	1.4	0.2	0.5	0.3	0.6	0.1
Productivity growth [1)]	4.4	4.2	5.1	5.7	5.8	5.9
Unemployment rate (ILO, 15-74 years old)	10.3	9.9	9.6	9.4	9.2	9.0
Average wage (EUR)	392.7	431.8	470.5	512.6	558.5	613.6
Wage real growth	7.0	8.7	5.0	5.4	5.6	6.9
Investments and inventories (% of GDP)	31.4	33.1	33.0	33.1	33.5	33.9
Domestic savings (% of GDP)	19.2	20.6	22.5	23.5	24.5	25.3
Current account (% of GDP)	-12.3	-12.7	-10.4	-9.6	-9.0	-8.6
Sources of growth						
Private consumption	9.1	5.4	5.9	6.3	6.1	6.0
Government consumption	5.0	3.7	3.5	3.3	3.4	3.5
Gross fixed capital formation	16.1	13.7	6.6	7.6	7.7	7.9
Change in inventories (% of GDP)	2.9	2.3	2.1	1.8	1.7	1.6
Export on goods and services	6.0	7.4	11.5	10.0	10.2	10.4
Import on goods and services	10.2	10.8	9.5	9.3	9.7	10.0
Contribution to GDP growth						
Domestic demand (excl. inventories)	9.5	8.9	5.1	6.7	6.5	6.7
Change in inventories	0.8	-0.4	-0.1	-0.2	0.0	0.0
External balance of goods and services	-4.3	-4.1	0.6	-0.4	-0.6	-0.8
Growth of value added						
Agriculture	1.4	-0.8	2.7	3.9	3.6	3.8
Industry	8.6	8.7	8.8	6.8	7.4	6.6
Construction	13.9	3.6	5.8	*7.7*	*7.0*	*7.6*
Services	4.6	3.3	4.6	5.6	5.4	5.7

Source: Ministry of Finance

1.6.4. IMPACTS OF INTEGRATION WITH THE EUROPEAN UNION

Membership in the European Union will bring about important changes in the socio-economic situation of Estonia. Different studies have predicted that when new members join and start on the process of catching up, the result will be a step-by-step convergence of productivity and living standards to the EU norms and that the merger is going to enhance the economic and social cohesion between new member states and the previous EU. Nevertheless, because of major disparities between the new member states and the EU 15, the convergence may take as long as 20-40 years. There are no automatic guarantees for reaching the average EU levels, since the process of catching up depends on economic policy decisions, which in turn are based on the estimates and prognoses of the impact made by union.

This Programme sees full-term association with the single market of the European Union to be the most important impact. Estonia is probably going to be influenced by the goods and services markets, but labour and capital markets will also have an effect. At the same time the market issues cannot be observed separately from other EU policies extendable to Estonia, as these have been developed to meet the challenges of the single market. This does not refer to the access to Structural Funds as an opportunity of its own, as the use of these Funds constitutes the scope of the Programme.

The market of agricultural products is a regulated part of the single market. After integration, no custom tariffs or quotas will apply on products allowed to enter the EU market on favourable conditions. Subsidies on imported agricultural products from the EU are going to stop. At the same time, Estonia has to apply EU common customs tariffs applicable to any foodstuffs imported from third countries. Its is estimated that the combined effect of these factors will result in the rapid convergence of the prices of foodstuffs to the EU market's average. The share of Estonian products on the local market is going to increase simultaneously, accompanied by increased export volumes[40]. This means increased income and better marketing opportunities for agriculture and the processing industry. Nevertheless, agricultural producers and processors have to comply with the EU standards in food hygiene, environment protection, animal welfare and other requirements to benefit from these opportunities. Where the referred conditions are not complied with, the companies are not allowed to market their production on the EU market.

In addition to the expanding market, agriculture can benefit from EU common agriculture and rural development policies and fisheries policies. Estonia has to apply market regulation measures, measures accompanying rural development policies and structural measures within the framework of the said policies. Through the income basis of agriculture and fisheries, the competitiveness of respective Estonian sectors is going to improve, and there is also direct assistance available to help in complying with rules governing EU food hygiene and other standards.

Although the Europe Agreement stated that no customs tariffs are applicable to most of Estonian industrial products sold on the EU market, the services market was closed. Total lifting of all the classic trade restrictions (customs tariffs and quotas) is not the only positive impact of EU association – all the other trade restrictions are also going to be lifted. For Estonia, overcoming standards and trade restrictions is of utmost importance, as this permits an increase in the exports of a large number of goods to West-European countries. Estonia sees many opportunities in these spheres, including the provision of services requiring a large capacity of labour (for example, construction and transport) to industrial countries that are geographically close. Full integration with the common (single) internal market will have the following effects on Estonia:

- increased competitiveness – above all, expressed as indirect competition which results in investors' increased interest in Estonia,
- larger investment flow to spheres of industry where the capacities for making the most of the opportunities of a new, extended market are available,
- technological modernisation as a result of the extended market and pressures attributable to increased competitiveness,
- economies of scale effect which is attributable to the market increase that results from the establishment of Customs Union and which enables the country to specialise.[41]

One can expect that association with the European Union is going to result in the need to increase the financing made available to scientific-technological research and in the implementation of new technologies, since the trade exchange within certain branches of industry is going to play a major role in trade. This can be directly ascribed to the benefits of the scale savings effect. The ***EU research and innovation policies*** can support the elaboration and implementation of new technologies. Although Estonia has rather successfully participated in both the EU 5th and 6th Framework Programmes during the pre-accession period, there is a much better selection of opportunities available for a member state. The objective established at the European Council in 2000 in Lisbon is for the EU to become the most competitive and dynamic knowledge-based economy in the world by 2010. The main tool for this is the creation of European Research Area. This initiative includes three main components:

- establishment of an "internal market" in the research sphere for the free movement of information, researchers and technology,
- improvement of the European research fabric through the co-ordination of national policies;
- development of European research policies, not only when it comes to increasing the funding but also improved consideration of EU and national policies.

By 2010, the expenditures on research in EU are expected to account for 3% of GDP.[42]

EU educational policies are also closely related to the objectives of European Council in Lisbon: the Candidate Countries will be given better opportunities for taking part in related initiatives. When looking at the international scope, educational policy in the EU is going to promote the mobility of both the students and professors, mutual recognition of study results, co-operation between educational institutions, improved vocational education by providing support to the implementation of updated technologies and exchange of information of mutual interest.

After association with the EU, the common labour market is going to be open for Estonia. However, for Estonia there is a danger of ***losing valuable labour force.*** Due to strict legal barriers the number of people leaving to other EU countries has been relatively small. In 1998, roughly 15,000 Estonian citizens were living outside of Estonia, and the main EU countries of destination were Finland and Germany. Different opinion surveys have shown that the number of people wishing to leave Estonia is relatively small, and that most of those considering leaving would stay away for only short periods for the purpose of working in abroad. Considering the EU's labour requirements, it is possible to predict that the people leaving Estonia will probably work in spheres such as ICT, business services, health care, social work and education. The migration potential is the largest in two groups:

- top level specialists (both young and middle-aged people) whose wages are higher than the Estonia's average, but whose income would increase even more when working in EU (for example, researchers, top managers, civil servants);
- young people (both with lower and high levels of education) whose potential wages in Estonia would be relatively small.[43]

Integration with the EU is also going to cause major changes in Estonia's investment environment. Since the impact of expected changes is varied in sections of foreign investors with different motivations, it is not possible to estimate – where only the motivation is available – whether the direct inflow of foreign investments to Estonia is going to increase or decrease. Investments aimed at providing services to a target market are mostly dependent upon the increase of the local market's payment capacities, while investments aimed at increasing efficiency are mostly related to a country's advantages as a production area[44]. Where the market's payment capacities are expected to increase after integration, the changing advantages of the EU as a production area are due to factors with different impacts. As the volume of foreign investments per capita in Estonia has so far been many times smaller than the respective average EU indicator, and as the previous EU enlargement has resulted in increased flow of foreign investments into the new member states, a general ***increase in investments*** can be expected. As a member state, Estonia has the opportunities for making its name known in the EU and therefore it is predictable that the circle of new investors is going to include more distant countries (incl. Germany, Great Britain, France) beside Finland and Sweden. Since direct foreign investments and trade are closely related, this may also result in increased export. We also should not forget about Estonia's potential as a tourism destination. Finally, the ***number of Estonia's foreign trade partners is going to expand*** and become more balanced geographically.

Membership in the European Union has some negative impacts on Estonia. First of all, we should mention that ***goods imported from the third countries are more expensive*** due to the implementation of customs rates and quotas. The most important group of such products includes relatively cheap steel products imported from Russia and the Ukraine: the European Union applies quotas in such products. The agreement, which was achieved as a result of the accession negotiations, guarantees the increase of the EU quota on steel imports that meet the needs of the current raw material requirements in Estonian industry. Therefore, Estonia has some time to get adjusted to the expected changes.

So far, scant attention has been paid to the ***enhanced competition*** and its effect on Estonian enterprises. A survey on the prospects of four – expectedly – sensitive branches of industry in the EU is currently being devised: textile production, manufacture of clothing, production of machinery and equipment and production of electrical machinery and apparatuses. Up to now, the development of these branches has been based upon price-based competitiveness. By now, the major share of the enterprises has transferred, or is transferring, from a resource-based development stage to an investment-based development stage. The number of enterprises still operating at the resource-based development stage is dropping, and therefore several former competitive advantages are losing their importance. Nevertheless, the loss of price-based competitiveness would be dangerous if we consider the present structure of the economy with its structural unemployment, lack of qualified labour, low investment activity and insufficient level of development activities and innovation. Membership in the EU speeds up the loss of price-based competitive advantages. As for the branches of industry under survey, the membership makes the situation more tense in the textile and clothing industry, and in the longer perspective the production output of these respective branches is expected to drop.[45]

Even during the pre-accession period, Estonia made efforts to bring not only the food processing industry, but also ***enterprises in other spheres,*** into conformity with EU standards in sanitation, safety, environment and others. Short adaptation periods and high investment requirements have been too hard upon a large number of small enterprises (above all, in catering and retail sales) and they have gone out of business. The number of such enterprises can increase after becoming a member state.

One of the important factors facilitating tourism to Estonia has been the tax-free trade on ships travelling on international shipping lines. Because of the common trade policy, ***tax-free*** trade on ships and planes connecting Estonia with the remaining EU exists no more. The accompanying increases in the price of transport and passenger packages can cut down on the income from tourism – at least in the beginning – and is going to cause decreases in the number of jobs in the service sector.

2. STRATEGIC BASIS

2.1. STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS

Analysis of the socio-economic situation, presented in Chapter 1, enables to assess the competitiveness of Estonia as a future member state of the EU by using the following structure to identify its main opportunities, strengths and weaknesses as well as the possible threats Estonia faces.

Strengths

One of the most important strengths of Estonia is the ***stable macro-economic framework***. This refers, first of all, to the currency board system, the principle of a balanced budget observed by the central government sector, and maintenance of a favourable investment environment. All this provides Estonia with a trustworthy business environment open to investors and global competition. The competitiveness of Estonia as a business environment is ranked highly.

The location of Estonia and its cultural ***closeness to the Nordic and other countries in the Baltic Sea Region in general has facilitated good relations*** with them. The greatest share of foreign investments into Estonia originates in Finland and Sweden. These same countries, together with Germany, Russia and Latvia, are Estonia's main partners in trade.

Due to the rapid privatisation and implementation of the economic-political principles mentioned above, which have been followed by all the new governments of Estonia since it gained independence, Estonia's economy as a whole has passed the transition to a market economy. As a result, ***the structure of the economy has adjusted to international competition.*** Estonia has achieved considerable success in ***attracting foreign direct investments,*** which, on its turn, has facilitated the upgrading of technology and expertise, and reorientation to the markets of developed countries.

Similarly to the other Central and Eastern European countries, ***production input*** (labour, local material resources and services provided by the sheltered sectors) is ***relatively cheap*** in Estonia. Although this is a temporary advantage, it will continue to be one of the factors encouraging foreign capital inflow and exports for some time.

The relatively high formal educational level of the population - in comparison with both the new and old EU member states - is also one of the strengths of Estonia. Traditionally, education has always been highly valued in Estonia and the prestige of education has increased even more over the last decade. The share of labour with a third level education (that is, post-secondary school) is remarkably large. The high level of education can be seen as one of the factors facilitating the retraining of the labour force and supporting its greater flexibility in general.

While Estonia does not stand out for its supplies of natural resources with high value, its ***stocks of oil shale, timber and fish*** can be seen as strengths. In the long-term perspective, oil shale has limited competitiveness as a source of energy (due to increasing taxes on pollution), but this resource still strongly supports Estonia's energy sector. The existence of local electrical energy helps to balance foreign trade and provides independence from foreign supply. In future, the importance of oil shale as a raw material for the chemical industry may increase. Development of wood industry - including the manufacture of furniture and its considerable share in exports – relies mostly on domestic timber supplies. Fishing and fish processing provide an important source of income in coastal areas, and fish products are one of Estonia's articles of export.

The agriculture of Estonia has gone through a difficult restructuring process during the transition period. One of the results of this process – which makes Estonia different from other EU member states and candidate countries, where economically inefficient small farms dominate – is the rapid concentration of production. A large share of the production yield in Estonian agriculture is attributable to ***large production units with relative potential and viability,*** regardless of the fact that at present they suffer from insufficient investment.

In comparison with the strongly urbanised countries of Western and Central Europe that have lost their natural landscapes, Estonia stands out for its ***diversified nature and natural environment,*** including forests. The share of protected areas is relatively high, which means that Estonia has excellent advantages for the development of areas of activity based on a clean natural environment. With its regionally diversified, unique cultural and historical heritage, it provides prerequisites for the development of tourism and its products. Sufficient amounts of arable land, in combination with a generally clean natural environment and suitable climate, are good conditions also for producing naturally clean crops and livestock products.

During the last decade, the number of information technology services (ICT) and ***telecommunication systems*** available in Estonia has developed rather quickly and there is a ***large number of users*** for such services. This creates good opportunities for moving towards the information society but also for enhancing entrepreneurship and investments.

Compared to some other new member states, Estonia has ***relatively good territorial coverage of social infrastructure and road networks.*** Therefore, the efficiency of investments made into infrastructures is also relatively high. When the choice is made for reconstruction instead of construction, expenditures for upgrading the necessary technical level of an infrastructure object are lower.

Weaknesses

The first private businesses came into being in Estonia only ten years ago. Experiences in entrepreneurship are therefore rather limited, business culture is still young, and in many cases the lack of skills and access to start-up capital prevent the establishment of new enterprises. Business motivation is limited in rural areas and in Ida-Viru County, with its large industries. ***Small and medium-sized enterprises*** – the main area providing new jobs – ***are not active enough*** in establishing themselves and expanding, and ***the average figures for SMEs in Estonia are considerably lower than the EU average.***

To date, the competitiveness of the Estonian business sector is mostly based upon cheap production. Unfortunately, this advantage is diminishing. The manufacture of products with high added value, based on innovation, is the only tool that can guarantee long-term competitiveness, but this assumes sufficient know-how, highly qualified labour and the use of quality standards. ***The development and implementation of new technologies***, enabling the companies to increase their productivity and added value, is ***poor in Estonia.*** The links between research carried out in universities and business ventures are poorly developed. ***Enterprises spend limited amounts of money on innovation.*** Because of the large share of sub-contracting, ***marketing is often weak and the scope of quality standards is also limited.***

In many respects, ***the situation on the labour market is difficult*** since it suffers from the combination of the negative impacts of restructuring and market problems. At the end of the 1990s, high unemployment rates emerged as a result of the closing of inefficient enterprises and a general decrease in the number of jobs. The most vulnerable groups at the risk of becoming unemployed are disabled people, older people and people with lower levels of education or not speaking Estonian language. Insufficient professional education provided by the vocational education system is one of the core reasons for the high rates of unemployment among young people. Unemployment rates are the highest in the industrial regions of Ida-Viru County and in some agricultural areas. Mobility among the unemployed, both professional and geographical, is rather limited. Many people have become discouraged and have left the labour market. In addition to high rates of unemployment, Estonia suffers from a lack of qualified labour; that is, the demand for certain categories of highly qualified workers remains unsatisfied. Entrepreneurs consider the lack of good workers with suitable qualification to be one of the main problems hampering the development of enterprises.

To a certain extent, the situation described above can be related to the ***gaps in the professional preparation of labour,*** and therefore be blamed upon the shortages of the educational system. Training of teachers, existing curricula and training environments are not in compliance with contemporary requirements. Co-operation with enterprises to provide students with opportunities for practical training is weakly promoted. The educational system ***does not provide opportunities for continuing education, in-service training or the retraining of labour***.

The low productivity of the economy and the resultant low levels of income threaten a large section of society with poverty. ***Poverty*** combined with ***social exclusion*** limits opportunities for self-realisation and participation in social life and serves as a serious obstacle to realise one's rights and gain benefits. Both poverty and social exclusion are serious problems for the whole of society since they can be easily passed on from one generation to the next and hold back both regional and national development.

Great changes have taken place in the agriculture and rural development of Estonia during the last decade. The economic conditions have provided for neither the ***technological modernisation of agriculture*** nor sufficient amounts of investment for bringing agricultural production into conformity with environmental requirements and product development. Investments into improvements are also insufficient. These factors, however, would be the essential prerequisites for sustainable development in the near future. The unemployment level is high, ***the number of new jobs is limited*** and the general income level in rural areas is lower than in towns. The changes that have taken place in agricultural sector have not been accompanied by the development of more remunerative sectors and emerging alternatives for creating new jobs.

During the transition period, ***regional socio-economic disparities*** have increased significantly. There are great developmental differences between Tallinn and the other parts of Estonia. Gaps in income and employment levels are also remarkable when comparing the counties and rural areas in general. These disparities hold back the overall development of the country not enabling the population in many areas to enjoy the benefits of economic growth.

The fisheries sector is one of the production areas that relies mostly on local resources and provides sustenance to the population in coastal regions. At the same time, the sector suffers from a number of structural difficulties: quotas that do not match the excessive fishing capacities, out-dated fishing fleet, infrastructures in ports are in bad condition, and the access of fish processing industry to foreign markets is limited. Therefore, ***employment opportunities in the fisheries sector are limited*** and the socio-economic situation of coastal areas is very insecure.

Although the environmental situation in Estonia is generally good, there are still some ***strongly polluted areas*** in the industrial parts of north-eastern Estonia; for example, industrial sites and sources of past pollution on the territories of former Soviet military bases. ***The environmental infrastructures*** (water supply, sewage treatment, equipment intended for the protection of the atmosphere, landfills) ***are out-dated*** or ***insufficiently developed.*** Compared to the European Union average, the disparities in the implementation of environment-sparing technologies are considerable. Estonian ***energy producing sector*** that uses oil shale causes a ***considerable load for the environmental situation***; at the same time, energy is inefficiently used in Estonia.

The technical and maintenance levels of Estonian roads and railways do not meet contemporary requirements. The capacities of the railways and its border stations are insufficient. There are no opportunities for providing modern train connections to Central Europe and for high-quality passenger traffic in Estonia. Smaller harbours and airfields are not in conformity with contemporary needs and have to be modernised.

The social infrastructures in Estonia ***are mostly out-dated, expensive and do not match modern requirements.*** This causes high maintenance costs and waste of social resources that could be spent on development needs. The nature of imbalance is largely attributable to the functional type and location of specific buildings or facilities. Vocational schools and universities often need to adjust to modern curricula and to the growing number of students. Institutions providing certain small-scale services are often scattered among big, depreciated buildings that are difficult to heat and maintain. Hospital buildings fail to keep up with the needs of contemporary treatment, thus impeding more efficient delivery of health care services that would help to cut down the number of days for in-patient treatment.

Although certain progress is notable in strengthening ***administrative capacities,*** several aspects still need more attention. There is little co-operation between different institutions, and one can observe needless duplication in certain functions and areas that are not being administered efficiently. Government organisations in general do not pay sufficient attention to improving their policy-making and service delivery capacity and are often not aware of the best practices available. Also, implementation of sectoral policies at the regional level is insufficiently developed, the capacity of local governments is insufficient, and regional co-operation is often weak. There are not sufficient funds available for training at the local government level, and the civil service training provision in general is scattered. Therefore, a lot of training is not tailored to specific needs of the public administration, nor is its organisation systematic enough to enable the Government to undertake major public management reforms.

Opportunities

Most of Estonia's opportunities are related to its membership in the EU in one way or another.

Although the Estonian economy already had strong ties with the EU economy, the membership provides several new opportunities. The most crucial one is that the internal goods and services' market of the EU is open to the new member states. For Estonia, the ***opening of the market of agricultural products*** is probably the most important since it includes the lifting of sales quotas. Joining the EU can also improve Estonia's access to the Russian market. So far, Russia has not applied to Estonia, but upon becoming a EU member state the most-favoured-nation treatment by Russia automatically extends to Estonia.

EU enlargement to the frontiers of Russia and the Baltic States is expected to facilitate the integration of the EU and CIS economic areas. Estonia's status as a border state of the EU is ***expected to provide Estonia with additional opportunities for participating in extensive international co-operation*** (including within the framework of the EU Nordic dimension).

The Baltic region is one of the most promising areas for economic growth in Europe. So far, the integration of this region (which has been one of the EU spatial planning regions within the framework of INTERREG for years) into a single economic region has been hampered because the countries located on the eastern and southern coasts were

not member states of the EU. This restriction is now eliminated. The new member states become equal partners in cross-border co-operation, which is co-financed by the EU. Estonia should also benefit from ***the general accelerated economic growth of the Baltic Sea region.***

Being a part of single economic region gives Estonia ***additional opportunities for extending economic relations with more distant regions of the EU*** (above all, Germany, Great Britain and France). Estonia's attractiveness – and that of other new member states – as an investment area is going to increase. At the same time, Estonia's access to geographically distant markets improves. The common system of public procurement applicable in the EU serves as a good example here.

When it comes to the global trends, one of the most important opportunities for Estonia is the ***faster development and implementation of new technologies, including ICT,*** in all sectors of society. Technological development is continuous, diversified and not easy to predict. Openness towards new applications across the sectors of society plays a vital role for maintaining and increasing competitiveness.

The fast implementation of new technologies is of crucial importance to Estonia as a country with regional disparities, since the rapid implementation of such technologies is one of the most important means to increase economic productivity and accelerate general socio-economic development. Membership in the EU supports these opportunities. ***Estonia is a participant in the common research and innovation area of the EU,*** thus gaining access to all the programs and initiatives to be implemented in this area.

Both the global trends aimed at rapid development of information society and the EU membership provide ***additional opportunities for human resource development.*** Some examples of this opportunity are cross-border virtual and e-learning opportunities and free movement of students, professors, specialists and exchange programs.

Increased awareness about environmental protection problems also provides important opportunities. The ***market demand and social need for products and services*** related to clean, diverse and ***an aesthetically valuable natural environment*** is increasing. This provides Estonia with an opportunity to benefit from its relatively good environmental situation. The growth potential is especially high in the eco-tourism, organic agriculture and resort sector. There are plenty of peaceful areas for summer vacations and recreation.

Finally, the ***EU common agricultural and rural development policy and fisheries policy*** provide new opportunities for Estonia's rural areas. The assistance provided to agriculture, rural development and fisheries sector by the Structural Funds, is in the focus of SPD. In addition, the market regulation and rural development measures have to be mentioned here. The common agricultural and rural development policy and fisheries policy contribute to the maintenance of population in rural areas, help to make social life more sustainable, preserve cultural and natural heritage. The measures directly aim at alleviating poverty and social exclusion in rural areas.

Threats

Estonian economy is very open, and internal demand does not necessarily compensate for the possible decline in external demand. Much of foreign trade depends on Nordic markets and Russia, which means that ***Estonia is heavily dependent upon the economic cycles of its main economic partners.*** The large share of sub-contracting in its export volumes further aggravates the dependence. A simultaneous decline in both markets could be considered the biggest threat for Estonia.

Inevitably, the development of the Estonian economy in the near future is going to be related to the continued price convergence. The faster the integration with the EU, the faster will be increase in prices as a result of general economic convergence. This also poses a ***threat to economic sectors based on cost advantages*** (above all, various subcontracting areas) that make up a large share of the Estonian economy. In the long run, the competitiveness of these spheres may decrease as exports and investments diminish. And finally, higher costs can drive such activities away from Estonia into areas where production is cheaper. If the technological development and expansion of production with higher added value is not going to compensate for this phenomenon, it may bring along increases in unemployment rates.

Regardless of the fact that Estonia's foreign economic policies have been very open so far, membership in the European Union is inevitably accompanied by ***stronger competition.*** It is likely that some of the economic sectors lack the strength to put up with the competitive pressures so that domestic production and employment are going to drop.

Low wages and the free movement of labour threaten Estonia with the ***loss of well-qualified labour.*** Above all, this refers to the permanent departure of researchers and specialists, but also to the outflow of some of the more highly qualified workers (nurses, for example).

Since membership, ***all the mandatory requirements concerning food hygiene, technology, environment protection and other stipulations*** not applied in the transition period are in force in Estonia. The pressure for bringing the activities into conformity with these requirements over a very short period may be too difficult to handle for many enterprises, especially for those that are smaller and located in poorer areas, and may result in their termination.

Membership in the EU excludes further ***tax-free trade*** on board aircraft and ships travelling between Estonia and other countries. This can result in a considerable rise in the price of travel and accommodation services (sold as package deals). This may also cause a decline in foreign tourism, tourism-related income and employment.

For providing a better overview, the main issues discussed in the SWOT analysis are summarised in Table 54 below.

Table 54

Strengths, weaknesses, opportunities and threats*

Strengths

- **Stable macro-economic framework, liberal foreign trade and foreign investment policies**
- Close economic and cultural integration with the countries around the Baltic Sea
- Relatively large share of foreign investments as the prerequisite for improving the level of technology and management
- **Population's high level of education; education is highly valued among people providing the basis for learning capacity of the labour**
- Diverse and clean nature; interesting and unique cultural and historical heritage
- Local natural resources as raw material for energy and industrial sector: oil shale, forest, fish stocks
- Agriculture that has passed first-stage re-structuring where the production is concentrated into technologically viable units
- Modern infrastructure of telecommunications and ICT services, large number of users of such services
- Relatively good territorial coverage of road network and social infrastructure

Weaknesses

- Poor economic activity and short-term business experience, insufficient level of skills and knowledge, problems encountered by small enterprises attempting to access capital; low business motivation in rural areas and the industrial Ida-Viru County
- **Insufficient long-term competitiveness of enterprises: low content of added value in production, limited use of quality standards, limited innovation costs, weak marketing**
- **Labour market situation is difficult due to the restructuring of economy and decline in number of jobs. Lack of vacancies and their spatial dispersion accompanied with the lack of qualified labour in several spheres. Barriers related to age and gender preventing access to jobs, insufficient flexibility of labour force. High rates of long-term unemployment and large share of discouraged people**
- The mismatch between the skills of the labour force and labour market needs, essential shortages in vocational education and re-training system
- High levels of poverty and social exclusion
- Weak economic development in rural areas and big disparities between the capital city and the rest of the country
- Limited access to foreign market in fisheries sector related to the employment problems in the sector
- Polluted areas, insufficient environmental infrastructures; energy sector with low efficiency and great load to the environmental situation; past pollution in some areas
- Technically insufficient transport networks, poor maintenance and overtaking capacities
- Out-of-date public infrastructures that need adaptation and reorganisation because of their unsuitable dimensions and energy consuming nature: above all, general educational schools and hospital networks
- Shortages in the levels of administrative capacity that hinders the effective designing and implementation of policies

Opportunities	Threats
■ **Improved access to the markets: market of agricultural products opened after the accession to the EU, normalised trade conditions provide access to Russian markets** ■ Estonia's good prerequisites for providing services supporting the integration of the EU and CIS economic regions integration ■ Increasing integration in the Baltic Sea area, benefits from the economic growth of this area ■ Strengthening of economic relations between Estonia and distant areas of the EU ■ **Development and implementation of new technologies (incl. ICT). Accession to the European research and innovation area facilitating the implementation of new technologies** ■ Additional opportunities for human resource development (EU wide co-operation within educational system). Provision of virtual studies with international scope, etc. ■ Increasing demand for clean and diverse natural environment (ecological tourism, organic agriculture, renewable sources of energy etc.) ■ Opening of the EU agricultural and rural development policies and fisheries policies for Estonia	■ Very open economy with a relatively limited number of geographic trade partners, relatively large share of sub-contracting and dependence on cyclical fluctuations in the economies of Estonia's main trade partners ■ **Decrease of cost advantages due to the international competition which is going to damage the prospects of traditional production spheres and sub-contracting** ■ Increased competitiveness resulting from the membership in the European Union may be impossible to overcome for some companies ■ Outflow of highly qualified labour or highly needed specialists to the common European labour market ■ The need to bring the production in conformity with the EU sanitary, technological, environmental etc. requirements that poses challenges for many enterprises ■ Banishing ***tax-free*** trade on board of aircraft and ships may cause a considerable increase in prices especially in travel and accommodation, resulting in the decline in foreign tourism, tourism-related income and employment

**Bold font is used to show the most important items in each field of the SWOT table*

Conclusions

Based on the information provided in the table, one can draw the following conclusions in regard to ***developmental priorities.*** These have been identified by inter-linking the SWOT fields to each other (which strengths can be developed further to decrease the probability of certain threats, or soften their impacts, etc) and considering the need to concentrate development activities on a limited number of strategic directions.

A number of factors support focusing to the ***strengthening of enterprises*** as a top priority: decreases in cost advantages, strengthening competition and softening the repercussions resulting from some of the negative impacts related to the integration with the EU. Other factors are the opportunities offered by new technologies or related to new markets to be opened in the east and west, and business creation connected to nature and culture. Special attention should be given to spheres like marketing, product and technology development, development of labour force qualifications (for employees, specialists and managers) and providing small enterprises with access to finances. Also, a more intensive promotion of Estonia abroad with the purpose of obtaining new investments related to improving skills and know-how. If it were possible to develop entrepreneurship as described above, it would help to increase the added value of products and promote economic relations of a geographic nature. In the case of failure, Estonian companies may lose a large share of their market niche (which, so far, has been based on cost-related advantages), their capacity to penetrate new markets will be downsized, and the macro-economic balance may be destroyed. In such a situation unemployment would increase and the relative share of people living in poverty would grow. This may cause a severe burden for the Estonian social security system.

Requirements of business development and the need to act as a contemporary European society make the ***human resource development*** one of the most crucial priorities for Estonia in the coming years. In the light of the need to cope (as an economy characterised by frequent shifts in prices) with competition under common market conditions, this priority becomes even more crucial because of various impacts, such as technological progress, the need to cope with a more complicated terminology in products and services, and the geography of expanding markets. Human resource development is of utmost importance for both the training and retraining of staff in enterprises and for solving complicated social problems, especially in regions with disparities. Considering the present develop-

ment situation in Estonia, it is very important to make vocational education match with labour market requirements, improve in-service training and retraining opportunities for adults, develop more active labour market measures, and bring socially excluded and unemployed people back into the labour market and social life. Successful implementation of the priority will make it possible to decrease structural unemployment and increase the adaptability of the labour force. As a result, enterprises are going to enjoy greater productivity and the value added will increase. In addition, general administrative capacity and society's social interaction will improve. Without major progress, the competitiveness of the economy is going to decrease, unemployment rates will remain high and the process will lead to people's coping difficulties and greater social exclusion.

In general, development of Estonian agriculture and rural development has suffered from a strong setback during the transition period. At the same time, agriculture became the subject of relatively strong restructuring and maintained its competitiveness despite insufficient investments made in the sector. The situation and prospects of Estonia's ***agriculture and rural economy*** can be improved by relying on factors such as access to new markets, the development of new technologies, opportunities arising from the EU common agricultural policies and increasing demand for economic activities based upon clean nature and cultural heritage. This priority can only be implemented when working simultaneously to create additional investment opportunities and develop human resources while strengthening communities in the countryside. Functioning structures in agriculture are going to support local service sectors as well as new spheres of business. In cases where the related policies become successful, it will be possible to maintain the competitiveness of the remaining agricultural sector, as well as provide people who have left traditional agriculture (their number is expected to increase) with jobs in other areas. At the same time, successful policies will reduce development disparities between the capital city and other territories (including rural areas and towns). If farms and agricultural enterprises fail to meet EU standards in organising their production, and if they fail to benefit from the opening of new markets (mainly because of poor investment opportunities), they may go bankrupt. This may in turn result in the interruption (or marginalisation) of social ties in rural areas as the unemployed move to towns. There will also be difficulties with the normal usage and development of Estonia's territory as a whole and problems with the preservation of the country's natural and cultural heritage.

Issues related to fisheries are also closely related to sustainability of rural development. In Estonia, fisheries and the fish processing industry are traditional spheres of the economy with an important share in export and employment. Estonia has a fishing quota, but nevertheless faces difficulties in accessing the foreign markets with its fish products. Depreciated fishing fleets with fishing capacities that exceed assigned quotas are difficult to manage efficiently as one struggles to bring processing facilities into conformity with regulations. The lack of investments into fisheries prevents the fish processing industries from conforming to EU standards while attempting to engage in competitive production. Improving the capacities of fishing fleets and modernising fish processing and production facilities can be carried out successfully by implementing the EU common fisheries policies. Successful implementation of these policies will help to make Estonian fisheries competitive and sustainable and safeguard a large number of jobs in the sector. Failed structural policies in the fisheries sector would mean increasing unemployment and a worsening socio-economic situation in coastal areas.

The shortages or non-compliance of infrastructures with new requirements is a weakness characteristic of both Estonia and other post-socialist countries. Ranking the developing of ***infrastructure*** in various areas so high on the list of priorities can be justified with its very important role in the implementation of the priorities listed above (human resource development, competitiveness of the businesses and rural development). One of the main prerequisites for human resource development is the provision of modern learning structures and conditions for, above all, vocational education. Special industrial parks, technological centres, improved conditions in areas of tourist interest, etc. are required for the promotion of enterprises. Maintenance of land improvement systems could be named as one of the prerequisites for rural development. The condition of roads, energy and water supplies and environmental protection systems as well as public schools, hospitals and social welfare institutions, should be up-to-date enough to provide for basic living and business needs all over the country. If this priority is successfully implemented, we can expect the facilitation of economic growth and social development. In future, the territory of Estonia can also serve the economic interests of the EU (including co-operation with the economic areas of CIS). Implementing the priority will help to balance Estonian development and provide equal opportunities for people while improving the availability of different services. The realisation of the priority will also contribute to the better economic management of Estonia's territory and reduce the pressures put on the natural environment by the economic activities and the society as a whole. If the priority will not be addressed in a proper way, it would mean (in addition to the possibility that it may fail to support the priorities mentioned above) more negative attitudes towards the EU as a whole among the people. This is likely since both improvements and failures in the development of infrastructure are a lot more visible to the public than any other activities supported by different EU funds.

2.2. HEADLINE OBJECTIVE

One of the main common aims of the Estonian state and the European Union is to reach real convergence and continuously improve the standard of living of the population. Rapid economic development serves as one of the key vehicles to achieve these goals. Economic growth needs to be sustainable in respect of natural situation and socially as well as regionally balanced in order to increase the wellbeing of all the members of society.

Domestic resources together with Community assistance are aimed at promoting the economic and social development of Estonia**.** As a country where the GDP per capita is below 75% of the respective EU average, Estonia is designated to the Objective 1 areas of the EU regional policy – development of regions lagging behind and promotion of structural adjustment. Pursuant to the provisions prescribed with Article 8(1) of the Council Regulation No 1260/1999, the Community measures are intended to supplement the national initiatives or contribute to the implementation thereof. Therefore, both Estonia's economic policy and the EU policies supporting the national policies serve the same overall objective to be achieved in Estonia:

Fast, socially and regionally balanced sustainable economic development.

According to the general objective stated above, the administration of the EU Structural Funds and the contribution of Estonia's public sector in a co-ordinated manner over the next period will be guided by the present Single Programming Document.

2.3. STRATEGY

Analysis of the relative importance of the factors listed in Table 54 (see the factors given in bold) allows drawing a general outline for the strategy of the SPD.

Estonia's most important strengths are the stable macro-economic framework and a labour force that is eager to learn but also ranking highly a good education. The main weaknesses are related to the large share of ill-prepared and non-flexible labour that fails to meet labour market requirements and (partly attributable to the quality of human resources) the insufficient long-term competitiveness of the business sector. The most important opportunities for Estonia are the enlargement of markets and new technologies, while the main threat lies in the decline of its cost-based competitive advantages.

In conclusion, ***the central objective of the strategy is to make better use of the learning capacity of the country's human resources and seize the opportunities presented by new technologies and expanding markets. This shall be done by promoting innovation in the business sector and anticipating the risks that occur inevitably as cost-based competitive advantages will begin to decline.***

Following the analysis above (Chapter 2.1), there are four priority areas in Estonian economy that need to be developed and are largely eligible for the EU Structural Funds. The four key priorities chosen are categorised under the following titles:

- Human Resource Development
- Competitiveness of Enterprises
- Agriculture, Fisheries and Rural Development
- Infrastructure and Local Development

To achieve the prime objective of the Programme, Estonia will commit itself to four specific objectives. These are as follows:

- Increasing and using Estonia's labour force potential in a more effective way
- Increased competitiveness of enterprises and employment
- Balanced and sustainable economic and social development of rural areas
- Establishing infrastructures that support sustainable and balanced economic development

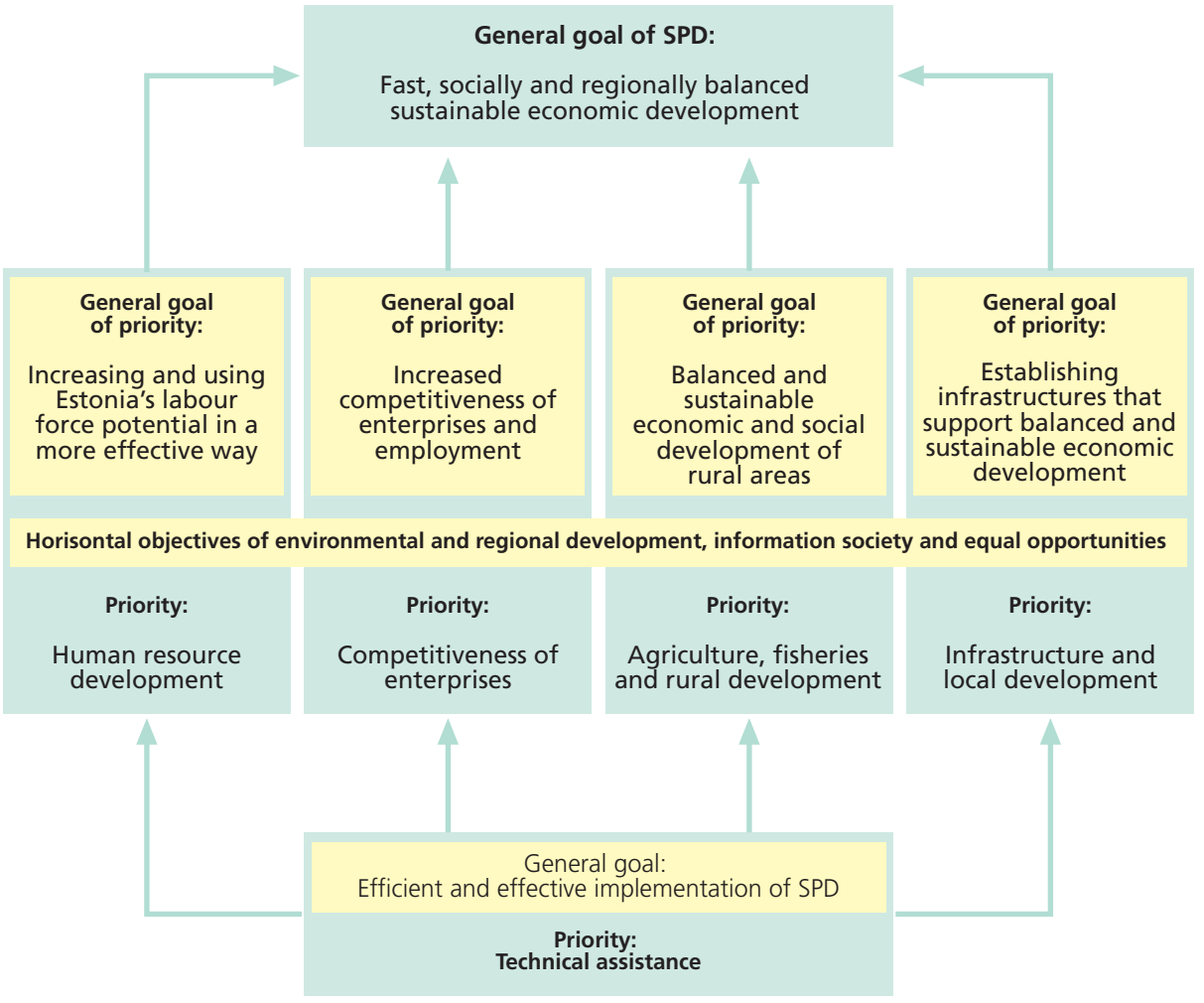
Alongside the four priorities, the implementation of the Programme is supported by the Technical Assistance priority, the aim of which is the efficient and effective implementation of the Programme.

Apart from the specific objectives to be achieved through the implementation of separate priorities, objectives connected with environmental and regional development, information society development and promotion of gender

mainstreaming are to be followed in the Programme on a horizontal basis (see Chapter 4). The inter-linkages between the headline objective, specific objectives and the priorities of the Programme are shown in Figure 46.

Figure 46

Goals and priorities of the Estonian Single Programming Document



Based on the analysis of the socio-economic situation, the priorities described above will aim at overcoming the main weaknesses and avoiding risks that have been highlighted, whereas making use of the existing strengths and opportunities.

Defining the substance of the priorities, attention is given not only to the general analysis, but to the fact that they are going to be implemented through assistance from the Structural Funds, which have all established the rules for the channelling and use of the funds with respective EU regulations. Estonia is going to choose the approach in which each priority is going to be funded under one structural fund (*mono-fund approach*), the only exception here being development of agriculture and rural areas, which is planned to be financed from two funds.

The following part of the chapter gives an overview of the priorities seen as integrated parts of the strategy. The outlines of measures are presented in Chapter 3.

Broadening partnership involvement in the implementation of the strategy is considered to be one of the essential principles to be followed. Particular attention is focussed on involving and strengthening non-profit sector organisations to develop people's initiative and improve their participation in the society.

Human Resource Development

Human development can be seen as the final goal of socio-economic development, and weaknesses related to human resource cannot be compensated for with strengths of any other kind (material assets, money). None of the

weaknesses attributable to human resource should be ignored or postponed for future life. European Employment Strategy (EES) and the Estonian National Employment Action Plans based upon the EES form the strategic basis for human resource development on European as well as on the national level, contributing to the achievement of the Lisbon targets.

The key words involve appropriate educational and life-long learning system, effective labour market measures and the promotion of adaptable work force. However, European human resource policies are expanding by addressing labour market issues and problems of poverty and social exclusion that have drawn less attention so far. In relation to EU enlargement, the policies also include the building of administrative capacities in candidate countries.

The implementation of the SPD in the field of human resource development will generally continue in the national policy framework, but the additional resources available will enable the expansion of the scope of activities and the introduction of new relevant measures.

Implementation of the Human Resource Development priority of the SPD will improve the advantages of the rapid and extensive implementation of new technologies and contribute to making use of the enlarged market and foreign co-operation opportunities. Improving qualifications of labour will provide prerequisites for a faster shift towards production with a higher added value and helps to compensate for risks that arise out of the decline in competitiveness of cost-based activities. The implementation of the priority will be supported by such strengths as high value attached to education and progress made in ICT implementation. Human resource development will aim to alleviate weaknesses such as low levels of entrepreneurship, insufficient long-term competitiveness of enterprises, difficulties on the labour market, gaps in the preparation and retraining of labour force, and the impacts of poverty and social exclusion.

The priority covers a number of areas: preparation of the working force in the education system, life-long learning, active measures to combat unemployment and social exclusion and, finally, enhancement of administrative capacity. Mutual relations of the measures implementing the present priority and their coherence to the basic reference documents are dealt with in detail in the Policy Frame of Reference for Employment and Human Resource Development that is placed at the description of priority (cf. 3.1.2). Below only the main strategic features of the priority are outlined.

In the field of education the priority will focus on bringing vocational and applied higher education into better conformity with contemporary labour market requirements. For that purpose the development of structures and systems, training of students and better training provided to professors and teachers have an important place. Continuing training opportunities will be improved which will provide improved skills of the labour force, its better adaptability and flexibility. Applying of flexible learning opportunities and preventive measures will aim at better preparation of students for the working life and a decrease in the number of young people dropping out of school.

Training of employees in enterprises is one of the key elements that could facilitate life-long learning. During the present programming period enterprises are stimulated to invest more into human resources, as this will help them to increase their productivity and development potential, and to employ Estonia's existing research bases more effectively. Besides, training will be given to those who would like to start their own business. For the managers, enhancement of the skills and knowledge (including for example management, marketing, innovation, quality standards, environmental protection) will be promoted.

In the field of active labour market policy during the present programming period emphasis will be put on improving and developing active labour market measures. For facilitating access to labour market of those who are the most excluded, other means such as rehabilitation, new sources of employment will be offered. In order to ensure the quality of the services the public employment service will be modernised and the staff will be trained.

In connection with the enlargement, the EU human resource policies also include the building of administrative capacities in the new member states. The priority contributes to building administrative capacity by training civil servants with the purpose of them becoming better equipped with the tools for improved policy-making and public management. Also, organisation level management capacity building projects will be supported.

While implementing ESF in Estonia the necessity to promote equal opportunities for all in accessing the labour market will be taken into account. Particular emphasis will be paid to those exposed to risk of social exclusion, regardless of the different grounds. The aim of integrating persons with specific risks, be it disability, ethnic minority, lack of command of Estonian language, duration of unemployment, age or other, is followed horizontally, exploiting all the additional means required. The aspects of local development and employment initiatives as well

as the employment potential of the information society will be considered while implementing the measures. Promotion of information society will be facilitated throughout the priority by providing any kind of support for mastering ICT skills more extensively.

Equal opportunities for women and men as part of the mainstreaming approach is pursued through all the measures and while implementing all the activities. This priority will only be co-financed from the European Social Fund. Considering the special importance of the human resource development priority, funding to be made available for the measures within this priority will increase more than for any other priority - threefold compared to the funding presently allocated from Estonian state budget. As the absorption capacity of Estonia can only be increased step by step, the share of the priority in the total assistance is 20.5% during the current programming period.

Throughout the implementation of the Programme the need for co-ordination of operations under the Human Resource Development priority and other priorities will be kept in mind. The priority will support the implementation of all the other priorities by improving the general quality of labour and providing special training related to the implementation of projects within other priorities. Further, a major share of the capital investments necessary for human resource development is going to be made within the framework of other priorities (for example, investment activities concerning vocational education, life-long learning, research and development activities).

Competitiveness of Enterprises

The priority promoting competitiveness of enterprises will aim at using new emerging market opportunities, modernisation of production by using new technologies applied on global level, and making better use of business opportunities based on natural environment and cultural heritage. At the same time, attempts will be made to alleviate the risks posed by the limited geographic scope of Estonia's foreign trade relations, excessive orientation on cheap sub-contracting and increasing competitiveness. Being supported by the potential of highly educated labour force, the enterprises' long-term competitiveness is likely to increase. Establishment and development of small and medium-sized enterprises is supported with the purpose of increasing employment and promoting regional development.

During the present programme period the implementation of the priority as a whole will concentrate mostly on efforts for promoting research and development activities and innovation. Within the aforementioned area the assistance will be directed, first of all, to setting up or improving support systems, science-business co-operation arrangements and respective RD&I infrastructures. Besides that, a rapid extension of applied research as well as product and technology development initiatives is foreseen. Support for quality promotion is expected to raise the competitiveness of products and services.

Another area covered by this priority is business development, which is focused on the establishment and development of small and medium-sized enterprises. Different instruments that are mostly in use already today – such as counselling, providing better access to capital, and support for establishment of infrastructures – are used to boost starting up and growth of enterprises. During this programme period all these activities will be extended. Measures to be implemented under this priority are seen as the main tools for the implementation of the National Employment Action Plan.

The competitiveness of Estonia's tourism sector will also be enhanced within the framework of this priority. In that area, main focus will be given to the improvement of the international competitiveness of this sector – by creating awareness of Estonia as a tourism destination country and supporting large-scale national tourism infrastructure projects. Those activities will be complemented by support to businesses developing tourism products and infrastructure that have remarkable impact on increasing tourism flows and attracting tourists into areas located away from the capital city. It is planned to coordinate tourism actions with other countries of the region. Complementary actions of local governments in this sector are supported under the priority Infrastructure and Local Development described later in this section.

When it comes to the horizontal objectives of the priority, environment protection and regional development will be taken in consideration in implementing the priority. It is going to contribute to the promotion of information society, above all in the areas of research and development.

The Competitiveness of Enterprises priority will be implemented in co-ordination with other priorities. The co-operation will be the most intensive within the Human Resource Development priority, as this will provide for the preparation of skilled labour for enterprises, training of entrepreneurs, supplementary training for the staff of enterprises and retraining of the unemployed. In many cases it would be useful to implement projects of the two priorities in parallel. Equally important is the co-operation with the Infrastructure and Local Development priority, as the physical

business environment, infrastructures of education, business communication networks etc. have close links with the activities carried out under this priority.

This priority is co-financed by European Regional Development Fund. Considering the special impacts of the Competitiveness of Enterprises priority, the additional funding to be made available for the measures within the priority is going to increase twofold compared to the funding presently allocated from Estonian state budget. The priority's relative financial weighting for the implementation of the Programme as a whole will make up about 19.7% of the total funding allocated for the SPD.

Agriculture, Fisheries and Rural Development

When implementing this priority, Estonia is going to make use of the opportunities provided by the Community's common agricultural and rural development policy and fisheries policy striving for a share as large as possible on the agriculture and fish production market of the EU. Opportunities related to the values of clean natural environment and cultural heritage should be taken advantage of to improve the situation in rural areas. The main strengths to be relied upon are agricultural production that has been concentrated into potentially viable production units, sufficiently large forest and fish stocks, clean natural environment and cultural heritage of rural areas. Implementing the Agriculture, Fisheries and Rural Development priority serves as one of the important factors helping to fight unemployment and structural disparities.

Different measures are used to guide the development of rural areas: market regulation measures, accompanying rural development measures (according to the Rural Development Plan[46]) and structural measures (based on the SPD).

The emphasis will be put on securing sustainable development in rural areas. For that purpose, the measures will contribute to safeguarding the competitiveness of traditional agriculture under the EU conditions and securing a sufficient level of income. Creation of additional opportunities for rural livelihood the agricultural producers as well as other rural enterprises will be supported both within the framework of agriculture (horticulture, apiculture, bio-dynamic agriculture, environment maintenance, forestry) and alternative non-agricultural activities. In the fisheries sector, support for decreasing the existing fishing capacities will be provided. This is to provide the fishermen remaining in the sector with better job opportunities. The relevant measures will contribute to securing the fisheries' competitiveness under EU conditions.

This allows us to outline the following strategy for the development of Agriculture, Fisheries and Rural Development priority during the present programming period that builds upon the structures and systems put into operation in the framework of SAPARD:

Strengthening the economic basis of rural development will focus on increasing the competitiveness of the food production chain as a whole – from the initial production to final processing– by providing support to the investment projects. During the present programming period supported investment projects will, first of all, ensure fulfilment of the EU hygiene, environmental and animal welfare standards. Alongside the modernisation of traditional agriculture, the priority will contribute to the diversification of agricultural production, development of product quality, improvement of environmental situation, development of sustainable forestry, renovation and development of villages and creation of new non-agricultural enterprises in the countryside. The opportunities related to the enhanced use of the local natural environment and cultural heritage will be addressed in the development of non-agricultural economic activities. The priority criteria for developing alternative economic activities is the creation of new jobs to provide employment for people leaving or going to leave agriculture and utilization of local resources – rural tourism, handicraft, etc. Besides direct investments into main production areas the priority will support the modernisation of agriculture and forestry by the maintenance of depreciated amelioration systems. Specialized systems for farm advisory and extension services aimed at improving the skills and knowledge of agricultural producers as well as other rural economy entrepreneurs will be set up within the framework of this priority.

Reconstruction or construction of buildings intended for public use, but also development and implementation of local partnership-based pilot development strategies will be supported to make the living environment in villages more attractive. The activities will positively affect the levels of local initiative and viability of rural areas.

The Common Fisheries Policy (CFP) covers conservation, management and sustainable exploitation of living aquatic resources, aquaculture, and the processing and marketing of fishery and aquaculture products, where such activities are practiced on the territory of Member States or in the Community waters or by Community fishing vessels. The objective of the Common Fisheries Policy is to insure sustainable development of fisheries at the same time maintaining the balance of environmental, economic and social aspects. The primary focus of fisheries measures is

on the adjustment of fishing capacity and bringing all the links in the fish-handling chain (vessels, ports, industries) into conformity with food safety, occupational safety and environmental protection requirements. Establishment of fish and crayfish farms will also be supported to compensate for decreasing fishing capacities and diversify the economic basis of rural life. The marketing of fish products will be facilitated to improve access to the markets. Accompanying social measures will be implemented for the fishermen affected by the restructuring of the fisheries sector.

Structural interventions in the framework of this SPD concerning the fisheries sector are in conformity with the objectives of the Common Fisheries Policy. These interventions are particularly subject to specific requirements and provisions fixed in Council Regulations (EC) No 1263/1999 and 2792/1999, lastly amended by Council Regulation (EC) No 2369/2002 of 20 December 2002. These provisions have to be respected even in the exceptional case of a fisheries action being financed by another fund. The interventions concerning the protection of aquatic resources, aquaculture, processing and marketing, and inland fisheries should have sustainable economic effect. The envisaged structural actions should give a sufficient guarantee of technical and economic viability and should particularly avoid the risk of creating any production over-capacity.

As for the horizontal objectives, environment protection requirements are to be integrated into the agriculture and rural development measures. The priority will contribute to the promotion of information society by establishing public Internet access in villages. The gender issues will be addressed when alternative economic activities are supported.

During the implementation of this priority it is vital to provide for the co-ordination with the priorities of Competitiveness of Enterprises and, in particular, Infrastructure and Local Development. The latter is important since the living and business environment in rural areas is largely shaped by the nature and availability of infrastructures provided by the local municipalities. Priority Competitiveness of Enterprises in its turn enhances establishment of new enterprises whereas the present priority has more emphasis on providing non-agricultural alternatives for agricultural producers and for diversifying the service supply in rural areas. The risk of overlaps between the three above-mentioned priorities will be tackled on the measure level

The implementation of the priority will be funded by two structural funds – Guidance section of the European Agricultural Guarantee and Guidance Fund (EAGGF) and the Financial Instrument for Fisheries Guidance (FIFG). The priority's relative weighting for the implementation of the Programme is 18.7% of the total funding allocated for the SPD.

Infrastructure and Local Development

Compared to the priorities described above, this priority is the most supportive one in its essence. In the context of infrastructure development, Estonia's strengths are related to road network and community infrastructure with a relatively good coverage, quite well developed telecommunications networks and ICT services for public use. On the other hand, poor technical conditions of several buildings and facilities (mostly attributable to insufficient funding), non-compliance with modern technical safety requirements and environmental protection requirements as well as the changing social and economic needs serve as main weaknesses. Past pollution, covering large areas is also considered to be a serious problem.

In order to achieve the prime objective of this Programme – to promote fast, socially and regionally balanced sustainable economic development – this priority should concentrate on the development of those parts of the infrastructure that have direct impact on the socio-economic development or the improvement of which cannot be postponed any further. Where appropriate, regional growth centres will be preferred as defined by the national regional policy and spatial planning documents in force. The spatial focussing is important especially when developing the networks of educational establishments, hospitals and transport. The physical infrastructures influence remarkably regional development – therefore, when implementing the measures, the needs of regional balancing will be kept in mind.

Development of infrastructures held by private bodies will not be supported, as a rule. In general, no support will be available for commercial telephone and data communication networks, or the distribution of electricity and transmission networks.

Implementation of the Infrastructure and Local Development priority will be co-financed under the European Regional Development Fund (ERDF). Besides the ERDF assistance provided by this Programme, two of the central spheres of infrastructure having very large investment requirements – transport and environmental infrastructures – will also be financed from the Cohesion Fund. In Estonia, the relative share of the Cohesion Fund in the total assist-

ance of the EU structural assistance amounts to almost 50% – therefore, approximately ¼ of the total amount of the EU structural assistance comes from the Cohesion Fund for each of the sectors. Therefore the role of transport and environmental projects co-financed by ERDF within the framework of this Programme is going to be of complementary character. ***A Single Strategy for the management of the Structural Funds and the Cohesion Fund in Transport and Environment Sector*** necessary for the co-ordination of the assistance is presented below.

A Reference Framework for the Cohesion Fund in Estonia has been elaborated in parallel to the SPD. The main features of this strategy paper for transport and environment are as follows:

In the transport sector, the Cohesion Fund can provide assistance for infrastructure projects that serve common interests and have been specified on the basis of the guidelines for the development of trans-European transport network, adopted with the decision of the European Parliament and Council no 1692/92/EC of July 23, 1996 and the revised guidelines adopted in October 2001. The Cohesion Fund pursues to provide the EU with a trans-European transport network including the "Motorways at sea" and "Rail Baltica" and the ERDF finances connection between its different parts where necessary. The assistance from the Cohesion Fund and ERDF needs to be fully co-ordinated. Projects to be co-financed under the ERDF must aim at the elimination of transport costs, traffic jams and time spent on travel while also improving the capacity and efficiency of networks and quality of the services, including traffic safety.

Following the national transport development plan and the principles listed above, Estonia has prepared a list of Cohesion Fund projects aimed at the modernisation of transport sector, considering the perspectives of the trans-European transport network until year 2010. The main emphasis will be put on the modernisation and development of selected roads and railway lines and the development of the port and airport infrastructures on the trans-European transport network. The relative importance of these corridors and infrastructure junctions is connected with both freight handling and passenger transport.

ERDF places emphasis on connections and interconnections with the trans-European networks where they need to be completed. Projects to be co-financed from ERDF should seek to remove bottlenecks of transport-connections, provide improvement of intra-regional or local access, modernise connection opportunities, reduce transport costs, congestion and travel times, and improve network capacity, performance and service quality, including safety and reducing negative environmental impact. Estonia will apply ERDF assistance during 2004-2006 for roads, small ports, regional airports and railways belonging to the state.

In the environment sector, Estonia is going to concentrate its efforts on the measures that aim at compliance with the requirements of the environmental directives and require the largest volume of investments. These directives are:

- Urban Waste Water Directive
- Drinking Water Directive
- Large Combustion Plants Directive
- Directives on the limitation of emissions of certain pollutants into the air from large combustion plants
- Directives on the quality of ambient air
- Directive on waste and other waste management directives
- Bird Directive
- Directive on the conservation of natural habitats

According to the Accession Treaty, Estonia has several transitional periods to achieve full compliance with the directives mentioned above. The transitional periods may last up to the year 2015.

The projects for the Cohesion Fund are to be selected according to the National Environmental Strategy and National Environmental Action Plan. During 2004-2006, problems related to drinking water, wastewater, management of solid waste and ambient air protection will be mainly addressed.

Estonia intends to launch several energy projects as well– for example, for taking up of renewable sources of energy.

Factors such as environmental and investment policies implemented in Estonia so far together with the smallness of the state and the large number of local government units have caused a situation in which Estonia needs to

implement a number of smaller projects in addition to the large environmental projects. The smaller projects, when taken alone, will not meet the minimum size requirements established by the Cohesion Fund. The environmental objectives established would not be achieved when the need for small projects is ignored; furthermore, the efficiency of large projects could suffer if this will be the case. Therefore, Estonia will take the approach for grouping smaller projects to meet the minimum size requirements applicable to Cohesion Fund projects. The projects will be grouped if:

- this is possible in the technical and economic sense – i.e. it can be done where the projects involve drinking water or sewage systems of one and the same settlement;
- this is necessary for the achievement of environmental quality objectives – for example, waste water treatment projects within the same river basin;
- a number of consecutive activities need to be finished for the system to work – for example, closing down an old landfill, establishing a new one and development of waste collection and transport system.

Whenever the grouping of smaller environmental projects in the waste sector proves to be not feasible, they will be addressed by the ERDF.

The management of assistance from both the Cohesion Fund and ERDF will be co-ordinated in conformity with the strategies or action plans existing or being designed applicable to specific spheres of the environmental sector (water management, waste management, nature protection).

Apart from the co-ordination activities on the strategic level, co-ordinated implementation of assistance from the Cohesion Fund and ERDF will be secured when deciding upon the project pipeline. This kind of approach is supported by the division of administrative tasks (Ministry of Finance is the Managing Authority responsible for both the implementation of the Cohesion Fund and the present programming document), and the fact that for both of the funds, the implementing bodies co-ordinating the assistance will be the same.

Transport and environment infrastructures are only a part of the coverage of the Infrastructure and Local Development priority. A description of strategic aims of developing infrastructures in other sectors is presented below.

Investments are to be made into the vocational education and applied higher education infrastructures to support the preparation of internationally competitive labour force and provide for contemporary learning environment. During the present programming period a special focus will be on the development of regional vocational training centres.

Without increases in the tax burden, state budget funds are not sufficient for modernising the hospital network that is economically inefficient and does not meet the contemporary requirements. At the same time, it is not possible to postpone the modernisation of hospital network. Assistance from the Structural Funds will be used to start the modernisation process. During the present programming period 3-5 hospitals among those that need development according to the Hospital Network Development Plan will be selected and thoroughly modernised.

Development of information society is a high priority for Estonia. The information society strategy is based on the e-Europe Action Plan and the Information Policy Principles 2002-2006. The present programming period will focus on development of ICT solutions concerning mainly the public sector (particularly concerning information for and services to the citizens) and improving access of population to Internet. Complementary operations aimed at information society will be supported in a co-ordinated way under several measures of this Programme.

Development of infrastructures of national importance is not sufficient alone. Within this priority it is necessary to design flexible tools for eliminating the "bottlenecks" related to local infrastructures. Existence of such bottlenecks can undermine the efforts made at national level to develop business and human resources. A local socio-economic development measure has been devised to involve municipalities into the achievement of the Programme objectives by contributing the maximum use of supplementary endogenous resources available at local level. The "bottlenecks" of local development are of various nature depending on the locality. Therefore these "bottlenecks" will be eliminated in complementarity with the other measures of this programme. In order to guarantee the most efficient use of resources and avoid the dispersion of funds, the support is focused on the most important bottlenecks having wider regional impact according to the local development plans and other criteria of socio-economic character which are presented in the relevant measure of this document.

Development of environmental protection is the most important horizontal issue in the implementation of the Infrastructure and Local development priority

When implementing the priority, consideration will be given to the need to co-ordinate the measures both within the priority and across priorities. The operations carried out within the Infrastructure and Local Development priority will provide in a complementary way to the other priorities and measures the environment necessary for human resource development, business development , rural development and improved aspects of everyday life of people. The implementation of this priority will be co-ordinated with the relevant activities on human resource development, agricultural, rural development, tourism, etc., and any possible overlaps (particularly of the Local Development measure) with other measures will be tackled at measure level.

Due to the relatively poor condition of the Estonian infrastructures and investment requirements characteristic of infrastructure related projects, the share of this priority will be approximately 37.2% of the funding made available for the Programme.

2.4. QUANTITATIVE OBJECTIVES

Relating the objectives to quantitative targets expressed in terms of indicators enables to assess the performance of a programme against its qualitative objectives. The objectives of a programme are mainly connected with its expected impacts. Thus, establishing quantitative objectives for a programme enables us to assess the expected impacts of the programme as well. Both setting up quantitative objectives and impact assessment of programmes serve as essential programming activities foreseen according to the Council regulation 1260/1999 of 21 June 1999.

For the countries joining the EU in 2004, the programming period is short. The observable structural impacts, however, reveal only after considerable effort and with a time lag. Therefore, a streamlined approach needs to be taken in the new Member States, which is both rigorous and practicable and which provides essential information on the progress and performance of the programmes.[47] The approach combines targets expressed on one hand both top-down and bottom-up indicators and on other hand impact, result and output indicators. The overall socio-economic background for achieving the targets is monitored by a limited set of context indicators.

The most important quantitative targets that relate to the general goal of the present SPD and to the main objectives of the selected priorities are presented in Table 55 below. The table is divided into four sections.

In section A, the overall socio-economic situation in Estonia, is expressed in terms of macroeconomic context indicators. No targets are set for the context indicators but their forecasted values are presented for reflecting the assumed economic environment for the programme. If the observed development of the context will remarkably differ from the forecast, deviations from the targets set for the programme are likely to occur.

Section B outlines the main expected macroeconomic impacts of the Programme. The indicators have been chosen to match the processes characterised in section A of the table, therefore allowing the use of the basic data for comparison. The Programme's impact targets on the growth of GDP and on general labour market indicators are presented on the basis of expert assessment made by the Ministry of Finance and are directly related to the macroeconomic forecast. Technically, the impacts of the programme can be estimated ex-post mainly via macroeconomic modelling.

In section C of the table the main targets for individual priorities are presented using a limited set of impact, result and output indicators. In section D the main indicators for monitoring progress in the "horizontal" priorities are presented. No quantitative targets are set for the "horizontal" indicators.

Table 55

Main indicators and targets related to the objectives of the Programme and its priorities

Sections, qualitative objectives	Indicator	Type of indicator	Measurement unit	Forecast/target 2006	Source of data	Base-line	Source of data
A. Context for the Programme							
	GDP average growth rate 2004-2006	Context	%	5.8	Statistical Office of Estonia	3.8 (1999-2001)	Eurostat
	GDP per capita in prices of year 2000	Context	euro	5.846	"	4.294 (2001)	Eurostat
	R&D expenditure in GDP	Context	%	1.5 incl. private sector 0.45	"	0.68 inc. private sector 0.15	Eurostat
	Employment rate (aged 15-64)	Context	%	64.3 men - 68.5 women - 60.4 15-24 – 30.2 25-54 – 78.8 55-64 – 52.5	"	62 (2002) men – 66.5 women- 57.9 15-24 – 28.2 25-54 – 76.8 55-64 - 51.6	"
	Unemployment rate (aged 15-64)	Context	%	7.8 men – 8.0 women – 7.6 15-24 – 16.5	"	9.1(2002) men – 9.8 women – 8.4 15-24 – 17.7	"
	Long-term unemployment	Context	%	4.3 men – 4.9 women – 3.6	"	4.8 (2002) men – 5.7 women – 3.8	"
	Expenditure on active labour market policy in GDP	Context	%	0.15	"	0.09 (2002)	"
B. Global targets for the programme **General goal: Fast, socially and regionally balanced sustainable economic development**							
	Increase of the average GDP growth rate 2004-2006 due to the SPD and Cohesion Fund	Impact	% points	0.7	Ministry of Finance, simulation		
	Increase of GDP per capita due to the SPD and Cohesion Fund 2004 2006	Impact	%	2.0%	"		
	Decrease of unemployment rate due to the SPD and Cohesion Fund, 2006	Impact	% points	0.4	"		
	Increase of employment (net job impact) due to the SPD and Cohesion Fund, 2006	Impact	No	3000	"		
C. Targets for the priorities **General objective for priority 1: Increasing and using Estonia's labour force potential in a more effective way**							
	Created and safeguarded jobs (net) 12 months after project	Impact	No	2000	Ex-post evaluation, survey		
	Coverage rate of unemployed persons receiving ESF active labour market measures	Result	%	35	Annual implementation reports		
	Placement rate after participation in active labour market measures	Result	%	65	"		
	Number of persons participating in training courses carried out in educational system (Measure 1.1)	Output	No	24,000 of which 55% women			
	Number of persons participating in training courses increasing competitiveness of enterprises (Measure 1.2)	Output	No	12,000 of which 50% women			

Number of unemployed participating in active labour market measures (Measure 1.3)	Output	No	30,000 of which 50% women				
Number of civil servants participating in training courses for enhancing administrative capacity (Measure 1.4)	Output	No	3,600 of which 53% women				
General objective for priority 2: Increased competitiveness of enterprises and employment							
Created and safeguarded jobs (net) 12 months after project	Impact	No	5,640 of which 50% for women	Ex-post evaluation, survey			
New enterprises created with SF support still active after 18 months	Impact	No	400	"			
Created new jobs (gross) by the end of project	Result	No	6,000, (incl 800 in high-tech production and services) of which 50% for women	Annual implementation reports			
Safeguarded jobs (gross) by the end of project	Result	No	1,050 of which 50% for women	"			
New enterprises created with SF support by the end of project	Result	No	500	"			
Enterprises supported	Output	No	650	"			
Marketing and investment grants to tourism enterprises	Output	No	60	"			
General objective for priority 3: Balanced and sustainable economic and social development of rural areas							
Created and safeguarded jobs (net) 12 months after project	Impact	No	1,170 of which 60% for women	Ex-post evaluation, survey			
New enterprises created with SF support after 18 months	Impact	No	50	"			
Created new jobs (gross) by the end of project	Result	No	245 of which 60% for women	Annual implementation reports			
Safeguarded jobs (gross) by the end of project	Ressult	No	1,220 of which 60% for women	"			
Reduction of Estonian fishing fleet	Result	GT, kW	550/1,050				
Cattle, pig and sheep places modernisation supported	Output	No	13,500	"			
Non-agricultural diversification projects supported	Output	No	180	"			
Fisheries related projects supported	Output	No	100				
General objective for priority 4: Establishing infrastructures that support balanced and sustainable economic development							
Share of people assessing the impact of supported physical infrastructure projects as having improved attractiveness of their region for living and business-making among all benefiting persons	Impact	%	65	Ex-post evaluation, survey			

	Improvement of IRI (International Roughness Index) of road covering on rehabilitated road sections.	Result	%	67 (from 3 to 1 mm/m²)	Annual implementation reports		
	Students (including vocational pre-training and further education) benefiting from improved learning conditions in vocational education during the academic year following project completion	Result	No	9,000	"		
	Increase in bed turnover of modernised hospitals	Result	(%)	40	"		
	Inhabitants benefiting from supported municipal infrastructure investment	Result	No	280,000	"		
	Roads constructed/rehabilitated	Output	km	130	"		
	e-Government projects supported	Output	No	10	Annual implementation reports		
	Upgraded student places in vocational education	Output	No	5,000	"		
	Hospitals upgraded	Output	No	3	"		
	Municipal infrastructure investment projects supported	Output	No	280, incl 60 environmental projects	"		
D. Horizontal priorities							
Sustainable development							
	Share of assistance with environment-friendly impact	Result	%		Annual implementation reports		
	Projects with environment-friendly impact	Output	No		"		
Gender equality							
	Share of assistance with positive impact in terms of gender equality	Result	%		"		
	Projects with positive impact in terms of gender equality	Output	No		"		
Information society							
	Share of assistance contributing to the development of information society	Result	%		"		
	Projects contributing to the development of information society	Output	No		"		
Regional development							
	Share of assistance by counties[1]	Result	%		"		
	Division of projects by counties[1]	Output	No		"		

[1] *Only geographically delimited projects*

3. PRIORITIES

3.1. PRIORITY 1: HUMAN RESOURCE DEVELOPMENT

3.1.1. GENERAL ORIENTATION

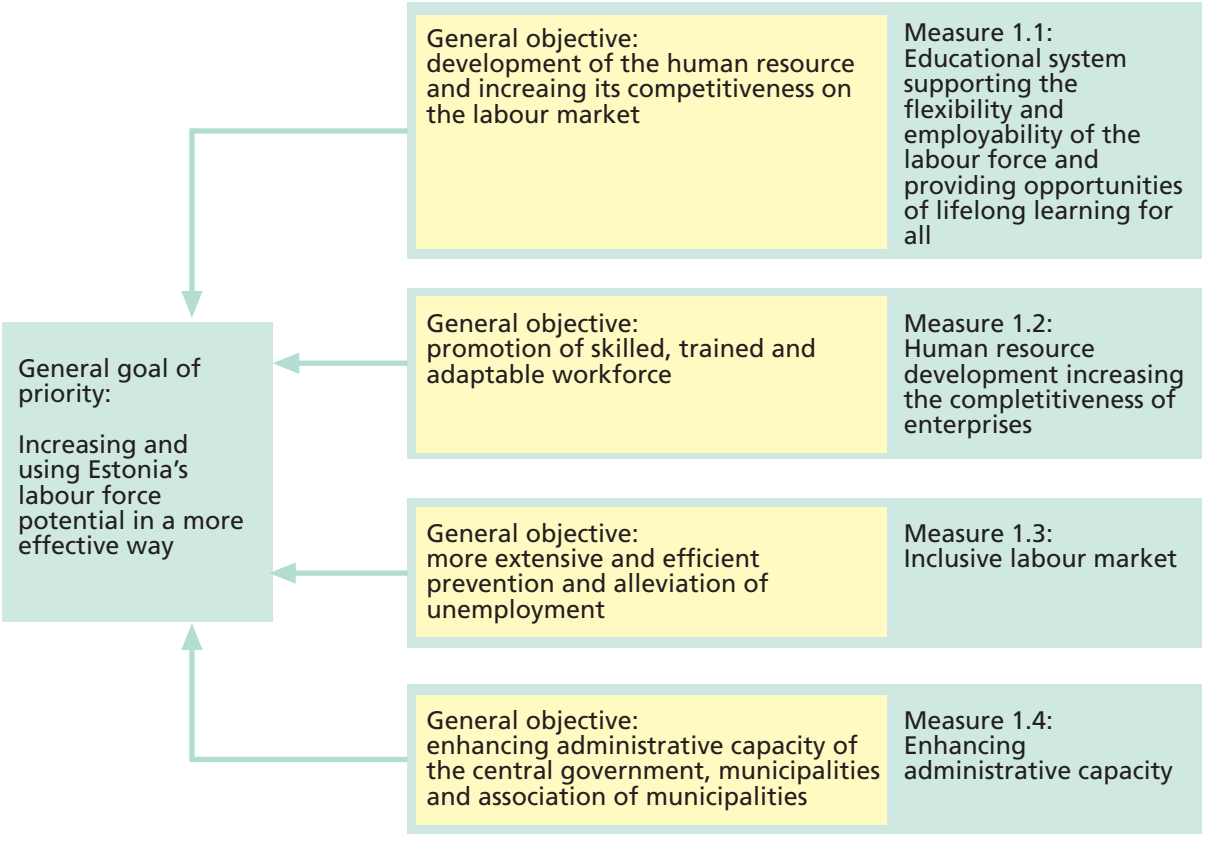
The human resource development priority of the SPD will be implemented through the following four measures:

- Measure 1.1: Educational System Supporting the Flexibility and Employability of the Labour Force and Providing Opportunities of Lifelong Learning for all
- Measure 1.2: Human Resource Development Increasing the Competitiveness of Enterprises
- Measure 1.3: Inclusive Labour Market
- Measure 1.4: Enhancing Administrative Capacity

Aims of the measures and their links to the general objective of the priority to be achieved are presented in Figure 47.

Figure 47

Objectives and measures of the Human Resource Development priority



Article 29 (3) (a) of the Council Regulation (EC) No 1260/1999 states "the Community contribution may rise in exceptional and duly justified cases to a maximum of 80% of the total eligible cost". Proceeding from that Estonia applies an 80% Community contribution rate for the Measure 1.3. The exceptional rate is justified by the need to facilitate access to the measures for the non-governmental organisations acting in the field of human resource development, having often very weak funding capacity and also for the poorer local municipalities.

The detailed information about the foreseen budgetary split between measures will be included in the Programme Complement.

Mutual relations of the measures implementing the present priority and their coherence to the basic reference documents are dealt with in detail in the Policy Frame of Reference for Employment and Human Resource Development presented below.

3.1.2. POLICY FRAME OF REFERENCE FOR EMPLOYMENT AND HUMAN RESOURCE DEVELOPMENT

Human resource development is seen as the most crucial means so as to ensure sustainable development of economy and the whole society. The availability of well-educated and flexible labour force capable of adapting to the rapid changes in information society is a strong prerequisite for enhancing the competitiveness of the economy. More skilled labour force enables to use new and more advanced technologies, develop the potential of businesses and create new jobs. Also, qualified labour force will serve as one of the main prerequisites for effective implementation of development plans of structural nature.

The Human Resource Development priority is aimed at increasing and using Estonia's labour force potential in a more effective way.

In comparison with EU countries, a relatively high formal educational level of the adult population is characteristic of Estonia. The share of population with higher education is considerably large whereas the share of people with lower level of education is relatively small. Considering the increase in enrolment rates and duration of training, the prestige of education has increased even more over the recent years.

At the same time, the qualification of the people who finished their studies quite long ago does not always match new labour market demands. Employment prospects for younger people are poor and they often fall into the category of unemployed just after finishing school. This is largely because in many vocational schools out-dated curricula and poorly equipped learning environment are still provided. Estonia is suffering from structural unemployment, i.e. high unemployment rates exist in parallel with the lack of qualified labour force. There is not enough skilled labour and competent managers in enterprises. On the other hand, further development of enterprises is hampered by low levels of knowledge and know-how among managers of firms in areas such as for example, quality management and innovation.

In a knowledge-based information society, a continuous self-development is strongly needed in order to maintain the job or enter the labour market again once one has become unemployed. This would mean creating a well-functioning life-long learning system as well as raising people's awareness on the advantages of the learning opportunities. Since the level of education among the unemployed is much lower than among employed persons, a greater emphasis shall be put to the training for the unemployed and implementing special measures for risk groups that help them to enter the labour market.

In 2001, the unemployment rate was 11.8%. During 2002, it decreased to 9.1% but is still much higher than the average indicator of EU. In EU, the ultimate goal has been set to achieve the employment rate no less than 70% by the year 2010. In 2001, employment rates in EU and Estonia were 64% and 61%, respectively.[48] Thus, Estonia needs to make strong efforts if it is to accomplish the goal set by the European Union.

The main objective of Estonian employment policy for 2010 is to provide employment for as many people as possible. This could be realised through enhancing the competitiveness of the labour and regions supported by the smooth implementation of educational reforms, promotion of lifelong learning, increasing administrative capacity of public employment services, extending active labour market measures, and involving social partners into the middle of the process. In developing new measures and activities, the principle of promoting gender equality shall be followed.

An overview about the national labour market situation and the overall readiness of Estonia to implement the European Employment Strategy is described in "Joint Assessment of Employment Priorities in Estonia" (JAP), signed by the Government of Estonia, with the European Commission in 2001. JAP has identified a number of areas whereby employment policy can be reinforced to promote social and economic development in Estonia. The following priorities laid down in the JAP have deserved a special emphasis in the current Programming Document: completion of the vocational education reform, providing adults with opportunities for life-long learning, focussing to active labour market measures (with greater attention to different risk groups), enhancing the administrative capacity of the public employment services, decreasing regional differences in unemployment, and promoting gender equality on the labour market. The need for improvements in vocational education and development of lifelong learning opportunities is also stressed in the JAP Progress Reports of 2002 and 2003 as these are seen to play a key role in raising the overall levels of qualification among labour. Furthermore, the elaboration and implementation of the employment action plans proceeding the principles of the European Employment Strategy as well as designing measures targeted at social risk groups, is positively underlined in the JAP. The JAP priorities have been taken into account in the course of implementation of different strategies and action plans aimed at improving employment and education: National Employment Action Plans; Estonian Research and Development Strategy "Knowledge-

based Estonia" 2002-2006; Estonian Life-long Learning Strategy project; Action Plan for Developing Estonian VET System in 2001-2004, and National Higher Education Programme "Tiger University 2002-2004". In addition, human resource development activities in the context of the present Programme have ties with the following documents: Youth Work Development Plan 2001 – 2004; "Enterprising Estonia" – a National Policy for the Development of Small and Medium-Sized Enterprises in 2001-2006, and National Programme "Integration to Estonian Society 2000-2007". Development plan "Higher Education reform 2001-2002" approved by Estonian Government sets the goals up to year 2008.

The SPD has tight connections with the National Employment Action Plan (NAP), prepared in accordance with the EU Employment Strategy. In practice, both the NAP and the Policy Frame of Reference for Employment and Human Resource in the present Programme have been prepared in strong co-operation between the Ministry of Social Affairs, the Ministry of Education and Research, and the Ministry of Economic Affairs and Communications.

While implementing ESF in Estonia the necessity to promote equal opportunities for all in accessing the labour market will be taken into account. Particular emphasis will be paid to those exposed to risk of social exclusion, regardless of the different grounds. The aim of integrating persons with specific risks, be it disability, lack of command of Estonian language, ethnic minority, duration of unemployment, age or other, is followed horizontally, exploiting all the additional means required. The aspects of local development and employment initiatives as well as the employment potential of the information society will be considered while implementing the measures. Equal opportunities for women and men as part of the mainstreaming approach is pursued through all the measures and while implementing all the activities.

The first guideline of the new European Employment Strategy foresees active and preventative measures for the unemployed and the inactive designed to prevent inflow into long-term unemployment, and to promote the sustainable integration into employment of unemployed and inactive people. These issues will also be addressed when implementing the Human Resource Development priority of the SPD. According to the NAP, the most vulnerable groups in Estonia are young people, long-term unemployed, disabled and elderly people.

Measure 1.3 foresees retraining and continuing training (including entrepreneurship training) of the unemployed and job seekers declared redundant. Employment aid, including creation of subsidised jobs, assisted or sheltered jobs and other adapted employment arrangements will be offered especially for different risk groups and those excluded from the labour market. In order to modernise and strengthen the employment and other services supporting inclusion to the labour market, the staff will be trained utilise an individual approach, but also to better co-operate with the employers, pay attention to the specific needs of risk groups, advisory skills, including vocational guidance, etc.

The second guideline – Job creation and entrepreneurship – aims to encourage the creation of more and better jobs by fostering entrepreneurship, innovation, investment capacity and a favourable business environment for all enterprises. Policy initiatives will focus on promoting education and training in entrepreneurial and management skills and providing support, including through training to make entrepreneurship a career option for all. Above all measure 1.2 will foresee ESF support for training of persons employed in enterprises in order to improve and maintain employability, develop entrepreneurship, to promote the conditions facilitating job creation, as well as to boost human potential in research, science and technology. Potential entrepreneurs will be encouraged to start their own business by providing them with necessary business management skills.

The fourth guideline is most important for promoting development of human capital and lifelong learning. It foresees implementation of lifelong learning strategies, including through improving the quality and efficiency of education and training systems. The aim is to equip all individuals with the skills required for a modern workforce in a knowledge-based society, to permit their career development and to reduce skills mismatch and bottlenecks in the labour market. Policies will aim in particular to achieve an increase in investment in human resources. All four measures are related with adult training and raising persons' competitiveness on the labour market. More links with this guideline has the measure 1.1. The specific objectives of the measure are: ensuring quality of education and training (developing training systems for teachers, curricula development, training the lecturers and teaching staff for higher education institutions, etc.), equal opportunities for accessing education (providing flexible learning opportunities, preventive actions: counselling and guidance, vocational pre-training for drop-outs, etc., possibilities and providing conditions for lifelong learning (developing a system for career counselling, information database on adult study opportunities, developing a professional qualifications system, etc.).

The fifth guideline – increase labour supply and promote active ageing – aims to increase labour market participation by using the potential of all groups of the population through a comprehensive approach covering in particular the availability and attractiveness of jobs, making work pay, raising skills, and providing adequate support measures.

For promoting active ageing access to continuing training is important. Here again we can stress that all four measures are supporting raising skills of population. Measure 1.1 will provide conditions for lifelong learning, measure 1.2 will support the training of persons employed in enterprises, measure 1.3 will organise training for unemployed people and measure 1.4 will increase professional skills in the public administration.

The sixth guideline – Gender equality – is a principle throughout the SPD. It aims through an integrated approach combining gender mainstreaming and specific policy actions, encourage female labour market participation and achieve a substantial reduction in gender gaps in employment rates and unemployment rates. Attention will also be given to reconciling work and family life. In Estonia promotion of equality of opportunities between men and women is foreseen. In measure 1.3 indicative activities will include diminishing the barriers for women in entering/returning to the labour market and accompanying measures (e.g. day-care for children or dependent elderly). Measure 1.2 foresees the promotion of flexible work arrangements enabling the reconciliation of work and family-life (part-time work, tele-working, work with flexible timetable).

The seventh guideline foresees promotion of the integration of and combat the discrimination against people at a disadvantage in the labour market. It aims to foster the integration of people facing particular difficulties on the labour market, such as early school leavers, low-skilled workers, people with disabilities, immigrants, and ethnic minorities, by developing their employability, increasing job opportunities and preventing all forms of discrimination against them. Measure 1.3 aims to facilitate access to employment of the most excluded from the labour market. Implementation of active labour market measures is very important especially for risk groups such as young people, the long-term unemployed, disabled people, elderly people and ethnic minorities. Indicative activities will include also supporting work capacity and employability of the most excluded from the labour market through rehabilitation and re-socialisation provisions. Measure 1.1 foresees vocational pre-training to bring drop-outs back into the education system.

With the help of ESF financial assistance this Programme will contribute to the improving vocational education and higher education system, increasing economic activity and the competitiveness of labour force through life-long learning as well as extending the implementation of active labour market measures. Also, it will positively address the needs for enhanced administrative capacity and greater social inclusion.

Based on the five ESF Policy Fields, the Human Resource Development priority can be divided into the following sub-fields:

Developing and promoting active labour market policies to combat and prevent unemployment (ESF Policy Field 1). The activities described in measure 1.3 will constitute the core of the policy field while corresponding to the National Employment Action Plan. The objectives and activities of social inclusion process (including JIM and NAP Inclusion) will also be paid due attention. Overall objective of the measure is a more extensive and efficient prevention and alleviation of unemployment and, thus, poverty and social exclusion, and enhancing social inclusion. When implemented effectively, the activities could contribute to the increase in the number of participants in active labour market measures. Likewise, the existing active labour market measures will be developed, adjusting them to regional needs and the individual needs and elaborating and implementing new labour market measures.

In order to modernise and strengthen the employment services, but also others contributing to inclusion into the labour market, their staff will be trained to apply a more individualised approach, to better co-operate with the employers, pay attention to the specific needs of risk groups, advisory skills, including vocational guidance etc.

Promoting equal opportunities for all in accessing the labour market and improving social inclusion (ESF Policy Field 2). Measure 1.3 also addresses to increasing social inclusion, first of all, by integrating different risk groups to the labour market and by preventing becoming socially marginalized. For facilitating access to employment of those who are the most excluded from the labour market the active labour market measures must be complemented with other means such as rehabilitation, socialisation and workplace adaptations that are carried out either beforehand or simultaneously with labour market services. While carrying out activities in this field, it is important to follow a pathway approach, through promotion of joint working between different services to improve the persons' opportunities to find job.

Promoting employability, skills and mobility through lifelong learning (ESF Policy Field 3). Measure 1.1 is aimed at human resource development and raising competitiveness on the labour market by providing training, improving the educational system and the conditions for lifelong learning. To ensure the quality in vocational education and training (VET) the first priority is to provide qualified teachers to the schools – by developing training and re-training system corresponding to current demands and organising training. Training the lecturers and teaching staff for

higher education institutions, ensuring their mobility and training the students to become top level specialists in strategically important fields (user-friendly information technology and development of the information society, biomedicine and materials technology) is also the priority set in Estonian R&D strategy "Knowledge-Based Estonia". To implement the concept of lifelong learning the most important goal is to increase the accessibility to further education and re-training. A system recognising previous work experience and already acquired knowledge will be developed and career counselling will be made available to adults (incl. training of practitioners).

Promoting a skilled, trained and adaptable workforce and developing entrepreneurship (ESF Policy Field 4). Needs for human resource development in enterprises are addressed in Measure 1.2. The general objective of the measure it to prevent unemployment through the promotion of skilled, trained and adaptable workforce. The measure will support the training of persons employed in enterprises in order to improve and maintain employability, develop entrepreneurship, to promote the conditions facilitating job creation, as well as to boost human potential in research, science and technology. This measure aims at raising R&D and innovation-related competence of enterprises as well as the skills and strategic planning capacities of managers and specialists on implementation of quality management systems. The specific objectives of the measure are: to achieve an increase in investment in human resources, particularly in investments by enterprises in the training of adults with a view to promoting productivity and competitiveness; encouraging potential entrepreneurs to start their own business by providing them with necessary business management skills; increasing the awareness of business managers about new management methods and export and marketing by promoting the respective training; enabling the implementation of new technologies and quality assurance systems as well as more flexible work organisation in enterprises by supporting acquisition of necessary skills.

Improving women's access to, and participation in the labour market (ESF Policy Field 5). The specific activities improving women's access to the labour market are implemented mainly in measure 1.3. Usually, women who have small children face the problems related to getting a stable job and integrating with the labour market. Therefore, measure 1.3 will aim at diminishing the barriers for women faced in (re-)entering the labour market, as well as the provision of accompanying measures (e.g. day-care for children and elderly). Women can also benefit from more flexible work arrangements, for example part-time work, tele-working, flexible work patterns, which are dealt with in measure 1.2. However, the principle of equal opportunities for women and men is followed horizontally throughout the priority.

In addition to the five principal ESF policy fields, enhancing the administrative capacity serves as a special priority within the frame of human resource development in Estonia. In Measure 1.4, management development and training of personnel will be dealt with to support the systematic and sustainable development of public service training. This measure is designed to enhance administrative capacity of the central government (including county governments) and municipalities and associations of municipalities. The measure contributes to more efficient identification of policy needs, strategic planning and management and evaluation of policy outcomes.

3.1.3. MEASURE 1.1: EDUCATIONAL SYSTEM SUPPORTING THE FLEXIBILITY AND EMPLOYABILITY OF THE LABOUR FORCE AND PROVIDING OPPORTUNITIES OF LIFELONG LEARNING FOR ALL (ESF)

Objectives

The general objective of the measure is human resource development and increased competitiveness on the labour market by providing training, improving the educational system and the conditions for lifelong learning.

The specific objectives of the measure are:

- Ensuring quality of education and training
- Ensuring equal opportunities for accessing education
- Ensuring possibilities and providing conditions for lifelong learning

Rationale

Vocational Education

In vocational education the main basis for implementing activities is "Action Plan for Developing Estonian VET System in 2001-2004". To ensure the quality in vocational education and training (VET) our first priority is to provide qualified teachers to the schools – by developing training and re-training system corresponding to current demands and organising training. Fundamentals of the teacher training are derived from the "National Development Plan for

Teacher Training 2003-2010" (draft version). Training, further training and practical work experience of teachers and schools' headmasters will be implemented in close cooperation between schools and enterprises.

To improve the quality of vocational education and training the new curricula will be developed and current curricula will be updated. Also new training materials linked to training co-financed by the ESF will be needed. It is very important that in developing curricula and providing training courses the employers would be included to the process.

To ensure the quality of vocational education and training, developing and implementing an accreditation system for vocational institutions has been planned. This will make schools comparable, enable authorities to better monitor schools and also increase the trust in the vocational education system.

Second priority in flexibility and employability is to guarantee attractive VET opportunities or to ensure the accessibility to education and training in order to ease the transition from school to labour market. Present proportion of students entering upper-secondary and vocational school (70:30) does not correspond neither to the abilities of the learners nor to the needs of the labour market. In order to alleviate this problem, the learning opportunities will be made more flexible. In addition to the training of students in VET institutions for example, in-company training will be organised together with employers, apprenticeship training and basic VET training for upper-secondary students will be implemented, and closer co-operation with enterprises will be initiated. The further development and implementation of the career guidance system (including training of qualified practitioners) will help to decrease the gap between the education system output and the labour market needs. Training of the practitioners and the development of the model for the provision of guidance and information services is in conformity with the "Action Plan for Developing Estonian VET System in 2001 – 2004" and the "Youth Work Development Plan 2001 – 2004". Higher education institutions will provide training for the practitioners-counsellors. To make learning opportunities flexible and labour market-oriented, training supervisors to guide the students during their practice period among both schools' as well as enterprises' personnel will be trained.

Both, "Education Strategy" (draft) and VET Development Plan foresee the activities aimed at dropouts to bring them back to school, especially by providing them vocational pre-training. The emphasis is on preventive activities (such as guidance, information and counselling, training of qualified teachers and counsellors). Vocational education institutions may also provide training courses for dropouts and/or risk groups to gain basic vocational and elementary skills together with formal education as well.

Ensuring the quality of education and training is closely related to Measure 4.3 "Modernisation of Infrastructure for Vocational and Higher Education" (co-financed from ERDF) which provides the infrastructure needed for modern teaching methods and up-dated curricula, especially supplying the facilities needed for VET.

Higher Education

Development plan "Higher Education Reform 2001-2002" approved by Estonian Government sets the goals up to year 2008 that will mostly be achieved through the implementation of Universities Act and Applied Higher Education Institution Act. This plan also includes the financial plan and vision for 2003-2008 where more attention is paid to the quality of higher education, especially on master and doctor level. The plan also foresees greater attention being paid to those applied specialties on the higher education level that will help to fulfil the demand for highly qualified personnel on Estonian labour market.

Main role for the universities under this measure is to provide training on the fields that are strategically important to Estonian economy and also training and re-training of the teaching staff. Further training and re-training for the higher education teachers can also be provided by universities as well as by other educational institutions (together with enterprises when needed). Training the lecturers and teaching staff for higher education institutions (applied and academic), ensuring their mobility and training the future top level specialists in strategically important fields is also the priority set in Estonian R&D strategy "Knowledge-Based Estonia". Strategic goal of the "Knowledge-Based Estonia" is to increase the competitiveness of enterprises and the key fields are: user-friendly information technology, development of the information society, biomedicine and materials technology. In strategic fields and in training the top-level specialists the aspects of curricula development and developing of quality assurance system on post-graduate level should also be paid due attention. Mobility activities may include inviting top-level teaching and research staff to work with Estonian higher education institutions on a long-term basis, providing post-doctoral research and teaching experience for universities teaching and research staff, etc.

The main objective of the national higher education program "Tiger University 2002-2004" is quality improvement in higher education institutions through modern technologies and teaching materials and also through highly qualified teaching staff. Tiger University program foresees the training of ICT specialists and training the ICT trainers.

Complementary to infrastructure investments under priority 4, this measure enables the implementation of new training methods elaborated in the program (e-learning, project based learning, etc). In teacher training the emphasis is put on integrating ICT into specialty study.

Lifelong Learning

To implement the concept of lifelong learning with regard to European Commission Lifelong Learning Memorandum and "Estonian Life Long Learning Strategy" (draft 2002) the most important goal is to increase the accessibility to further education and re-training. According to the study carried out by Research Company ***Saar Poll*** in 2002 the main barrier to take part in training courses is low motivation and the expensiveness of modern training. For that reason support to training projects will be provided under this measure. The projects supported must be initiated by training institutions and the training courses should be labour market related and aimed at employed people (while training for the unemployed will be provided from measure 1.3). To ensure the quality of training, training the trainers will be provided.

In order to motivate persons to take part in life-long learning, a system recognising previous work experience and already acquired knowledge will be developed and implemented. An information database of learning opportunities for adults will also be developed which will support the provision of professional and career counselling services to adults as part of the career guidance system.

Infrastructure investments in the context of lifelong learning will be implemented under priority 4, mainly from measure 4.3 where those centres and institutions are preferred which besides formal education provide lifelong learning opportunities.

To measure the competitiveness of labour and to make education and training correspond to the needs of labour market the continuing development of a professional qualifications system together with the labour market partners is planned. The measure foresees the development of professional standards, the organisation of professional examinations (for both graduates of vocational schools and for adults), curricula development according to the developed professional standards, etc.

Indicative Operations

- Further development of the training systems for teachers
- Provision of training and practical experience for teachers
- Curricula development and development of new teaching materials on vocational, applied higher and higher education level linked to training co-financed by the ESF
- Developing an accreditation system for vocational education institutions
- Training guidance practitioners and youth information workers, further developing and implementing the guidance services provision model
- Training of students including providing flexible learning opportunities (for example establishing in-company practice and apprenticeships, implementing professional pre-training, extending cooperation with enterprises)
- Training the training supervisors among the schools' as well as enterprises' personnel
- Vocational pre-training to bring drop-outs back into the education system
- Actions preventing drop-out from secondary and vocational education (counselling and guidance, training qualified practitioners and teachers)
- Training of students in higher education in the fields that are strategically important to Estonia
- Training the lecturers and teaching staff for higher education institutions, ensuring their mobility (inviting top-level teaching and research staff to work with Estonian higher education institutions on a long-term basis, providing post-doctoral research and teaching experience for universities teaching and research staff, etc) and training the students to become top level specialists in strategically important fields (user-friendly information technology and development of the information society, bio-medicine and materials technology)
- Developing quality assurance system on the post-graduate level
- Establishing a lifelong learning system recognising previous work experience and already acquired knowledge
- Support to the labour market related training projects that are aimed to already employed people, including training the trainers

- Developing and implementing a system for career counselling (including training of practitioners with applicable qualifications)
- Information database on adult study opportunities
- Further developing a professional qualifications system
- etc.

Examples of Intended Final Recipients

- Vocational education institutions, applied higher education institutions and universities, training and educational institutions (including the trainers of teaching staff, providers of lifelong learning opportunities)
- Providers of guidance, counselling and youth information services
- Regional counselling centres for people with special needs
- Educational foundations and other institutions providing training (including umbrella organisations, NGOs, local authorities, etc.)
- Organisations subordinate to the Ministry of Education and Research
- Organisations associated with the development of the professional qualifications system

State Aid

Any state aid granted under this measure will be in conformity with the ***de minimis*** regulation.

3.1.4. MEASURE 1.2: HUMAN RESOURCE DEVELOPMENT INCREASING THE COMPETITIVENESS OF ENTERPRISES (ESF)

Objectives

The general objective of the measure is to prevent unemployment through the promotion of skilled, trained and adaptable workforce. Measure will support the training of persons employed in enterprises in order to improve and maintain employability, develop entrepreneurship, to promote the conditions facilitating job creation, as well as to boost human potential in research, science and technology.

The specific objectives of the measure are:

- Achieving an increase in investment in human resources, particularly in investments by enterprises in the training of adults with a view to promoting productivity and competitiveness;
- Encouraging potential entrepreneurs to start their own business by providing them with necessary business management skills;
- Increasing the awareness of business managers about new management methods and export and marketing by promoting the respective training;
- Enabling the implementation of new technologies and quality assurance systems in enterprises by supporting acquisition of necessary skills.

Rationale

Enterprising Estonia – Policy for Developing Small and Medium Size Enterprises in Estonia 2002-2006 defines human resource development as its first priority. The most important personnel problem for enterprises is the lack of skilled workers and qualified specialists. It is also important to support the development of the existing workforce according to the rapidly changing needs of labour market. Current measure aims at improving access to training and higher qualification of employees of especially small and medium-sized enterprises. Qualified workers will facilitate the use of new and more sophisticated technologies, thus allowing enterprises to grow and develop and create more jobs.

Grants to Retraining and Continuing Training

Enterprise Estonia which is one of the implementing bodies of state business development activities has been providing enterprises with grants to retraining and continuing training since 2001. The measure is needed, as mainly small enterprises are not able to invest in training that is profitable in the long term. In addition, entrepreneurs are often not eager to invest into development of the labour force because of the risk that trained workers could leave their jobs. The training grants are available to enterprises, associations of enterprises and regional business development institutions. Associations of enterprises can apply for this grant to train the staff of their member organisations, while business development organisations can apply for support to train potential entrepreneurs and those starting up.

Training Programme

The above mentioned support scheme is demand-driven. Enterprises approach Enterprise Estonia with their training plans. Unfortunately small enterprises that form the main target group of training support activities often tend to undervalue the positive effects of training and are not active appliers of the grants. Reasons behind of this lie often in lack of information and experience. At the same time transition to a knowledge-based economy presents the companies and their workforce with great challenges and requires the continuous acquisition of knowledge in many new spheres. In order to encourage enterprises to train their employees and increase professional skills of specialists on different speciality-related fields proactive training programmes are being developed. The training program is based upon the needs identified with sector based needs assessments as well as consultations with entrepreneurs and their associations.

According to recent surveys there are fields with particular need for enhancing skills and accumulation of knowledge. These fields are defined in national strategic documents, for example Knowledge-based Estonia – Research and Development Strategy 2002-2006, Enterprising Estonia – Policy for Developing Small and Medium Size Enterprises in Estonia 2002-2006 and Export Policy. These priority fields are taken into account while implementing the measure and are therefore further explained as follows.

Entrepreneurship figures are considerably lower in Estonia than in the EU. Therefore it is necessary to provide the knowledge and skills necessary for success for those wanting to start entrepreneurship. All the hired workers are seen as potential entrepreneurs within the framework of this measure, since their existing experience and skills might enable them to start a business, but they lack the necessary knowledge to establish and manage a business.

Although the managers of enterprises (both middle and top level) are capable people, they often lack the special education necessary for coping with business in a transition economy. There should therefore be opportunities for them to improve their awareness and skills. According to the evaluations of business managers themselves the most constraining factor limiting the enterprise development is finding market for their products or services. These facts indicate the immense need for training on business management, marketing and exports.

Another problem is managers' low levels of competence and know-how in product development, technology development and innovation. Lack of training in the administration of innovation and technology also holds back development. In certain phases of enterprise development, further expansion is hampered by lack of knowledge in quality management and patenting in ensuring competitiveness. This means the measure is also aimed at raising R&D and innovation-related competence of enterprises as well as the skills and strategic planning capacities of managers and specialists on implementation of quality management systems.

The competitiveness of enterprises can be increased by encouraging the use of flexible forms of work. While identifying the training needs, the need for more flexible working arrangement is also taken into account. The managers can be trained to re-organise working arrangements in a more flexible way and the examples of best practice will be promoted. The potential of the employees can thus be better exploited and the workforce's adaptability increased.

Indicative Operations

- Provision of support for training activities for employees and managers of enterprises;
- Support necessary for the identification of training requirements attributable to enterprises' development, implementation of new technology or quality assurance system;
- Assessment of training needs in different sectors of economy;
- Provision of entrepreneurial training for potential entrepreneurs ;
- Training activities to increase the awareness and skills of managers and specialists about business management, export and marketing, R&D, innovation, quality management, etc.;
- Awareness raising, information and publicity regarding the activities of the measure, the activation of target groups and project initiation.

Examples of Intended Final Recipients

- Potential entrepreneurs, except unemployed who will be targeted under measure 1.3;
- Enterprises, especially small and medium-sized enterprises;
- Social partners;
- Non-profit organisations involved in development of entrepreneurship, such as regional business development agencies.

State Aid

January-April 2004: state aid granted under this measure will be compatible with the ***de minimis*** rule.

From May 2004: any aid granted under this measure will be in conformity with the training aid block exemption.

3.1.5. MEASURE 1.3: INCLUSIVE LABOUR MARKET (ESF)

Objectives

The overall objective of the measure is a more extensive and efficient prevention and alleviation of unemployment and, thus, poverty and social exclusion, and enhancing social inclusion.

The specific objectives of the measure are:

- Faster and more extensive integration to the labour market of the unemployed and employees at the risk of becoming unemployed due to declared redundancy
- Facilitating access to employment of those the most excluded from the labour market
- Improving the efficiency and quality of employment services

Rationale

Unemployment is the main cause of poverty and social exclusion in Estonia. More inclusive labour market is, thus, the key way of preventing and alleviating poverty and exclusion and enhancing social inclusion. The annual National Employment Plans, the Joint Inclusion Memorandum and the National Action Plan on Inclusion serve as a basis for the implementation of the measure.

The National Employment Action Plan is compiled in accordance with the new employment guidelines, involving three overarching objectives of full employment, improving quality and productivity at work and strengthening social cohesion and inclusion. The Joint Inclusion Memorandum follows the EU common objectives for social inclusion. It identifies increasing labour market participation, in particular of those long-term unemployed or the most distant from the labour market, as one of the most urgent challenges in relation to tackling poverty and social exclusion.

Active Labour Market Services

In order to reduce skills mismatch and bottlenecks in the labour market, active labour market measures should be implemented by the public employment services. Re-training and continuing training can improve the qualification of the unemployed and job seekers who have been declared redundant.

Employment aids and aids for self-employment (for the unemployed exclusively) and vocational counselling are also provided in order to increase the unemployed persons' opportunities to find steady jobs. Implementation of different active labour market measures is of great importance to all the unemployed, but especially for risk groups such as young people, the long-term unemployed, disabled people, elderly people and ethnic minorities.

Existing active labour market measures (retraining and continuing training and others) will be improved and new ones will be developed in order to enhance the capacity of the system and make it better correspond to the needs of the clients (unemployed and the employers). The development of services is accompanied by relevant studies in order to ensure that they are targeted to the most critical problems and that they give effective results.

Women's access to and participation in the labour market

The measure will promote the equal opportunities on the labour market by reducing barriers for women in entering or returning to work after a period of absence.

Social Inclusion

For facilitating access to employment of those who are the most excluded from the labour market the active labour market measures must be complemented with other means such as rehabilitation, socialisation and workplace adaptations that are provided either beforehand or simultaneously with labour market services to facilitate a pathway approach to labour market integration. As it is not feasible to have all people employed in the open labour market, it is also necessary to foster alternative ways of working (e.g. sheltered jobs, assisted jobs, activity centres). The pathway approach will be applied in order to help the discouraged persons, including those unregistered in

employment offices through rehabilitation and proper labour market training to find a job. According to identified needs the services supporting inclusion to the labour market will be adapted to the individuals.

While offering services mentioned under previous subheadings the need of providing of adequate accompanying measures including provision of care services and facilities for dependants will be taken into account.

Modernisation of Employment Services

In order to modernise and strengthen the employment services, the staff of employment offices will be trained according to the training needs' assessment to better co-operate with the employers, pay attention to the specific needs of risk groups, advisory skills, including vocational guidance, etc.

The management systems and organisation of work of employment services will also be modernised.

The measure is underlined by the principle of providing individualised and integrated support, promoting joint working among relevant institutions and services (i.e. employment services and municipalities social services), strengthening local partnership.

Therefore training of staff of other services supporting inclusion to the labour market (including rehabilitation) is foreseen as well, the main emphasis being on individual approach and case management.

In implementing the activities of the measure we see NGOs dealing with different risk groups (such as young people, the long-term unemployed, disabled people, elderly people, ethnic minorities and others excluded from the labour market) and provision of services for those excluded or in risk of exclusion as potential applicants. The NGOs can approach the labour market problems the target groups are facing in a more flexible way in terms of local initiatives or very specific problems. The NGOs are involved both in developing the new services together with relevant partners as well in delivering the actual programs. In fact the provision of certain rehabilitation services tackling the exclusion issue is currently in some areas covered only by the non-profit sector. However, the ability of co-financing of these organisations is limited and thus the higher rate of Community contribution would contribute to more successful implementation of Measure 1.3. Otherwise the co-financing difficulties could pose a threat to the implementation of certain parts of the measure.

Indicative Operations

- Retraining and continuing training (including entrepreneurship training) of the unemployed and job seekers declared redundant
- Supporting work capacity and employability of the most excluded from the labour market through rehabilitation and re-socialisation provisions
- Providing labour market related Estonian language training in order to support the integration of persons with insufficient knowledge of Estonian to the labour market
- Employment aid, including creation of subsidised jobs, assisted or sheltered jobs and other transitional employment arrangements
- Aids for self-employment
- Diminishing the barriers for women in entering/returning to the labour market
- Accompanying measures in the provision of services to beneficiaries (e.g. day-care for children or dependent disabled adults and elderly)
- Developing existing labour market measures, adjusting them to regional needs and the individual needs and elaborating and implementing new ones
- Training of staff of employment services and other services supporting inclusion to the labour market
- Modernisation of employment services
- etc.

During implementation of this measure possible overlap regarding the aids for self-employment and the start-up aid for new entrepreneurs provided in measure 2.1 will be excluded via information exchange between the implementing bodies.

Examples of Intended Final Recipients

- Public employment offices
- Local government institutions
- County governments

- Non-governmental organisations
- Training and research institutions
- Private enterprises (including self-employed)
- Labour Market Board
- Ministry of Social Affairs
- Social partners' organisations
- Other legal bodies whose projects' objectives, foreseen results and activities as well as target group are in line with the objectives and activities of the measure

State Aid

January-April 2004: state aid granted under this measure will be compatible with the ***de minimis*** rule.

From May 2004: any aid granted under this measure will be in conformity with the employment, training and SME block exemptions.

3.1.6. MEASURE 1.4: ENHANCING ADMINISTRATIVE CAPACITY (ESF)

Objectives

The general objective of the measure is to enhance administrative capacity of the central government (including county governments), municipalities and associations of municipalities.

Specific objectives are:

- To increase professional skills in the public administration;
- To ensure sustainable and high quality public service training system;
- To improve management quality in the public administration by supporting management capacity building.

Rationale

Achieving the biggest impact with structural funds is to a large extent a matter of professional quality of the civil service. For this programming period, as well as the next one, allocating the structural funds to the highest potential or most needy policy areas and regions requires careful identification of policy issues, consideration of options, good co-ordination between ministries, and well-functioning implementation mechanisms. As numerous strategic decisions concerning the use of structural funds are deliberated by civil servants, identification of potential and opportunities for growth requires strategic vision, sound judgement, and mastering of a wide set of skills.

In the longer perspective, it would be dysfunctional in terms of training and other development activities to prefer those civil servants involved in administering structural funds to the others due to significant mobility within the civil service. Strong co-operation is needed for more joint-up policies and better public service delivery. Therefore, the target group of this measure is the civil service as a whole.

Acquiring wider knowledge and skills in policy formulation and evaluation, planning, general management, human resources management, financial management, electronic records management and other areas are vital for increasing administrative capacity. These are the training subjects that courses will be developed on and delivery of which (including preparation and, in case of need, translation of, training materials) is supported from the measure. The subjects will be prioritised more precisely according to the Annual Civil Service Training Priorities prepared by the State Chancellery and adopted by the Government at the end of each year. Input from other ministries, institutions and associations of municipalities, is appreciated in determining annual training priorities.

In addition, short internships for civil servants in foreign administrations to learn from others experiences will be supported. Conduct of surveys will be funded which help to identify the state of affairs with human resources development within public administration.

A significant share of the measure will be allocated to management capacity building projects for central government organizations. The purpose of such projects is to train civil servants in management tools and systems, which would increase their productivity, make them more adaptable with the constantly increasing requirements within public administration and on the job, and more mobile within the public sector as well as on the labour market as a whole. A prerequisite for approving such projects for funding is that they need to be innovative in a subject matter taught or training approach, and produce significant new knowledge about how to do things more effectively, thus having potential for replication in other public organisations. This knowledge will then, in the form of workshops

and reports, be shared with them. Thus, learning will be elevated to the organisational level, encouraging government organisations to innovate and benchmark themselves against best practices.

In order to assure the sustainability of human resource development activities implemented in the Estonian public administration, strengthening of the Centre for Public Service Training and Development (CPSTD) is foreseen in the measure. The mission of CPSTD is to offer systematic, timely and high-quality public service, training and counselling. From the measure training of CPSTD staff is supported with the aim to reinforce CPSTD's performance as a competency centre assisting State Chancellery and other institutions responsible for developing Estonian public administration in promoting professional public service workforce and raising its productivity. Implementation of the measure will draw on the "CPSTD's Strategic Development Plan for 2003-2005".

Another government training institution, Public Service Academy (PSA), will be supported from the measure. Its vision is to become a competency and development center for internal security and other civil service branches. PSA's main target groups are the public service organisations that request the Academy to provide applied higher education to its students, but its capacity allows it to provide further training to other civil service organisations, particularly at the local government level and to supervising agencies and inspections. Activities are supported which aim to increase the competency of the Academy's personnel.

Indicative Operations

- Conducting training needs assessment and surveys diagnosing issues and problems in public administration related to human resources development;
- Preparing training programmes in accordance to Annual Civil Service Training Priorities;
- Systematic further training of civil servants;
- Short term internships in foreign administrations;
- Preparation and in case of a need translation of materials for training courses;
- Implementing management capacity building projects in public organizations in the form of management training and counseling;
- Training of CPSTD staff;
- Training of PSA staff.

When planning and implementing this measure, particular attention will be given to ensuring synergies and avoiding overlaps with similar operations and projects which have been/are supported by the Community Initiatives and other programmes (such as Transition Facility, "Schengen" Facility, etc.)

Examples of Intended Final Recipients:

- Central government institutions (including county governments)
- Municipalities and their associations
- Centre for Public Service Training and Development
- Public Service Academy

State Aid

No State aid falling under Article 87 (1) of the EC Treaty shall be granted under this measure.

3.2. PRIORITY 2: COMPETITIVENESS OF ENTERPRISES

3.2.1. GENERAL ORIENTATION

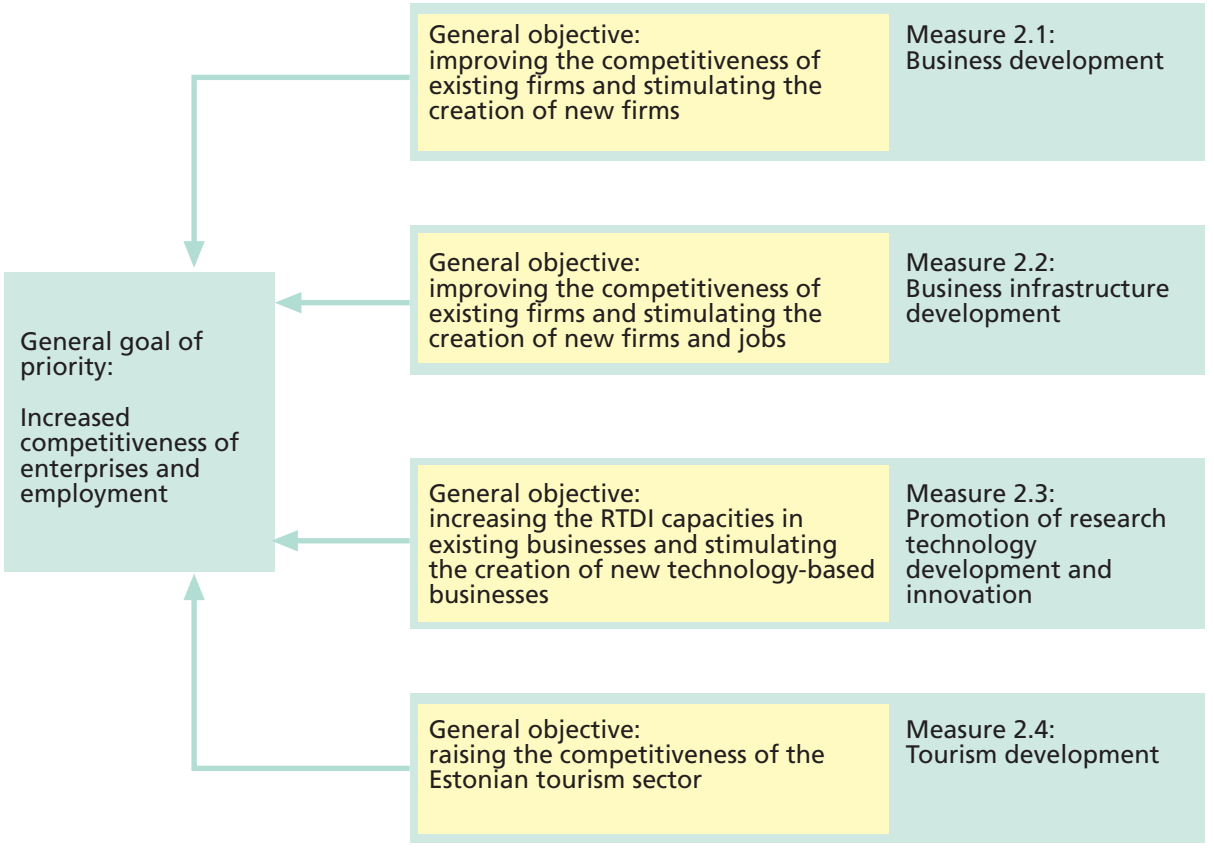
The general objective of the priority is to enhance competitiveness of enterprises and increase employment. The Competitiveness of Enterprises priority is implemented through the following four measures:

- Measure 2.1: Business Development
- Measure 2.2: Business Infrastructure Development
- Measure 2.3: Promotion of Research, Technology Development and Innovation
- Measure 2.4: Tourism Development

The main objectives of the measures and their linkages to the general goal of the priority are presented in Figure 48.

Figure 48

Objectives and measures of the priority Competitiveness of Enterprises



The detailed information about the foreseen budgetary split between measures will be included in the Programme Complement.

3.2.2. MEASURE 2.1: BUSINESS DEVELOPMENT (ERDF)

Objectives

The overall objective of the measure is to strengthen the competitiveness of existing firms and stimulate the formation of new firms. The specific objectives of this measure are to:

- Improve the prospects for the formation, survival and growth of small and medium sized firms by enhancing their access to finance;
- Boost enterprise growth and create additional employment opportunities by developing entrepreneurial expertise and new market opportunities;
- Improve competitiveness of enterprises and quality of products in particular by offering relevant business support services.

Rationale

With the restructuring of the economy, future growth is increasingly dependent on the competitive performance of the SME sector, a function of both the formation and survival of businesses, and a range of factors that impact on the performance of existing firms.

Improvement of Access to Finance for Enterprises in Start-up Phase

As the analysis of businesses shows (see section 1.2.5), while the economy is increasingly dependent on SMEs, the formation rate and number of enterprises per 1,000 inhabitants is substantially below the EU average. There are

wide variations between regions, with formation rates being lowest in those regions with the highest unemployment. Steps are required to stimulate and advise people thinking of setting up their own businesses. A key problem inhibiting people from being able to start their business is lack of finance because of reluctance on the part of banks to lend to enterprises without a track record. These issues have been recognised by the Government and covered in the entrepreneurship policy "Enterprising Estonia – Policies aimed at the development of small and medium sized enterprises of Estonia in 2002-2006" According to it, Enterprise Estonia (EE) has recently introduced a small-scale start-up grant, which needs to be enlarged. Experience up to the present verifies the importance of such grants and the need to expand the scheme. More attention should be paid to informing potential entrepreneurs about the financing schemes available to them and to linking financial support to advisory and training services.

Facilitating use of Consultancy Services

An analysis of business statistics suggests that the total number of small firms (employing 10-49 people) and medium sized firms (employing 50-250) has been falling. This would appear to be because the reduction arising, for example, from the restructuring of former state owned industries is greater than the number of firms expanding into each of these size slots. The performance of these firms is critical to the growth of the economy, yet there is strong anecdotal evidence that the competitiveness of many of the firms of this size is weak. However, enterprise managers are resistant to change, due in part to time pressures and lack of funds. In many instances they lack in-house expertise, but are reluctant to seek outside assistance or hire a consultant. As a result, the market for information, advice and consultancy is not well developed, and there is a shortage of people with the necessary knowledge and experience due to a reluctance of many SMEs to pay the full market rate for these services. In order to meet these problems Enterprise Estonia offers support SMEs to obtain business consultancy services. So far, the volume of subsidies has been relatively limited and mostly aimed at micro-enterprises and those that are just starting out. Both current results and an analysis of the needs of entrepreneurs confirm that a necessity exists for the expansion and improved quality of counselling services. The supported areas of consultancy include business management, export management, quality management, environmental management, use of ITC applications and new technologies, etc.

Supporting Entrance to New Markets

Despite the small size of the Estonian market, there are only 3,500 exporter firms, of which the top 30 account for 50% of export earnings. This is a problem critical for the growth of enterprises. As a common problem, enterprises have no market opportunities for their products in Estonia, or the market is limited, so the only opportunity for development is to export. Nevertheless, according to an export survey only 47% of exporting enterprises have an export plan; this shows there is no acknowledged design behind their export efforts. Exporters are also particularly concentrated in mature, low value-added industries. Thus according to Estonian Export Policies a key objective is to widen the export base and increase exporters' numbers and levels of activity.

Increasing Awareness of, and Access to, Business Support Services

Action needs to be taken to improve the competitiveness and growth of SMEs and increase the number engaged in performance improvement by introducing them to steps that they could take to reach a higher level of achievement. Currently, the awareness and use of public business support services is modest. Therefore entrepreneurs need to be encouraged to engage in business improvement programmes that would improve the quality and range of their products, upgrade their production systems and encourage them to enter new markets.

Enterprise Estonia is set up to strengthen the provision of business support services and rise awareness of the opportunities available. In addition business development centres have been set up in each county to assist entrepreneurs at the county level. Possibilities exist for them to play a more active role, but this will depend on the quality of their services. In order to improve the performance and assist the target groups in a more effective way activities are envisaged to strengthen the business support network and rise awareness of its services.

A field with particular need for action is quality promotion. Enterprise Estonia estimates that there are only 317 enterprises in Estonia who use some form of quality managing systems (less than 10% of exporters). One of the reasons behind of it is the lack of sufficient and adequate quality related information. Therefore it is important to stimulate the use of quality managing systems in companies that would make exporters trust worthier and would increase the added value to the products. Breaking through to foreign markets demands more effort also because of the lack of activities supporting quality infrastructure in Estonia. Thus an objective of this measure is to increase the number of firms engaged in introducing quality management systems. Aiming at improvements in area of quality, the Estonian Centre of Excellence was formed in 2002 under Enterprise Estonia.

Simultaneously with the support schemes implemented within the framework of this measure, the Human Resource Development priority also devises subsidies for continuous and re-training of the workforce.

Indicative Operations

The objectives of the measure will be supported through four main types of action:

Improvement of Access to Finance for Enterprises in Start-up Phase

- Start-up aid for new entrepreneurs to support the formation and survival of new businesses

Facilitating use of Consultancy Services

- Support to obtain the business consultancy services

Supporting Entrance to New Markets

- Assisting enterprises to develop their export plans, provision of necessary research and consultation;
- Support for marketing activities on foreign markets.

Increasing Awareness of, and Access to, Business Support Services

- Development of the network of regional business development centres (networking activities, etc)
- Improving business information and mentoring services (promotion, info line, mentoring, company visits, diagnostic services, portal, etc.)
- Enhancing entrepreneurs' awareness and programme-participation through events, seminars, workshops, company visit programmes, etc.
- Improving and supporting the activities in the area of quality promotion: the contest of Quality Award, developing Estonian Quality Index, creating and supporting the environment enabling benchmarking, recognizing the quality management of organizations, support for the participation in events related to quality
- Facilitating wider use of quality management systems, including environmental management systems such as Ecolabelling and Eco-Management and Audit Scheme (EMAS).

During implementation of this measure possible overlap with the measures 3.3: Diversification of Economic Activities in Rural Areas (EAGGF) and 1.3: Inclusive Labour Market will be excluded via information exchange between the implementing bodies.

Examples of Intended Final Recipients

- Enterprises, especially small and medium-sized enterprises
- Potential entrepreneurs
- Associations of entrepreneurs
- Non-profit organisations involved in business development efforts, including regional business development agencies

State Aid

January-April 2004: state aid granted under this measure will be compatible with the ***de minimis*** rule. From May 2004: any aid granted under this measure will be in conformity with the ***de minimis*** and SME block exemptions.

3.2.3. MEASURE 2.2: BUSINESS INFRASTRUCTURE DEVELOPMENT (ERDF)

Objectives

The overall objective of the measure is to enhance the competitiveness of existing enterprises and facilitate the generation of new enterprises and jobs. Specific objective of the measure is the following:

- improvement of the business environment of existing enterprises by supporting the development of business infrastructure and generating industrial real estate supplied with contemporary infrastructures;
- improvement of the business environment of starting enterprises by supporting the establishment of business incubation facilities.

Rationale

Development of Physical Infrastructure.

Analysis has revealed strong regional disparities in business development. The main development inequalities exist between the capital city and the other parts of Estonia: approximately one half of enterprises are located in Tallinn.

One barrier inhibiting the performance and expansion of SMEs has been the lack of suitable premises – business and production facilities. In some locations there is also a lack of basic services (electricity, water and sewage) and access - roads, railways, etc. – may be poor. As the starting enterprises as well as small companies as a rule lack the finance to build infrastructure they will choose for the locus of operations the region where reasonably priced space can be found and where it is possible to develop business. Private sector developers, particularly in remote areas where unemployment is highest, are generally not addressing these barriers.

These issues have been recognised in "Enterprising Estonia – Policy for Developing Small and Medium Size Enterprises in Estonia 2002-2006". As a result, Enterprise Estonia has recently allocated a limited amount of resources towards a new infrastructure development grant, which has increased huge interest and provided good results and now needs to be enlarged and continued. The support schema is demand driven: Enterprise Estonia co-finances projects initiated at local level and preferably supported both by local governments and entrepreneurs.

The measure also includes a supply-driven instrument. Support is given to the generation of selected industrial areas that contribute to activating regional business development and restructuring industry while diversifying less-developed regions and mono-functional settlements. The first pilot projects, co-financed by Phare, have been implemented in this area. Experience thus gained confirm the need to support the establishment of industrial areas and are seen as the basis for the further development of the support scheme. Environmental aspects of the projects, such as energy efficiency, are taken into account in the selection process.

Support to Establishment of Business Incubators.

Besides the start-up grants and information and counselling services described within the framework of Measure 2.1, new entrepreneurs are provided office or production premises in business incubation areas so as to increase the generation of new enterprises and expansion of existing ones. Business incubators emphasise the provision of know-how and the establishment of co-operation networks, but in some of the regions the lack of suitable premises is still seen as the main barrier. As in the industries, the support for the incubators is based on the experience gained from the pilot projects co-financed by Phare, as well as on the experience of other EU member countries.

Indicative Operations

- development and reconstruction of physical infrastructures necessary for business development, including access to roads and communications and establishment of industrial areas
- support to the generation of business incubators.

During implementation of this measure possible overlaps with Measure 4.6: Local Socio-Economic Development will be excluded via information exchange at the level of implementing bodies.

Examples of Intended Final Recipients

- Enterprises, especially small and medium-sized enterprises
- Potential entrepreneurs
- Associations of entrepreneurs
- Non-profit organisations involved in business development efforts, including regional business development agencies
- Local municipalities

State Aid

Activities described in this measure constitute state aid. State aid schemes will be designed and implemented based on the Guidelines on National Regional Aid (OJ No C 74 10.03.1998, p. 6). The state aid will be notified following the interim procedure agreed in the Accession Treaty.

3.2.4. MEASURE 2.3: PROMOTION OF RESEARCH, TECHNOLOGY DEVELOPMENT AND INNOVATION

Objectives

The overall objective of the promotion of research, technology, development and innovation measures is to increase the RD&I capacities in existing businesses and stimulate the creation and growth of new technology-based businesses.

This objective is in line with both the Estonian Research and Development Strategy (RD&I) for 2002-2006 and with strategic objectives set by the EU to increase the quantity and quality of research activities and the innovation performance in Europe. The Estonian RD&I competence has to be enhanced to be more competitive within the European Research and Innovation Area in order to stimulate knowledge creation in Estonia, knowledge transfer to Estonia and its diffusion into the economy. All activities that are planned to support under the current measure will aim to strengthen the competitiveness of businesses through more intensive RD&I investments, contributing to the overall EU target 3% of GDP by 2010 that has been set in Lisbon strategy.

The specific objectives of the measure are:

- To create a new knowledge and a critical RD&I mass in a number of technological fields vital to existing industry, and to set up new technology-intensive sectors of activity;
- To increase the co-operation between the science and business sectors in applied research of strategic importance for the Estonian economy and to reinforce the capacities of R&D institutions to co-operate with businesses and to manage the innovation process;
- To stimulate an increased involvement of Estonian businesses in funding and undertaking on a regular basis in research and development, technology transfer and development and innovation;
- To establish financially sustainable technology and innovation infrastructures and support services able support Estonian businesses in their innovation activities;
- To generate a wide awareness of innovation as a key driver of economic growth and to strengthen the RD&I capacity and competence of the businesses and R&D institutions.

Rationale

This measure will focus on supporting a number of actions and investment projects to increase the scale, competitiveness and innovative capacity of the country's business base. The economic analysis chapter (see sub-chapter 1.2.6) provides compelling evidence of the need to restructure the economy towards higher technology and greater generation of value added content, as well as to increase productivity, particularly in the manufacturing sector, if it is to compete following the EU accession. The socio-economic analysis underlines relatively low level of financial and human capacity of Estonian businesses to invest in technology and innovation and the weak co-operation between the science and business sector in Estonia.

The measure is aimed at developing of the following activity lines:

Creation of New Knowledge

In the context of the development of the knowledge-based economy for Estonia, supporting on research will provide both relatively immediate and medium-term benefits. In order to create a critical mass and excellence of R&D a limited number of Research Centres of Excellence is supported focusing on the priority fields important to the economic development in Estonia. These centres will contribute to knowledge creation in Estonia through larger more strategic research projects and will attract more international funds (notably EU RTD Framework Programme) and stimulate repatriation and international researchers (see also Annex 7). Graduates trained through research will take their analytical skills into businesses, increasing their performance and R&D capability.

The Research Centres of Excellence and Competence Centre (see also third activity line) programmes together on competitive bases support the existing strong RD&I competencies, concentrating the resources mainly on two so called knowledge centres in Estonia – Tartu and Tallinn. Both types of centres use the existing structures and competencies in creating the critical RD&I mass and in integrating our strengths into international networks and R&D communities. The growth in the number of high potential researchers through the Research Centres of Excellence gives input for Competence Centres to be internationally compatible.

Research Centres of Excellence Programme were opened in 2001 and Competence Centre Programme in 2003. first programme supports RD&I co-operation inside and between the research communities, the latter one RD&I co-operation between research and industry sectors in Estonia (the involvement of foreign partners is stimulated through both programmes).

Financing RTD and Innovation

Financial resources will be made available for both individual (R&D institutions, businesses) and collaborative (with other businesses and R&D institutions) industrial R&D projects and technological programmes for strategic and systematic development of key research areas (as defined in RD&I strategy: ICT, biomedicine, materials´ technologies). Financial support from public sector will initiate similar investments of the private sector and as a positive spillover, it will create partnership between industry and academia.

Strengthening the Innovation System

Under the current activity line the RD&I infrastructure, related innovation support services and strategic co-operation between industry and science sectors will be developed. The target group of the activity line will be R&D institutions, science/technology parks, existing enterprises and technology-intensive start-ups. The development of specific structures and services is expected to lead to a more favorable environment for attracting high-quality researchers, research-intensive inward investment and for the growth of high-technology enterprises.

The RD&I infrastructure (machinery and equipment, buildings, other facilities) in Estonia needs systematic support as a base for internationally competitive RD&I performance. The weak situation of RD&I infrastructure restrains the exploitation of RD&I human resource potential in Estonia. Investments into RD&I infrastructure will be limited to large scale investments projects both in R&D institutions and science/technology parks concentrating the resources on the priority RD&I areas.

The capability building for more intensive technology transfer is needed both among R&D institutions and enterprises. Technology transfer capacity in the R&D institutions is mainly stimulated through Spinno Programme (opened since 2001). Spinno Programme aims to support the creation of entrepreneurial culture in the R&D institutions and higher education institutions, stimulating the development of spin-offs from the universities and more intensive co-operation between industry and science sector. From another side, the technology transfer capability of enterprises will be supported through high-tech incubation services.

More strategic and systematic RD&I co-operation between science and industry sectors has been initiated through Competence Centre Programme (see also first activity line). Competence Centres are R&D collaborations, performed together by scientific and industrial partners receiving public funding for the building of intensive longer-term science-industry links. Competence Centres act as a framework for a number of industry-related R&D projects (with a prime focus on 1-3 year projects). These projects must be based on a mid-term research plan developed by representatives from R&D institutions on the one hand and industry on the other. Competence Centres will contribute directly to increase in the number of R&D specialists with industrial experience, to more intensive personnel mobility between science and industry sectors, to more effective tools for managing innovation process, to additional private R&D funding, etc.

Increasing Awareness and Knowledge about Innovation

Actions to develop the awareness of enterprises about the importance of innovation and their competence to manage technological and organisational innovation and research activities. This is expected to increase the number of enterprises becoming actively involved in undertaking innovation activity and should indirectly increase take-up of support services.

The logical sequence for the implementation of the measure and relations between the objectives, trends, planned support schemes as well as expected results have been more explicitly described in Annex 7.

Indicative Operations

The objectives of the measure will be supported through four main types of action:

- *Creation of new knowledge,* including reinforcing the Research Centres of Excellence in fields important to the development of the business sector;
- *Financing RTD and innovation*, including a support scheme for market oriented R&D projects; advanced technology programmes in key areas;

- *Strengthening the innovation system,* including the development of RD&I infrastructure through support on R&D institutions and science/technology parks; support scheme for technology transfer and high-tech incubation services; Spinno Programme; Competence Centres Programme;
- *Increasing awareness and knowledge about innovation,* including Innovation Awareness Programme.

Examples of Intended Final Recipients

- Enterprises incl. SMEs, large enterprises
- Innovation support organizations
- Universities and research institutions, in particular those research structures designated as Research Centres of Excellence
- Other non-profit organizations such as industrial associations, professional organizations, chambers of commerce

State Aid

The Community Framework on State Aid for Research and Development is largely applicable to the actions foreseen under this measure.

Programme of Estonian Technology Agency "Financing of Industrial Research and Pre-competitive Development Activity Projects" is an existing aid scheme, agreed in the Estonian Accession Treaty (EE/1/2002).

Collaborative Research Program of Technology Agency has been notified through the interim procedure (EE/1/2003).

Support for science/technology parks and incubation services will be the service of general economic interest and does not have the characteristics of state aid.

3.2.5. MEASURE 2.4: TOURISM DEVELOPMENT (ERDF)

Objectives

The overall objective of the measure is to support sustainable economic growth by means of raising the competitiveness of the Estonian tourism sector. Specific objectives are to:

- Increase international awareness of Estonia and its tourism product;
- Diversify and improve the attractiveness and quality of tourism services available in Estonia by developing internationally competitive tourism;
- Make Estonian tourism services easily available in export markets and develop marketing opportunities for tourism products.

Rationale

The immediate share of tourism in GDP is 10% in Estonia. If indirect impacts are considered, this will amount to 15%[49]. The relative share of tourism in employment is approximately the same. In 2001, exports in tourism services amounted to 13.3% of total exports. The average annual rate of increase in tourism earnings over the past four years has been 8.5% per annum.

Although tourism has grown significantly in Estonia over the last decade, there are several constraints which hinder the implementation of Estonia's full potential in this sector of the economy. Estonia's tourism sector is characterized by narrow product range and poor quality, concentration of the majority of tourism activities in Tallinn, large share of short-time visits, a very heavy reliance on the Finnish market and insufficient investments in the tourism infrastructure, particularly outside Tallinn. Estonia is remote from the established European tourism routes and its main product, city tourism, operates in a highly competitive field. Estonia is relatively unknown in countries outside the Baltic and Nordic regions and the country lacks a strong image in tourism terms.

Promoting tourism provides new and alternative opportunities for the development of various Estonian regions. Tourism is an area of economic activity that has been explicitly described in the development strategy of each county. Although tourism has developed rapidly in Estonia, several problems still exist, hindering further realization of Estonia's potential in this economic sector.

In the near future, Estonia's competitiveness in international tourism will become highly dependent on the ability to provide a high-quality tourism commodity. With sustained investment in marketing, product development and tourism infrastructure and with diversification into new markets, Estonia can significantly improve its appeal and earning power in international markets. There is a basic requirement to make prospective tourists aware of Estonia as an attractive destination and to provide comprehensive, reliable information to people considering traveling to Estonia. At the same time, investment is required in infrastructure and product development.

This measure will help to reduce the existing constraints in a coordinated way – marketing and product development activities will be carried out simultaneously, increasing the overall revenues from tourism. Product development will initially focus on investments into tourism services offered by private sector, but public investments into natural, historical and cultural objects of national importance that are owned by central government institutions are also envisaged when they significantly contribute to international tourism attraction.

Product Development and Marketing Support for Enterprises.

Upon development of the infrastructure and products of tourism, support is granted to private sector projects which contribute to the introduction of new special interest products to the market, the development of points of interest and attraction centers with a view to increasing a demand for the existing products and additional services. The projects include: new and improved tourist attractions; improvement of accommodation and catering facilities, creation of additional services to prolong the tourism season, special interest activity holiday products and the development of conference tourism products in Tallinn, Tartu and Pärnu. Support is given to projects which are economically sustainable, have the capacity of follow-up and are not dangerous to the environment.

Marketing support is given to private tourism service providers to carry out marketing activities on international target markets. According to the tourism development strategy, most important target markets for Estonia are: Finland, Sweden, United Kingdom, Germany and Russia.

Central Government Tourist Investment Projects.

While most of the support will be made available for private sector projects, a limited number of large scale public tourism development projects will also be carried out. Central government institutions own (at least partially) major objects of natural and cultural heritage of national importance that can be turned into tourism attractions. Local government projects are not supported under this measure.

Implementation of the Destination Marketing Programme.

Simultaneously with product development and marketing support it is necessary to increase awareness of Estonia as a tourism destination on international target markets based on "Welcome to Estonia" marketing strategy, prepared by Enterprise Estonia.

The eventual impact which Estonian tourism marketing makes on its target markets is a product of the combined effect of the activity of Enterprise Estonia and that of every individual enterprise and organization in the country. In order for the marketing activities of individual companies to be effective, there is a need for raising general awareness on Estonia and promoting the image of Estonia as a friendly and safe EU country. Destination marketing activities can be coordinated with other Baltic Sea countries to market the region as a whole. These types of activities are not carried out by private companies and therefore have to be implemented with public resources.

Providing high quality information to people interested in travelling to Estonia is also important. Further development of current tourism information system as a public service would provide efficient support to (small) enterprises exporting tourism services, while helping to improve competitiveness at the international level. This system enables the potential customer to get information about Estonia – possible tourism routs, attractions, available accommodation and catering facilities, etc.

The measure is implemented in compliance with the National Tourism Development Plan for 2002-2005. Activities under this measure will be closely coordinated with those of measure 4.6 (local government investments).

Indicative Operations

The following tourism-related product development, infrastructure and marketing activities will be supported within the framework of the measure:

- Investments into the development of tourism products in the areas and categories described in the Estonian Tourism Development Plan 2002- 2005, such as:
  - Improvement of accommodation and catering facilities, the creation of additional services to prolong the tourism season;
  - New/Improved tourist attractions;
  - Special interest activity holiday products;
  - Development of conference tourism products in Tallinn, Tartu and Pärnu regions.
- Implementation of marketing activities for enterprises aimed at international target markets (Implemented as a single grant scheme with product development)
- Public investment into central government-owned (potential) tourism attractions;
- Implementation of the Destination Marketing Programme for the Estonian Tourist Board of Enterprise Estonia;

Implementing this measure possible overlaps with Measure 3.3: Diversification of Economic Activities in Rural Areas (EAGGF) will be excluded via information exchange between the implementing bodies.

Examples of Intended Final Recipients

- Enterprises
- Central government institutions owning or managing (potential) tourist attractions

State Aid

Product development and marketing support is a state aid scheme. It will be designed and implemented based on the Guidelines on National Regional Aid (OJ No C 74 10.03.1998, p. 6). It will be notified following the interim procedure agreed in the Accession Treaty.

Marketing support for enterprises will be ***de minimis*** aid.

Central government tourism investment projects will not involve state aid.

Implementation of the Destination Marketing Program will not constitute state aid, as it is a general measure benefiting all enterprises in the economy.

3.3. PRIORITY 3: AGRICULTURE, FISHERIES AND RURAL DEVELOPMENT

3.3.1. GENERAL ORIENTATION

The general objective of the priority is a balanced, sustainable economic and social development in rural areas.

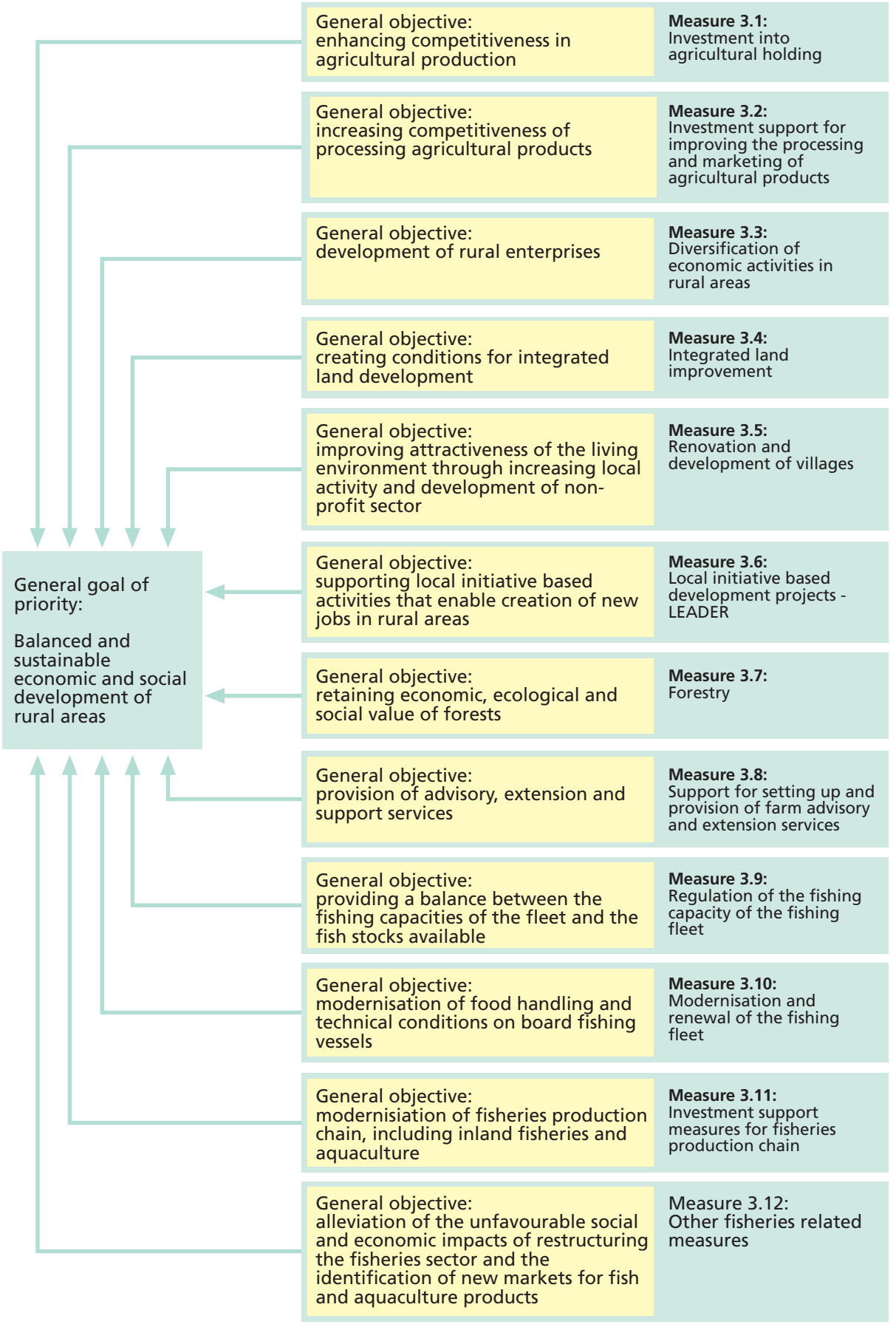
The Agriculture, Fisheries and Rural Development priority will be implemented via the following measures:

- Measure 3.1: Investment into Agricultural Holdings
- Measure 3.2: Investment Support for Improving the Processing and Marketing of Agricultural Products
- Measure 3.3:Diversification of Economic Activities in Rural Areas
- Measure 3.4: Integrated Land Improvement
- Measure 3.5: Renovation and Development of Villages
- Measure 3.6:Local initiative based Development Projects – LEADER
- Measure 3.7: Forestry
- Measure 3.8: Support for Setting up and Provision of Farm Advisory and Extension Services
- Measure 3.9: Regulation of the Fishing Capacity of the Fishing Fleet
- Measure 3.10: Modernisation and Renewal of the Fishing Fleet
- Measure 3.11: Investment support Measures for Fisheries Production Chain
- Measure 3.12: Other Fisheries Related Measures

The main objectives of the measures and their linkages to the general goal of the priority are presented in Figure 49.

Figure 49

Measures and objectives of the Agriculture, Fisheries and Rural Development priority



Article 29 (3) (a) of the Council Regulation (EC) No 1260/1999 states "the Community contribution may rise in exceptional and duly justified cases to a maximum of 80% of the total eligible cost". Proceeding from that Estonia

applies 80% Community contribution rate for Measures 3.5, 3.6, 3.8, 3.9 and 3.12. The exceptional rate is justified by targeting of those measures at rural actors whose economic situation is among the weakest in Estonia. At the same, those measures must be easily accessible as their social value is high but they do not provide short term economic revenues. Particular additional justifications are provided in measure outlines.

The detailed information about the foreseen budgetary split between measures will be included in the Programme Complement.

3.3.2. MEASURE 3.1: INVESTMENT INTO AGRICULTURAL HOLDINGS (EAGGF)

Objectives

The aim of the measure is to increase the competitiveness of agricultural production by promoting technological progress, by developing agriculture matching different requirements, preserving employment in agriculture and traditional cultural landscapes.

The specific objectives of the measure are:

- developing an environmentally sustainable agriculture that meets veterinary standards and the requirements of phytosanitary, animal welfare and hygiene;
- raising the level of technology and improving the quality of products;
- maintaining employment in agriculture;
- sustaining traditional cultural landscapes.

Rationale

Most of the fixed assets held by the agricultural sector in Estonia have depreciated because of the situation on the global agricultural market, limited market regulations and a low level of national support. The need for additional investments into agriculture is also needed for environmentally friendly development. In medium-term perspective, the agricultural sector is not capable of making necessary investments without support.

The measure is aimed at supporting activities that improve the quality of agricultural production, including the living conditions and welfare of livestock and animal breeding, and contribute to the implementation of phytosanitary and environmental requirements. Investments in agricultural holdings contribute to increasing competitiveness of agricultural holdings via quality of agricultural products and environmentally sustainable production. Investments in land improvement systems necessary for reducing the risks introduced to agricultural production by unfavourable water regime, is supported provided that the network that regulates the land improvement system is located within the boundaries of one and the same real estate and does not influence soil water regime of the other real estate land which is located on profit yielding land.

Diversification of farming activities is supported with the purpose of alleviating unemployment in rural areas. For contributing to improve the value added of the agricultural producers, also the investments of the agricultural producers to processing of the agricultural produces covered by Annex I (with the exception of fish products) of the Treaty are supported.

Investments made by agricultural producers involved in organic farming are supported on the same grounds.

Investments to land improvement systems of agricultural land and private forest land are supported within the framework of Measure 3.4: Integrated Land Improvement, where the network that regulates the system is located within the boundaries of several real estate areas or this land improvement system influences soil water regime of another real estate, which is located on profit yielding land.

The current measure is aimed at providing agricultural producers with investment support, pursuant to EU rural development policy (Regulation 1257/1999, articles 4-7 and Regulation 1257/1999, article 33l supplemented by the Treaty of Accession with EU).

The aim of the measure is to support 140 animal production projects, 160 crop production projects, 15 land improvement projects and 15 projects of processing Annex I products.

The scope of the support: support will be provided for building/improving animal places, procurement of machines and equipment for arable farming and on farm processing of Annex I products. The Programme Complement specifies the foreseen split of the support between animal places, equipment and machinery.

Minimum Requirements and Normal Market Outlet

Support for investment shall be granted to agricultural producers:

- the economic viability (defined in the Program Complement) of which can be demonstrated or will be demonstrated after the investment;
- where the agricultural producer possesses adequate occupational skill and competence (defined in the Program Complement);
- which comply with minimum standards regarding the environment, hygiene and animal welfare (defined in the Program Complement) or will comply the minimum standards mentioned above after the investment.

Support shall not be granted for investment, which has as its objective an increase in production for which no normal market outlets in the national level can be found. To this end, any restriction on production or limitations of Community support under the common market organisations is taken into account. The calculation of normal market outlet is based on market study. Information about calculation and delivery of data about normal market outlet is described in the Program Complement.

In the case of milk production support shall be granted to those agricultural producers who have sufficient milk quota needed for production with the fixed assets whose purchase will be supported.

The Ministry of Agriculture of Estonia has right to set limitations to any above mentioned activities in case enough investments to activities have been made or the normal market outlet of any products is in question. This kind of decision will be made by the Monitoring Committee and will be introduced in the national legislation.

The measure is implemented in co-ordination with the following measures: Measure 3.7: Support for Provision of Advisory and Extension services, Measure 3.4: Integrated Land Improvement, and Measure 3.2: Investment Support for Improving Processing and Marketing of Agricultural Products.

Indicative Operations

- Purchasing of milk production machinery and equipment needed for milk production required to take the production activities into conformity with European Union veterinary and hygiene requirements;
- Construction and reconstruction of animal barns and structures: investment support for construction and reconstruction of cattle (incl. dairy cows), pigs and sheep facilities including manure storage and removal facilities required to take the production activities into conformity with European Union environmental and animal welfare requirements and also to improve the competitiveness of animal producers;
- Purchasing of animals registered in herd books for animal breeding required for improving the quality of animal production;
- Purchasing of crop protection, manure spreading and seed propagation technology to take the production activities into conformity with European Union requirements;
- Purchasing of crop cultivation machinery and equipment, dryers and storage facilities of agricultural produces and of greenhouses and technology used in greenhouses aimed at reduction of environmental damages, improving the technology level and quality of production;
- Diversification of agricultural production: investment support for diversification of agricultural production is provided for purchase of certified or controlled plant propagation materials for establishment and expansion orchards and berry plantations (defined in the Program Complement), for purchase of plant propagation materials for establishment and expansion of open-grown ornamental trees and plant plantations, for purchase of machinery and equipment and enclosures and constructions for maintaining plantations and energy scrub cultivation and for purchase of facilities for mushroom cultivation and apiculture;
- Construction, reconstruction and rehabilitation of land improvement systems: investment support for construction, reconstruction and rehabilitation of land improvement system facilities required for drainage, irrigation and double water regime regulation, and service roads of land improvement systems (Investments to land improvement systems of agricultural land are supported within the framework of this measure where the network that regulates the system is located within the boundaries of one and the same real estate and this land improvement system does not influence soil water regime of an other real estate, which is located on profit yielding land);
- Construction, reconstruction and rehabilitation of infrastructure: investment support for construction and reconstruction of electricity supply systems, water supply and sewage (including connection charges or join-

ing a common sewerage network, construction and reconstruction of access roads and waste water cleaning systems);

- Processing of agricultural products by agricultural producers from self produced raw material.

Examples of Intended Final Recipients

Agricultural producers

Contribution Rates of Measure and Limits per Holding

The maximum public sector support in this measure can be up to 50% of total eligible investment, in the less favoured areas (LFA) up to 60% of total eligible investments. If young farmers make investments, the maximum support can be up to 55% and in the LFA areas up to 65% of total eligible investments. In the case of young farmers also Article 3 of Commission Regulation (EC) No 445/2002 will be taken into account.

In the case of investments of crop cultivation the maximum public sector support can be up to 40% of total eligible investment, in the less favoured areas (LFA) up to 50% of total eligible investments. If young farmers make investments, the maximum support can be up to 45% and in the LFA areas up to 55% of total eligible investments.

According to Article 29(4) of Council Regulation (EC) No.1260/1999, the contribution of the Funds in the case of investments in firms may not exceed 35 % of the total eligible costs.

The aid is disbursed in the form of direct grant.

The maximum investment eligible per one agricultural producer may amount to 300,000 EUR per year, but must not exceed 600,000 EUR for one holding under the duration of the programme. The maximum support of investments of crop protection, manure spreading and seed propagation may amount to 100,000 EUR for one holding per year, not exceeding 250,000 EUR for one holding under the duration of the programme. The maximum support of investments of crop cultivation may amount to 150,000 EUR for one holding per year, not exceeding 350,000 EUR for one holding under the duration of the programme. The maximum support of the investments for diversification of agricultural production may amount to 50,000 EUR for one holding per year, not exceeding 100,000 EUR for one holding under the duration of the programme.

Agricultural producers may submit several project annually, presuming the total amounts eligible are not exceeded.

State Aid

This measure will be implemented in compliance with Council regulation (CE) No. 1257/1999 of 17.5.1999.

3.3.3. MEASURE 3.2: INVESTMENT SUPPORT FOR IMPROVING PROCESSING AND MARKETING OF AGRICULTURAL PRODUCTS (EAGGF)

Objectives

The general objective of the measure is to increase the competitiveness of processing agricultural products.

The specific objectives of the measure are:

- Bringing the processing of agricultural production into conformity with new market requirements, finding new markets for agricultural products and improving the functioning of marketing channels;
- Improving processing conditions or increasing efficiency;
- Assuring agricultural producers of an income;
- Improving the quality of agricultural production, more efficient utilisation of by-products;
- Ensuring conformity with environmental and energy conservation requirements;
- Promoting innovative investments

Rationale

The food industry is an important industrial sector in Estonia. The total output of the sector amounts to approximately 3% of the gross domestic product and 5% of total exports, and the sector provides stable employment for approximately 3% of the working people in Estonia. The food industry plays a leading role in procuring and adding value to agricultural production and therefore the viability and development of the sector is highly important to the agriculture, rural development and economy of Estonia.

When improving the competitiveness and efficiency of processing of agricultural products the hygiene, environmental and animal protection requirements that have been enforced in the European Union must be considered. In order to meet the market and consumers' requirements the food industry must become more profitable and flexible by increasing the production of new products with higher added value and quality. As a result income for the primary producers of agricultural products can be secured. The investment must not have as its objective an increase in production of products for which no normal market outlets can be found.

Within the framework of the measures, support is provided for investments aimed at improving the conditions and efficiency of processing agricultural products, meeting environmental requirements, updating farm technologies and product development, and improving the marketing of agricultural products. Investment support, aimed at improving the processing and marketing of organic agricultural products, is also granted within the framework of the measure.

The weight of the investments is on those investments, which are made to comply with environmental and hygienic standards. Investments at the retail level and investments in the processing or marketing of products from third countries shall be excluded from support.

Indicative Operations

In accordance with the EU rural development policy (Regulation (EC) 1257/1999, Articles 25-28), the processors of agricultural products will be granted investment support within the framework of the current measure.

- Processing of milk and dairy products listed in Annex I to the EC Treaty;
- Processing of veal, pork, lamb, beef, game, poultry and rabbit products listed in Annex I to the EC Treaty;
- Processing of cereals (mills) listed in Annex I to the EC Treaty;
- Processing of fruit, vegetables and berries listed in Annex I to the EC Treaty;

Assessing Existence of Normal Market Outlets for the Products Concerned

For the purposes of Article 26(3) of Council Regulation (EC) No.1257/1999, the evidence of existence of normal market outlets has to be given. To this end, any restriction on production or limitations of Community support under the common market organisations is taken into account. The calculation of normal market outlet is based on market study. Information about calculation and delivery of data about normal market outlet is described in the Programme Complement.

Financial Contributions by the Funds

The total amount of support, expressed as a percentage of the volume of eligible investment, is limited to a maximum of 50%. According to Article 29(4) of Council Regulation (EC) No.1260/1999, the contribution of the Funds in the case of investments in firms may not exceed 35 % of the total eligible costs.

Examples of Intended Final Recipients

Processors of agricultural products

The details for assessing the economic viability and compliance with minimum standards of processors of agricultural products regarding the environment, hygiene and animal welfare are provided in the Programme Complement, including the reference to relevant legislation.

Legislation

Details of legislation regulating this measure are given in the Programme Complement.

State Aid

This measure will be implemented in compliance with Council regulation (CE) No. 1257/1999 of 17.5.1999

3.3.4. MEASURE 3.3: DIVERSIFICATION OF ECONOMIC ACTIVITIES IN RURAL AREAS (EAGGF)

Objectives

The general objective of the measure is increased employment and higher income levels in rural areas through the development of rural enterprises.

The specific objectives are:

- Supporting activities in non-agricultural small enterprises in rural areas;
- Developing small enterprises that use local resources/materials or offer services in rural areas.

Rationale

Because of changes that took place after the regaining of independence, the number of jobs in rural areas has decreased. The number of jobs in agricultural sector continues to decrease. Many young and enterprising people leave rural areas, and many of those remaining home are unemployed.

In 2000 the share of discouraged workers in rural areas was 2.5 times higher than in towns. Contrast between town and rural area is also characterized by net income of household, which is 19 % smaller in rural areas compared with towns. Lower income level and extensive social impacts caused by the re-structuring of agriculture have caused the decline in diversity of basic services offered and consequently rural areas have limited access to the broad span of services which their counterparts in urban areas often take for granted

The main measure for halting the decline in living standards and for increasing income in rural areas is to create non-agricultural jobs in rural areas, including diversification of agricultural enterprises. The main obstacle in starting and expanding non-agricultural enterprises is the lack of capital. National co-financing of investments therefore supports the diversification of economic activities including rural tourism and craft activities. Support is provided pursuant to the Council Regulation No 1257, Article 33, indents 5, 7 and 10, to those entrepreneurs in rural areas that create or maintain jobs in rural areas.

Support is given to small enterprises that use local raw materials or offer services.

This measure will supplement to the business development measure (Measure 2.1) where support is enabled to those who start with enterpreneurship and tourism development measure (Measure 2.4), where support is enabled to projects that increase a demand for products with export potential of tourism enterprises and regions on international target markets.

Indicative Operations

- provision of services for the economy and inhabitants of rural areas;
- diversification of agricultural activities and activities close to agriculture;
- promotion of tourism and handicrafts

During implementation of this measure possible overlap with Measure 2.1: Business Development (ERDF) and Measure 2.4: Tourism Development (ERDF) will be excluded via information exchange between the implementing bodies.

Examples of Intended Final Recipients

- Agricultural producers, who start non-agricultural activities in rural areas
- Entrepreneurs diversifying or expanding activities

State Aid

Investment support for diversification and development of economic activities in rural areas is a state aid scheme. It will be notified following the interim procedure agreed in the Accession Treaty.

3.3.5. MEASURE 3.4: INTEGRATED LAND IMPROVEMENT

Objectives

The general objective of the measure is to create conditions for integrated land development.

The specific objectives of the measure are:

- to reduce the risks introduced to agricultural production by unfavourable water regime;
- to increase forest productivity;
- to create conditions for better use of land;
- to safeguard the good state of surface water within the land improvement systems;
- to secure access to arable land.

Rationale

Of the 1,12 million ha of arable land in Estonia, 640,000 ha are drained. 70 % of the land improvement systems in use today have been built before year 1970. Land improvement systems depreciate in 25- 30 years. Because of that land improvement systems require repair works now to avoid total collapse of the systems that in turn would damage the natural environment. Decline in agricultural production and scarcity of investments in the sector, disfavouring large-scale land improvement works, reduces the share of land with good and satisfactory drainage by approximately 3-4% a year.

Concerning agricultural land, there is a situation arising where in unmaintained areas well-drained arable land can disappear in 6-10 years and all of the drained land can fall out of agricultural use in 25-30 years. About 500,000 ha of the forest growing on former farmland (approximately 1.2 million ha) is suffering from excess moisture.

Land improvement systems are mainly 100-300 ha in size and generally located across the land of several owners. Fragmented land tenure and scarcity of financial means of landowners make it difficult to organise reconstruction and rehabilitation of the existing land improvement systems. Maintenance of recipients independently by individual landowners tends to prove impossible both practically and technically in the majority of cases. It is reasonable to jointly carry out reconstruction and rehabilitation of the land improvement systems in the land of several owners, with non-profit land and water associations being one of the organisational forms for that.

In low-density areas construction and reconstruction of access roads to used fields is required. The road construction for access to agricultural land is not a net profit generating investment into infrastructure, but rather a primary need to put profit-yielding land into use and to start producing. For maintenance of land improvement systems it is necessary to construct or improve the relevant service roads.

Investments in land improvement systems in agricultural land are supported under the measure "Investments in Agricultural Production", provided the network regulating the land improvement systems is located on one real property and this land improvement system in the land or being built there has not impact on the water regime of the soil of the profit yielding land on another real property or of the land of residential lots with the intended purpose of residential land, used for agricultural purposes

Within the framework of the measure, entrepreneurs pursuing business activities in rural area or non-profit organisation shall be eligible for respective grants for land improvement and development of rural infrastructure pursuant to Article 33 of Regulation 1257/1999.

Indicative Operations

- construction, reconstruction and rehabilitation of land improvement systems (including service roads of land improvement systems) in arable and private forest land (indent 1 of art 33)
- road construction and reconstruction for access to agricultural land (indent 9 of art 33)

Examples of Intended Final Recipients

- Agricultural producers and their associations;
- Private forest owners and their associations.

State Aid

This measure will be implemented in compliance with Council regulation (CE) No. 1257/1999 of 17.5.1999

3.3.6. MEASURE 3.5: RENOVATION AND DEVELOPMENT OF VILLAGES (EAGGF)

Objectives

The general objective of the measure is improved attractiveness of living environments by increasing local activity and developing a non-profit sector.

The specific objectives are:

- Encouraging local initiative and intent to co-operate, thus strengthening social relations;
- Developing social infrastructure;
- Conserving natural and architectural village heritages and improving the outlook of settlements;

- Improving the availability of different services for village populations.

Rationale

Reorganisation of rural economy during the transition period has severely impaired the options for earning income and living conditions in rural areas. The unemployment and inactivity levels are relatively high in the countryside, the income levels are low, and poverty, exclusion and social apathy have become a considerable problem in several areas. Several local services are no longer easily accessible. Contemporary information technology services, which make life easier, decrease transport requirements and improve employment opportunities, are not accessible for many people. Young and more active people tend to leave the rural areas even if they have a job, as social and physical living environments are not attractive. Unfavourable surroundings prevent the development of rural tourism and discourage new inhabitants to settle in the villages. At the same time the voluntary co-operation of the inhabitants, aimed at improving social relations and the appearance of villages, is hindered due to lack of financial resources. The problem is very serious in outlying areas with limited population.

The village development measure favours a systematic approach to local development activities and supports activities that focus on the development of community infrastructures in villages. Community infrastructures refer to community buildings and other objects that present chances for co-operation in the organising of social events among the population. Such infrastructures also provide access to information and improve the appearance of villages as well as the general quality of the living environment. Therefore, the measure supplements other EU Structural Fund measures aimed at rural development, improving the sustainability and viability of villages.

The current measure is implemented pursuant to the provisions prescribed by Article 33, 6th indent of Regulation No 1257/1999.

Activities are co-ordinated with Measure 4.6: Local Socio-Economic Development – developing the local physical living environment, adding value to the urban and rural environment and strengthening development potential.

This measure helps to alleviate the rural development problems by improving the exterior of the rural areas and enhancing the general quality of the living environment.

Taking account that rural development is a priority for EU and basing on above named reasons, the EU co-financing rate will be up to 80%.

Indicative Operations

Within the framework of the measure, investment support is provided to the following social infrastructure-related activities, which develop the living environment of villages and which are of a type that normally would not be expected to generate substantial net revenue:

- Construction, reconstruction and furnishing of buildings intended for public use and related to joint activities of the village population, development of village culture and maintenance of natural and historical values; public information centres with Internet connections;
- Promotion and implementation of village development plans;
- Development and maintenance of village culture and cultural traditions.

Implementing this measure possible overlaps with Measure 4.6: Local Socio-Economic Development (ERDF) will be excluded via information exchange between implementing bodies.

Examples of Intended Final Recipients

- NGOs
- entrepreneurs

State Aid

Investment support for renovation and development of villages is a state aid scheme. It will be notified following the interim procedure agreed in the Accession Treaty.

3.3.7. MEASURE 3.6: LOCAL INITIATIVE BASED DEVELOPMENT PROJECTS – LEADER (EAGGF)

Objectives

The general objective of the measure is to support local initiative based activities that enable creation of new jobs, additional incomes and general economic activities in rural areas.

The specific objectives are:

- Developing the institutional framework and skills base necessary for implementing projects that use internal development potential in rural areas and are targeted for community development;
- Building a model for local development in the form of the functioning local action groups representing partners important on the local level;
- Funding pilot projects devised by local action groups and aimed at maintaining the interest of local population in the measure, and demonstrating the opportunities for the implementation of local initiative projects like LEADER and related impacts;
- Promoting co-operation and exchange of information and experience.

Rationale

Several support programs that are being implemented on the sectoral principle fail to consider the specific needs and features of different regions in rural areas.

In addition to sectoral measures, EU rural areas implement the community initiative LEADER+. LEADER+ contributes to the creativity, initiative and willingness of local people to co-operate, which manifest itself through local initiative groups. LEADER+ is used for local development strategies and for providing the financing needed to implement them. Internal and international co-operation and exchange of information between rural areas are essential components of LEADER+.

In the current programming period, LEADER-type of rural development measures are integrated into the Single Programming Document. Implementation of the measure through a limited number of regional pilot projects over the current programming period will create sufficient experience and capacity that will provide the required support for the implementation of LEADER programmes/measures during the next programming period (2007-2013).

The present measure will be implemented pursuant to the provisions prescribed by Article 20 of Regulation No 1260/1999 and the guidelines that have been issued based on it, and also on article 33f) of Regulation No 1257/1999 (as introduced by the Treaty of Accession).

In Estonia, some areas have experience in applying bottom-up integrated strategies and the partnership principle.

In framework of The Rural Partnerships Program (RPP), there are established three partnerships in South-Eastern Estonia (in 3 counties – Põlva, Valga and Võru), which are functioning on same principles as Local Action Groups.

The central core of the project lies in the Area-Based Partnership. The function of Area-Based Partnership is to prepare and implement an Area-Based Strategy. Each Area-Based Partnership will manage the allocation of a small Global Grant intended for demonstration of the impact of small but strategically focused actions. The Partnership will invite proposals from communities in the target areas. Following appraisal of the proposals, the Partnership will decide whether to allocate financial support. It will continue to monitor the implementation of projects and their contribution to the aims of the Area-Based Strategy over the period of the project.

The Rural Partnerships Program (for Sustainable Rural Livelihoods) is a three year project financed by the UK Department for International Development in Estonia, Latvia and Lithuania. The Rural Partnerships Program started in September 2000 and will end in December 2003. South-Eastern-Estonia has gained by the project substantial experience of developing locally based development and social inclusion strategies through the medium of partnerships.

The Kodukant Movement of Estonian Villages and Small Towns is an association of nongovernmental organisations, which unites volunteers and community-based organizations interested in the development of rural life in Estonia. The mission of Kodukant Movement is to support the survival, revival and harmonic development of Estonian rural life and villages, including support to rural economy, national culture, and the bringing together of village movements.

Kodukant was the initiator in "The local Initiatives Program", a national fund for rural initiatives. One of the main activities of Kodukant Movement is the Rural Parliament.

The Rural Parliament is a forum which brings village members together as well as representatives from local and international organizations, authorities and decision makers, representatives from the government, county administrations, communities and institutions to discuss and seek solutions to issues affecting rural development.

In 2002 Kodukant have started a project 'E-Villages'. The aim of the project is to prepare villages throughout Estonia for the implementation of SAPARD's sixth measure: 'Regeneration and development of villages', by training village leaders in the writing of village development plans, a prerequisite for funding. In providing training, E-Villages also aims to increase the knowledge and skill-level of village leaders, as well as improve the overall quality of life in villages.

Reorganisation of rural economy during the transition period has severely impaired the options for earning income and living conditions in rural areas. The unemployment and inactivity levels are relatively high, the income levels are low, and poverty, exclusion and social apathy have become a considerable problem in several areas.

This measure helps to alleviate the problems by improving the exterior of the rural areas and enhancing the general quality of the living environment

Bringing to attention that this measure is aimed for resolving problems in regional and social level with regard to human resources and employment, which are also mentioned in Article 29 of Regulation No 1260/1999, EU support rate will be up to 80%.

Indicative Operations

Both possibilities of article 33 (f) will be implemented within this measure: acquisition of skills and adoption of integrated territorial rural development strategies.

Option 1 - acquisition of skills

- Establishment and development of local initiative groups (information activities, training of the population, technical support for building the partnership, etc.);
- Development of local territorial integrated development strategies (technical support for studies, territory diagnosis, drawing of integrated development strategies, preparation of applications for support, etc.).
- Internal and international co-operation between different operators in rural areas (transfer of knowledge).

There will be an institution responsible for coordination of these activities. For selection of the coordinating institution, there will be an open call for tender in 2nd half of 2004. More detailed list of the time schedule, responsibilities of institution etc will be included in Terms of Reference for tender.

Option 2 - the adoption of integrated territorial rural development strategies:

- Implementation of local territorial integrated development strategies;
- Internal and international co-operation between different rural areas and participation in trans-European rural development networks.

Public contribution will be divided between two options as follows:

- Option 1 - acquisition of skills – 70%
- Option 2 - the adoption of integrated territorial rural development strategies – up to 30% of the funds allocated for the measure. After it has been selected as a local action group, it may use up to 15% of total public contribution for its own administrative expenses.

Selection Criteria of the Local Action Groups Implementing the Local Territorial Integrated Development Strategies

The implementation of up to 3 territorial integrated strategies will be supported under this measure. For the implementation of the territorial strategies, the selection procedure of the local action groups will be carried out in two rounds. Firstly, there will be the eligibility check of the LAGs, and secondly the selection process by ranking of the applications. The selection procedure will be carried out in the first half of 2005 by the Ministry of Agriculture or by the body designated by them.

Eligibility Criteria

- The territory must coincide with the boundaries of the local municipalities
- One municipality can belong only to one LAG;
- Population of area must number between 10,000 and 100,000, however properly justified exceptions may be accepted;
- Territory of partnership must be homogeneous unit in physical (geographical), economic and social terms;
- LAG must be operating as a legal person;
- Local action groups must consist of a balanced and representative selection of partners drawn from the different socioeconomic sectors in the territory concerned. At the decision-making level the economic and social partners and associations must make up at least 50 % of the local partnership;
- Integrated development strategy must be concentrated on specific strategic themes (the use of new know-how and new technologies to make the products and services of rural areas more competitive; improving the quality of life in rural areas; adding value to local products, in particular by facilitating access to markets for small production units via collective actions; making the best use of natural and cultural resources, including enhancing the value of sites of Community interest selected under NATURA, which must be coherent with the territory, particularly in socio-economic terms.

Selection Criteria

Each eligible development plan will be assessed according to the following criteria, to determine the ranking. The weight of each criterion will be set in the national legislation.

- The experience in managing the programs using LEADER approach;
- Rural development of the area;
- Partnership principle in LAG;
- Economic viability of the strategy;
- Sustainability of the strategy;
- Innovative nature of the strategy;
- Elements of international and inter-regional cooperation;
- Internal coherence of the strategy;
- Transferability of the strategy;
- Integrated approach in the strategy;
- Complementary with other programs;
- The use of the development potential of the local area.
- The strategies have to concentrate on one or two priority themes. The possible fields of intervention can be Priority theme;

The list of Codification is included to the program complement.

Examples of Intended Final Recipients

- Local Activity Groups (NGOs)
- Institutions responsible for implementation of the measure

State Aid

Any state aid granted under this measure will be compatible with ***deminimis*** rule.

3.3.8. MEASURE 3.7: FORESTRY (EAGGF)

Objectives

The overall objectives are to retain the economic, ecological and social values of forests, contribute to administrative functions in rural areas and help to safeguard jobs in rural areas.

The specific objectives of the measure are:

- Sustainable forest management and its development;
- Preserving forest resources and improving their condition;
- Investments to increase the economic, ecological and social value of forests;
- Establishing new opportunities for using and marketing products of forest origin, and investments aimed at improving efficiency in the processing and marketing of forest management products;
- Establishing associations of forest owners for more sustainable and efficient forest management;
- Restoring forest management potential lost as a result of natural disasters and forest fires and applying necessary preventive measures

Rationale

In the framework of land restitution to legal successors and privatization, almost 32% of forestland has gone back into private ownership (~ 700,000 ha). The major share of private forests in Estonia consists of the forests of former Soviet collective farms and arable lands covered with forests, where the replanting of woodlands and the forest management has failed to meet satisfactory requirements. Estonian forests belong to the boreal zone, which is an ecological system of conifers and mixtures of conifers and broadleaf trees. In Estonia, broadleaf trees usually cover such areas after regeneration cutting. At present, private forests have not been restocked with conifers, therefore the relative share of broadleaf trees, which are of restricted economic value, is relatively high (almost 20% of the total forestland area). One of the main options for restocking woodlands is to increase the share of conifers by preparing the soil and putting in forest plantations. For obtaining high-quality stands of forest, it is highly important to make cuttings that are not aimed at generating immediate revenues. The objective of restoring forests dominated by conifers is to retain the level of evergreens (spruce, pine) in the ecological system, contribute to increased employment and improved profitability in the forestry sector, add diversity to the landscape and obtain high quality timber.

At the same time the financial possibilities of private forest owners for improving forest management are limited and investments into forests involve relatively long payback periods. Much of the equipment used by both forest managers and timber processing companies is outdated. Since many forest owners hold only small areas of forest, it would not be profitable for them to acquire new and often expensive technology on their own, while co-operation in forest management has not yet attained adequate levels.

Poor forest management in private forests is one of the reasons why forest productivity and its capacity to fulfil the economic, ecological and social tasks important for society are not used enough.

Within the framework of the current measure, forest owners are granted investment support for improving the economic, ecological and social values of forests, pursuant to the provisions prescribed by Articles 29 – 30 (indents 2, 3, 4, 5, 6) of Regulation No 1257/1999. Support will contribute to the fulfilment of the Community's and member states' international commitments and is based on Estonian Forest Development Plan until year 2010.

The measure is implemented in co-ordination with the following measures: Measure 3.4: Integrated Land Improvement, Measure 3.7: Support for Provision of Advisory and Extension Services, and Measure 3.3: Diversification of Economic Activities in Rural Areas.

In the programming period 2004-2006 no forest fire prevention measures are planned to be co-financed.

Indicative Operations

Investment support is provided for activities serving the following purposes:

- restocking of woodlands damaged by natural disasters and fire, including the preparation of soil with the purpose of contributing to natural regeneration and purchase of plants (art 30 6th indent);
- restocking of woodlands and tending of young stands to encourage ecological diversity of species and to add value to the remaining trees (art 30 2nd indent);
- Purchase of forest management and timber processing (prior to industrial processing) equipment and forest plant protection products (excl. chemicals) (art 30 2nd and 3rd indent);
- establishing associations of forest owners (art 30 5th indent);
- Development projects that create new opportunities for using forest products and investments into improving and rationalising the processing of forest products (prior to industrial processing) (art 30 3rd and 4th indent);

Examples of Intended Final Recipients

- Private forest owners
- Associations of private forest owners

State Aid

Any state aid granted under this measure will be compatible with the deminimis rule.

3.3.9. MEASURE 3.8: SUPPORT FOR *SETTING UP AND PROVISION OF FARM* ADVISORY AND EXTENSION SERVICES (EAGGF)

Objectives

The overall objective of the measure is the provision of advisory, extension and support services.

Rationale

The development and specialisation of agriculture and the sustainable development of the forests demands general, technical and economic training for people engaged in agriculture, rural business and forestry, first and foremost in connection with the new orientations of management, production and marketing. Because of the new requirements, the need for qualified labour will increase in rural areas, establishing additional requirements for the provision of advisory, extension and support services.

Frequently, the main problems encountered by agricultural producers, forest owners and entrepreneurs in rural areas are related to the lack of management and administration skills and limited access to financial resources. The measure provides with the assistance to agricultural producers, forest owners and entrepreneurs who are applying for investment and other forms of support and devising business plans which will make the necessary finances more available. The measure will also contribute to the development of production that complies with the Good Farming Practice, thus providing the prerequisites for maintaining a stable environmental status.

Taking into account the changes in agriculture, forestry and education, and the requirements resulting from these changes, this measure helps to improve the level of knowledge and skills of agricultural producers and forest owners as well as agricultural advisers/consultants and enhances their competitiveness under conditions set out by the EU.

The current measure is implemented pursuant to the 3rd indent of Article 33 of Regulation 1257/1999 and Article 33g of Accession Treaty.

Article 29.3.a of Regulation 1260/1999 states "the Community contribution may rise in exceptional and duly justified cases to a maximum of 80% of the total eligible cost".

The main goal of Measure 3.8 is not higher effectiveness of agricultural production or larger investments. Its impact is more or less "social", by improving the level of knowledge and skills of agricultural producers and thereby contributing to overall development of rural areas.

Measure 3.8 contributes to the successful implementation of other rural development and agriculture-related measures such as Measure 3.1: Investment into Agricultural Holdings, Measure 3.3: Diversification of Economic Activities in Rural Areas and Measure 3.4: Integrated Land Improvement. By giving them overall knowledge about different EU support schemes and applying for investments, it helps to improve the competence of agricultural producers.

Measure 3.8 is also important in light of the enforcement of the European Common Agricultural Policy (CAP) and requirements arising from these changes. These requirements are compulsory for agricultural producers, which means that they need to be informed about these requirements. To make this information more accessible (i.e. lower co-financing rates for activities concerning CAP and CAP-requirements) additional expenses will be needed.

Therefore the Community co-financing rate will be up to 80%.

Indicative Operations

- Setting up farm advisory, relief and management services

- Provision of farm advisory and extension services

Examples of Intended Final Recipients

Public and private entities providing related services in the sphere of advisory, extension and support services

State Aid

This measure will be implemented in compliance with Council regulation (CE) No. 1257/1999 of 17.5.1999.

3.3.10. MEASURE 3.9: REGULATION OF THE FISHING CAPACITY OF THE FISHING FLEET (FIFG)

Objectives

The general objective of the measure is to provide a balance between the fishing capacities of the fleet and the fish stocks available.

The specific objective of the measure is reducing fishing capacity of the fishing fleet to ensure balance between the natural reproduction of fish stock and the use of it.

Rationale

The natural reproduction capacity of fish populations has to be preserved. To maintain the competitiveness of the fisheries sector, it is necessary to achieve a balance between the natural reproduction of fish and the use of fish resource. The intensive use of fish stock depends, above all, on the existing fishing capacity. The measure contributes to achieving an optimal fishing management and preserves the stability of fish resources.

Sustainable balance between the fishing capacity and the available resources is a key element of the Common Fisheries Policy and its reform. An increase of the FIFG contribution to 80% for this measure would be an incentive to accelerate adjustment of the Estonian fishing fleet and would therefore contribute to sustainable utilization of the fishery resources.

Indicative Operations

- compensation resulting from permanent cessation of fishing vessels' fishing activities
- compensation on permanent reassignment of fishing vessels for non-profitable purposes, including using the vessels for training, research, cultural heritage, tourism.

Examples of Intended Final Recipients

Entrepreneurs

State Aid

State aid schemes concerning actions financed under FIFG within this programme are governed by the provisions of Art. 19(2) of Council Regulation (EC) No 2792/1999 as amended by Council Regulation (EC) No 2369/2002 of 20 December 2002.

3.3.11. MEASURE 3.10: MODERNISATION AND RENEWAL OF THE FISHING FLEET (FIFG)

Objectives

The general objective of the measure is to modernise food handling and technical conditions on board fishing vessels.

The specific objectives of the measure are: Improving technical conditions of fishing vessels, fish processing conditions, working conditions and occupational safety; promoting the introduction of selective fishing techniques.

Rationale

The fishing fleets consist mostly of old fishing vessels of Soviet origin, built in the 1970-80s of extremely low quality steel and provided with extremely unreliable engines. In order to optimise the costs of fishing and improve the quality of fishing, the fishing vessels of Estonia need to be modernised with more contemporary and selective catching

technologies. The measure facilitates investments into modernising the vessels, implementing selective catching technologies and improving working conditions and the occupational safety of fishermen working on the vessels. This renewal of the fishing fleet will not increase the fishing capacity. This will be ensured by the exit-entry schemes of the fishing fleet register.

Indicative Operations

- modernisation and renewal of fishing fleet
- rationalisation of fishing operations, especially for applying more selective fishing technologies and methods on vessels;
- improving the quality of fish caught and preserved on board vessels, applying better catching and preserving methods and implementing legal and regulating norms;
- improving working and occupational safety conditions;

Examples of Intended Final Recipients

Entrepreneurs

State Aid

State aid schemes concerning actions financed under FIFG within this programme are governed by the provisions of Art. 19(2) of Council Regulation (EC) No 2792/1999 as amended by Council Regulation (EC) No 2369/2002 of 20 December 2002.

3.3.12. MEASURE 3.11: INVESTMENT SUPPORT MEASURES FOR FISHERIES PRODUCTION CHAIN (FIFG)

Objectives

The general objectives of the measure is to develop and modernise fish and aquaculture processing, development and modernisation of aquaculture, to improve conditions for the reception of the fish in the ports and fish landing sites, to facilitate investments in inland fisheries.

The specific objectives of the measure are:

- improving processing conditions of fish and aquaculture products, applying contemporary technologies, stimulating product development, reducing environmental pollution load caused by processing;
- modernisation of the production facilities of aquaculture, improving of the quality of the aquaculture production to meet the requirements of processing industry, decreasing the pollution load on the environment caused by aquaculture, increasing of the production output volumes of aquaculture;
- improving conditions of hygiene and working environment in fish landing and handling facilities, improving the services provided for fishing vessels in the ports;
- supporting the renewal and modernisation of inland fishing vessels.

Rationale

This measure will be divided into several submeasures in the Programme Complement.

3.11.1 Investment Support for Processing of Fish and Aquaculture Products

The fish industry that uses both domestic and imported fish as a raw material, plays an important role in the Estonian food industry (in 2000, 15% of the total output and approximately 40% of the total food exports). As a result of privatisation, the owners of the fish processing facilities acquired out-dated production equipment. Little attention has been paid recently to product development. The current measure will increase investments made into the modernisation of the fish processing industries and the implementation of new technology. As a result, the quality of fish products and their conformity with food safety standards is expected to improve considerably.

3.11.2 Investment Support for Aquaculture

The production volumes of the fisheries sector can be, above all, increased in fish hatcheries by applying contemporary fish breeding technologies – for example, fish breeding on sea in net cages – and establishing new

fish hatcheries that meet contemporary requirements and reconstructing the existing hatcheries. Major share of favourable natural opportunities for establishing or extending fish hatcheries or increasing the production intensity in existing fish and crayfish hatcheries have not been used mainly due to the lack of capital, insufficient awareness of new technologies and limited production volumes. The measure facilitates the modernization of fish breeding technologies, implementation of more efficient water utilization at fish hatcheries while supporting the creation of alternative employment in fisheries sector.

3.11.3 Modernisation of Fishing Ports.

The equipment and infrastructures of fishing ports are out-dated and fail to meet the contemporary requirements. Pursuant to the food safety requirements the ports must be brought into conformity with the sanitary requirements for handling of fish. The measure will support investments that are of collective interest for the fishermen using the ports and will promote the general development of ports while improving the quality of services provided to the fishermen in the ports.

3.11.4 Investment support for inland fisheries

Inland fishery is an important sector in rural areas and a traditional way of living on coasts of inland waters. It supplies the processing industry with valuable raw material and the fish products made from freshwater fish have good markets in the world. The measure helps to improve the quality of fish, the working and safety conditions in inland fishing vessels and to rationalise the fishing operations.

Indicative Operations

- Construction or reconstruction of production facilities (incl. storage and freezing facilities);
- Purchase and reconstruction of machinery, equipment, furnishing and technological production lines (including waste treatment equipment, water supply systems, energy supply systems and packaging lines employing environment-friendly technologies, fork lifters, vehicles with cooler/refrigerator units, etc) necessary for bringing the production of fish products into conformity with the respective standards;
- Implementation of new quality control systems;
- Development of new products;
- Securing of the implementation of environmental requirements, decreasing the pollution to environment, waste treatment, waste elimination, production that meets energy conservation requirements and better utilization of by-products;
- Establishment and reconstruction of crayfish and fish ponds, net cages and related equipment;
- Purchase of new machinery and equipment, including the purchase of integrated information technology (computer hard- and software);
- Construction and reconstruction of hatcheries;
- Assessment of environmental impact;
- Improving the conditions for landing, handling and storage of the fish and fishery products;
- Supporting the activities carried out by the fishing vessels (in particular to installations and equipment intended for supply of fuel, ice and water, repair and maintenance of the vessels);
- Improving the conditions of the gangways of the ports with the purpose of improving the food safety during landing and storage;
- Improving working conditions and safety on inland fishing vessels;
- Renewal and modernisation of inland fishing vessels.

Examples of Intended Final Recipients

- Entrepreneurs
- Public administration

State Aid

State aid schemes concerning actions financed under FIFG within this programme are governed by the provisions of Art. 19(2) of Council Regulation (EC) No 2792/1999 as amended by Council Regulation (EC) No 2369/2002 of 20 December 2002.

3.3.13. MEASURE 3.12: OTHER FISHERIES RELATED MEASURES (FIFG)

Objectives

The general objectives of the measures are to alleviate the unfavourable social and economic impacts of restructuring the fisheries sector and the identification of new markets for fish and aquaculture products.

The specific objectives of the measures are:

- To alleviate socio-economic difficulties resulting from restructuring of fisheries
- To promote the consumption of fish products as well as new products and to identify new markets.

Rationale

This measure will be divided into submeasures in the Programme Complement.

3.12.1 Social Measures Accompanying the Restructuring of the Fisheries Sector

The restructuring of fisheries will result in decreased employment of the sector. To stop the ageing of the labour force active in the sector, it is necessary to support young fishermen. This measure helps to alleviate the unfavourable social and economic impacts caused by restructuring fisheries.

3.12.2 Promotion of New Market Outlets

After the association with the European Union, free trade agreements that have been holding back the Estonian fishing industry will be declared null and void. At the same time, new marketing possibilities will be available to find new markets. These markets need to be introduced to potential consumers for safeguarding and enhancing the competitiveness of fish products manufactured in Estonia. The measure will contribute to identifying consumers' preferences in different markets, thus helping the industries to shift their focus.

Socio-economic measures are an essential part of the CFP implementation in Estonia. They will help to maintain social and regional equilibrium by mitigating the consequences derived from the adjustment of fishing capacity. Furthermore, promotion of new market outlets will enhance competitiveness of the sector and benefit the consumer by providing products in demand and in compliance with hygiene and food safety requirements. Having in mind limited national financial possibilities and aiming at maximum effect of the above actions, FIFG contribution of 80% would benefit the whole sector and the implementation of the CFP.

Indicative Operations

- Socio-economic measures related to the adjustment of fishing capacity
- Promotion campaigns
- Consumer and market researches
- Participation in fairs and exhibitions

Examples of Intended Final Recipients

- Fisheries organizations
- Producers associations
- Public administration
- Fishermen working on vessels that are subject to permanent cessation of activities

State Aid

State aid schemes concerning actions financed under FIFG within this programme are governed by the provisions of Art. 19(2) of Council Regulation (EC) No 2792/1999 as amended by Council Regulation (EC) No 2369/2002 of 20 December 2002.

3.4. PRIORITY 4. INFRASTRUCTURE AND LOCAL DEVELOPMENT

3.4.1. GENERAL ORIENTATION

The general objective of the priority is establishing infrastructures that support balanced and sustainable economic development

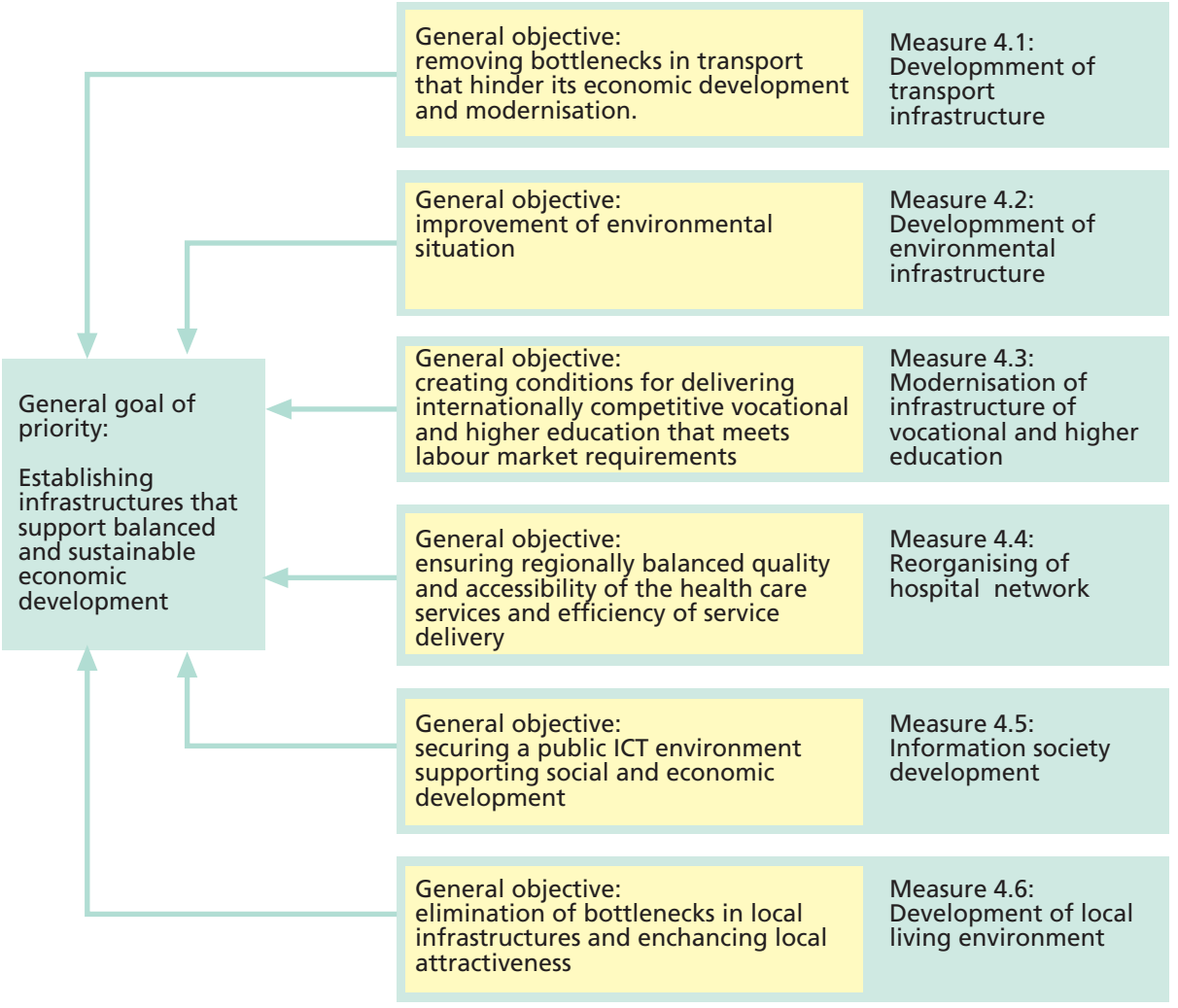
The priority is implemented through the following measures:

- Measure 4.1: Development of Transport Infrastructure
- Measure 4.2: Development of Environmental Infrastructure
- Measure 4.3: Modernisation of Infrastructure for Vocational and Higher Education
- Measure 4.4: Reorganisation of Hospital Network
- Measure 4.5: Information Society Development
- Measure 4.6: Local Socio-Economic Development

Main objectives of the measures and their linkages to the objective of the priority are presented in Figure 50.

Figure 50

Measures and objectives of the Infrastructure and Local Development priority



Article 29 (3) (a) of the Council Regulation (EC) No 1260/1999 states "the Community contribution may rise in exceptional and duly justified cases to a maximum of 80% of the total eligible cost". On the basis of this rule, Estonia applies an 80% Community contribution rate for the measure 4.3. This rate is justified by the need to reply effectively to the large shortage of vocational centres' and institutions' infrastructure, especially in regions of very

high structural unemployment where they are mostly needed, closing therefore the gap between labour market needs and vocational training infrastructure (bottlenecks). The reasons for such gap are that the large changes in the Estonian vocational education system during the last decade were not followed by the development of adequate infrastructure. The problem is particularly acute in the poorer areas of the country, where the relevant institutions lack financial resources.

The detailed information about the foreseen budgetary split between measures will be included in the Programme Complement.

3.4.2. MEASURE 4.1: DEVELOPMENT OF TRANSPORT INFRASTRUCTURE (ERDF)

Objectives

The general objective of the measure is to remove bottlenecks in transport that hinder its economic development and modernization.

The objects of the measure are state roads, railways, ports and airports.

The specific objectives are:

- Construction and upgrading of transport infrastructures linked to the trans-European transport network (TEN-T)
- Improve access to regional centres
- Improve safety in transport sector
- Improve environmental situation in the transport sector.

Rationale

From the point of view of transport sector, the aim of the national strategy is twofold: to promote the competitiveness of a national transport service in the international market and to influence the development of a transport sector by considering the harmonious development of a state as a whole. The preconditions for implementing the tasks are quality infrastructure, combined usage of all modes of transport and universality of all components.

In road transport it is important to ensure smooth transport connections inside the EU by organizing inland roads to have good access to the trans-European transport network, raising road safety, reconstructing connections with regional infrastructure networks and sustainability of the environment. Reconstruction of existing roads, and improvement of traffic system will help to increase the traffic safety and also solve environmental problems.

Renewal of railway is the key to achieving modal balance in EU. The target is to raise essentially the share of that environmentally sustainable mode of transport. Estonian aim is to participate actively in this process, which demands to implement the directives on interoperability. Comply with these directives will be also the criteria for the projects eligibility. Investments support the improvement of infrastructure, increasing railway safety, preventing and liquidation of the environmental problems, adequate capacity of trains and good level passenger transport.

Proceeding from the regional and social aspect, construction and modernisation of state owned small ports of local importance are considered significant as it helps to activate coastal shipping and short sea shipping to reduce internal development differences between the economically stronger and weaker areas, ensuring the latter a fast connection and access to the capital and international attraction centres (connections with islands, maritime tourism, etc.).

Proceeding from the trans-European air transport corridor, the continued implementation of the modernization program of air traffic control system and the reconstruction of infrastructures of local airports will be necessary for guaranteeing access and aviation safety in Estonia. During 2004-2006 the priority is the infrastructure modernization of regional airports, technical reconstruction and improvement of environmental protection, air safety and security measures for ensuring aviation safety.

Because of environmental risks accompanying the development of transport infrastructure, considerably negative impact is possible. For decreasing negative impact of the measure, alleviating and compensating activities will be implemented (liquidation of obsolete environment-hostile infrastructure and residual waste on the territories surrounding roads and railways, establishing resting places along roads, implementation of alleviation measures for animals' safety on roads with dense traffic, construction of sound barriers, joining environment monitoring with other monitoring systems).

Indicative Operations

Roads and Rail

- Modernisation and reconstruction of national roads that are connected with the trans-European transport network (TEN-T)
- Modernisation and reconstruction of national roads that ensure access to the region centres
- Improvement of road network that is needful for developing economic and regional area
- Solution of environment problems on national roads
- Improvement of road safety on national roads based on traffic safety analysis carried out by Estonian Road Administration
- Modernisation, reconstruction and construction of passenger transport infrastructure (platforms, railway stations, etc.)
- Prevention and liquidation of environmental problems of railway

Waterways

- Modernisation and reconstruction of waterways (inc. navigable inland waterways)
- Modernisation of state owned small ports (priority will be given to those ports which have bigger economic and social importance)
- Removing bottlenecks – construction of ports' access roads
- Development of ports infrastructure according to the prognosis of increasing freight and passengers flow
- Modernization of the navigation systems in ports for ensuring safe navigation
- Preparation of shipping traffic and water transport infrastructure development programmes, studies and analyses especially for modernising coastal shipping routes, connections between islands and between islands and mainland

Airports

- Modernisation and development of regional airports infrastructure
- Improvement of environmental protection, air safety and security measures for ensuring aviation safety

Studies

- Studies that prepare transport infrastructure investments

For avoiding overlaps with Measure 4.6: Local Socio-Economic Development (ERDF) the present measure excludes municipalities as beneficiaries when Measure 4.6 enables to support only municipal infrastructures.

Examples of Intended Final Recipients

- Transport enterprises
- Infrastructure owners

State Aid

Scheme for development of state owned small ports, regional airports and railway companies operating on infrastructure for public use is a state aid scheme. It will be notified following the interim procedure agreed in the Accession Treaty.

3.4.3. MEASURE 4.2: DEVELOPMENT OF ENVIRONMENTAL INFRASTRUCTURE (ERDF)

Objectives

The general objective of the measure is to improve the environmental situation.

The specific objectives of the measure are:

- Achieving a good status of surface waters and groundwater

- Reducing the environmental impact of the energy sector, improving efficiency and increasing the share of renewable energy
- Prevention and reduction of waste production, together with the related health and environmental hazards
- Preservation of biological and landscape diversity

Rationale

Water Protection and Use

The water management and protection is based on the requirements, obligations and purposes of the existing legislation, Environmental Strategy and Environmental Action Program. The main tool for the successful implementation of the water policy will be the river basin management plans which will be elaborated for each river basin district. The objectives for the river basin management plans will be to ensure the good status of all waters and the provision of safe and good quality drinking water for people. Those objectives will be achieved based on the action programs established for each river basin management plan. In case of the absence of the particular river basin management plan for the river basin district any other action program adopted on the national level shall be used. Action programs will consider all the existing information available on the status and the assessment of the status of water bodies, objectives of the Environmental Strategy and Environmental Action Program and requirements of the existing legislation.

All the necessary actions that need to be taken for the implementation of the water policy may be divided into two groups based on the source from which they will be financed. Main activities are related to the improvement and reconstruction of environmental and water infrastructures. In addition to infrastructure improvements other activities must be implemented as well, such as restoration of water bodies, mitigation of the impact of pollution, improvements of the biological status of water bodies, etc. Activities to achieve the latter objectives will be financed through the ERDF. All the activities must be carried out based on their prioritisation. Prioritisation shall be determined based on the cost of action to be taken and the environmental effect to be achieved. Thus all the activities that will be implemented should have the lowest cost and the highest effect for the environmental protection.

Renewable Energy

The main problems in the Estonian energy sector are related to high spatial concentration of the electric power production and the considerable environmental burden caused by it. This measure fosters the use of renewable energy sources like biomass, wind and small hydro, which gives rise to decentralisation of the electric power production and reduces the use of fossil fuel sources that helps to save the environment. Directive 2001/77/EC on electricity from renewable energy sources is part of the acquis. Estonia has agreed on an indicative target of 5.1% penetration of renewable electricity in 2010. Biomass activities are of special importance for Estonia due to its significant forest potential and due to the fact that 25% of agricultural land is unused in this country. Energy crops and afforestation of abandoned land could mitigate the underemployment problem in rural areas and generate a sustainable energy. They will also contribute to the production of liquid biofuels in line with Directive 2003/30/EC.

Waste Management

As for waste treatment, until now only waste disposal has been carried out, and this has been done disregarding the environmental requirements. The current measure will support the liquidation and reconstruction or recultivation of landfills, which do not meet the environmental requirements, and the development of waste management. To increase the level of waste treatment waste sorting at the source, collecting waste by types and recycling will be introduced.

This measure includes co-financing of projects for closing down old landfills with an area below 5 ha as packing of such kind of small projects is not feasible under the Cohesion Fund. According to the waste management directive small landfills that do not comply with environmental requirements must be closed down by the year 2009.

Biological and Landscape Diversity

For preservation of biological and landscape diversity and supporting an efficient nature conservation system, relevant infrastructure has to be developed, meeting also the requirements of the EU Habitats Directive (92/43/EEC) and the Birds Directive (79/409/EEC), first and foremost securing sufficient support to the sites to be included in the network of the areas designated in accordance to the Habitats (pSCI's) and the Birds Directive(SPA). The measure

will improve the possibilities to secure the favorable conservation status of the habitats types and species habitats included in the Natura 2000 network (pSCI's and SPA's) in Estonia.

Due to the drastic diminishing of the extensive agriculture in Estonia during the past 50 years the total area of valuable semi-natural habitats has decreased significantly. Therefore the restoration (removing of bushes, etc) of the semi-natural habitats (e.g. wooded meadows, coastal meadows, alvars, food-plains, etc) in places they were common 10 to 20 years ago would be essential to ensure the favorable conservation status of these habitats. The coastal meadows are also very important staging sites for migratory birds. Restoration of the habitats would be also important for improving the values of forest and wetlands in some regions.

There is also a need for purchasing of the equipment necessary for the management of the habitats and species habitats as well as for the monitoring of the status of these habitats afterwards. Establishment of the small scale infrastructure (nature trail) to protect nature values as well as to raise public awareness (e.g. pupils, students) would be quite essential issue to facilitate the successful implementation of the Natura 2000 network.

The implementation of the current measure is based on the following development plans:

- Estonian National Environmental Strategy, Estonian Environmental Action Plan
- National Waste Plan
- Long-term National Development Plan for Fuel and Energy Management
- Energy Conservation Programme and its implementation plan
- National Programme on Implementing Renewable Energy Sources and Peat until 2010 (in preparation)
- Regional water management plans and river basin management plans
- Development plans for public water supply and sewerage systems at local municipality level
- Estonian National Programme "Natura 2000" for years 2000-2007
- Management and action plans for habitats, nature protected areas and species.

Indicative Operations

Water:

- regeneration and restoration of the status of water-bodies (regeneration, treatment and sanitation of water-bodies, except for the restoration and improvement of the hydromorphological and physical status of rivers);
- Elimination of past pollution from water bodies (lake sediment removal, cleaning up the shores and coast of water bodies affecting the status of water, etc.);

Renewable energy

- Introducing renewable energy (for example, some forms of hydro-electric power, wind, biomass, etc) in projects where investments (kroons /MW) are the lowest or where the cost price of production (kroons /MWh) would not support the project's viability; emphasis is on increasing the share of energy produced by renewable sources;

Waste management:

- Liquidation and closing down of old and small landfills (less than 5 ha);
- Implementation of selective waste collection system and increase of waste recovery;
- Recovery of bio-degrading waste for compost.

Biological and landscape diversity

- Restoration of the habitats in Natura 2000 sites (semi-natural habitats, wetlands and forest habitats;) incl. small scale equipment and infrastructure directly related to restoration of habitats

Studies

- Studies that prepare the introduction of renewable sources for energy purposes, studies on surface water bodies, waste management and biological landscape diversity in order to plan appropriate activities for water protection and use, waste recovery and nature protection.

Examples of Intended Final Recipients

- Enterprises
- Local governments
- State agencies dealing with environment protection
- Environmental NGOs and foundations

State Aid

Grants for development of environmental infrastructure include state aid. The relevant aid scheme will be notified following the interim procedure agreed in the Accession Treaty.

3.4.4. MEASURE 4.3: MODERNISATION OF INFRASTRUCTURE FOR VOCATIONAL AND HIGHER EDUCATION (ERDF)

Objectives

The general objective of the measure is creating the necessary conditions for delivering internationally competitive vocational and higher education that meets labour market requirements.

The specific objectives of the measure are:

- To achieve a modern environment that promotes learning and research activities in vocational and higher education institutions;
- To provide a technical promoting qualitative learning and research activities, including making computers and Internet available for all the students and expansion of Internet-based services;
- To develop infrastructures that help young people to enter labour market.

Rationale

Improving the quality of infrastructure focuses on the provision of conditions necessary for human resource development and entrepreneurship and eliminates the main restrictions in these areas.

Large changes have taken place in the Estonian educational system during the last decade, but in developing the infrastructure (buildings, teaching aids and technical devices) of state-owned vocational schools and institutions of higher education, contemporary needs have not been taken into account. Few new buildings have been constructed after the year 1990. Because of changing needs in the structure of professions, in some schools a number of buildings have turned out to be unnecessary, while other schools are short of space. Equipment and tools in training facilities are mostly worn out and not used in enterprises, for which the labour force is being trained.

Accelerated development of vocational education institutions is a priority in regions with high unemployment rate. With PHARE support, multifunctional pilot vocational training centres (Narva, Kohtla-Järve, Tartu, Kuressaare, Võrumaa) were developed. The development plan for the network of vocational institutions until 2007 (project), foresees development of at least eight multifunctional vocational training centres. The Research Institute PRAXIS is now carrying out a study for optimising school network. The study will assist the Ministry of Education and Research to identify those of the vocational centres that are of the highest priority for the labour market needs in the longer term. The Ministry will take this study as a basis for an action plan. These centres that will be developed have a greater number of functions than vocational schools: delivering higher-level vocational and applied education, professional training (vocational training of young people without basic education), adult training and training people with special needs

Considering the fact that access to education is an important factor in development, then in addition to aiding big regional vocational training centres, a good-quality material foundation should also be laid in smaller vocational schools that show promise. Proper material conditions are needed for implementing the above-mentioned tasks. Without considerable improvements in the learning environment it is not possible to eliminate the lack of prestige of vocational education and raise the quality of teaching. This is an important factor hindering the increase in skilled workers.

The current measure co-finances the construction and renovation of buildings of public sector vocational and higher education institutions, as well as the development of information technology infrastructures, bringing these into

conformity with safety and health protection requirements. It also provides facilities necessary for the free movement of disabled people.

An important method to improve the quality and efficiency of education and training is to broaden the use of ICT. Preliminary to that is the ICT infrastructure with Internet access that could be used to develop and use the corresponding teaching materials, curricula and organize teachers training. ICT activities and investments in educational sector are also reflected in "Priorities for Estonian Information Policy 2002-2003" where starting the "Tiger University" programme and providing ICT infrastructure to the schools are set as priorities also for longer perspective.

Based on European White Paper on Youth Policy, the priority of the coming years is developing regional youth centres (among priorities of European Regional Development Fund 2000-2006) and providing information for young people, including guaranteed career counselling (among the priorities of European Social Fund 2000-2006). Considering the fact that approximately 1,600 children drop out from the level of basic education in Estonia, it is important to know that young people up to 17 attending compulsory school have the opportunity to spend their leisure time on self-development and getting career and professional counselling. For implementing these tasks, information and counselling sections in youth centres are to be established within the framework of the current measure. For this purpose, rooms left vacant through the rearrangement of school networks will be used.

The implementation of the measure will build on the following development plans:

- Action plan for development of vocational education system in Estonia 2001-2004
- Tiger Leap+: ITC in Estonian school 2001-2005
- National higher education programme Tiger University for 2002-2004
- Knowledge-based Estonia 2001-2004
- Estonian Youth Work Concept and Estonian Youth Work Development Plan
- National strategy for criminal prevention
- Priorities for Estonian information policy 2002-2003
- Integration in Estonian society in 2000-2007

The implementation of this measure is coordinated under the measure Educational system supporting the flexibility and employability of the labour force and providing opportunities for lifelong learning for all. All the ESF co-financed activities needed to accomplish the aims set by this measure can be implemented under measure 1 in priority 1. All ICT activities will be coordinated with Estonian Informatics Centre (RISAK) to ensure the strategic approach in Estonian ICT development. Ministry of Economic Affairs and Communication will organize the complementary coordination.

Indicative Operations

- Constructing and renovating buildings and research-bases of vocational and higher education institutions (regional colleges), including bringing them into conformity with safety and health protection regulations, and adapting buildings to meet the needs of disabled people;
- Procuring contemporary equipment, inventory and work devices necessary for learning and research in vocational schools;
- Establishing youth information and career counselling centres and public youth centres, taking into account access for young people with special needs, including procurement of necessary equipment and inventory for centres providing youth work services.

Examples of Intended Final Recipients

- Public and municipal vocational educational institutions
- Higher professional education institutions and public higher education institutions
- Local municipalities
- Youth information and career counselling centres and public youth centres

State Aid

Any state aid granted under this measure will be compatible with the ***de minimis*** rule.

3.4.5. MEASURE 4.4: REORGANISATION OF HOSPITAL NETWORK (ERDF)

Objectives

The general objective of the measure is to ensure regionally balanced quality and accessibility of the health care services and to enhance the efficiency of service delivery.

The specific objectives of the measure are:

- to support the reorganization of the hospital network according to the Hospital Network Development Plan
- to ensure the conformity of hospital buildings, treatment and working conditions to the established standards

Rationale

After regaining independence Estonia inherited from the former Soviet Union a hospital network with an excessive share of hospitals. In 1991 there were 120 hospitals with 18,000 beds in a country with 1.5 million people. During the last decade the number of hospital beds has been cut down. During 1992–1998, the number of hospitals decreased by one-third (from 118 to 78), largely due to closing down small hospitals, which were inefficient, both in medical and monetary terms. Due to administrative reorganization in 2000 – 2001 the number of hospitals has been further decreased. In 2002 there were 52 hospitals with 8,026 beds.

Considering the number and needs of the population, there are still too many acute care hospitals and hospital beds to ensure the quality and efficiency of the services. There are still more beds in acute care hospitals per inhabitant in Estonia than in many EU member states. The average length of stay is longer and the bed occupancy rate is lower. This is partly due to the little use of day care and day surgery and insufficient possibilities for rehabilitation and nursing care services. For many specialties the size of the area to be serviced is too little resulting in insufficient number of cases to maintain necessary medical quality.

To ensure regionally balanced quality and accessibility of specialist care services and enhance efficiency of service delivery, optimising and restructuring of the hospital network according to the Hospital Network Development Plan is inevitable.

The Hospital Network Development Plan has been developed for a 15-year period to optimise the hospital network that will provide a uniform quality of medical care.

The aim of the Hospital Network Development Plan is to reach following targets characterizing the hospital network (Table 56):

Table 56

Targets of the Hospital Network Development Plan

	Situation in 2001	Target 2015
Number of acute care beds[1]	6,500	3,200
Average length of stay	6.7	4.6
Bed occupancy	67%	83%

[1] *Psychiatry, tuberculosis, rehabilitation and nursing care beds not included*

The Plan foresees for optimal medical service of the Estonian population 19 acute care hospitals, 3 of which are regional hospitals (one of them university hospital), 4 central hospitals and 12 general and local hospitals. Demographic factors, the size of the area to be serviced, its infrastructure (roads, transportation, etc) and other factors are taken into consideration in choosing the locations for the hospitals. To ensure geographic accessibility the principle of locating a hospital within a radius of 70 km (one hour of transportation) from any settlement is observed. At the same time it is considered that the hospitals must be located in natural cultural and economic centres of the region where people travel also for other purposes (public services, shopping, etc). Thus the hospitals specified in the Development Plan will be located in centres that are also potential economic growth poles in the region.

Concentrating the more sophisticated and expensive specialist care to fewer hospitals will allow to economize the resources and to maintain the professional skills of the medical staff with larger number of cases.

The structural changes taking place in the hospital network are arising the need for major reconstruction of hospital buildings. Most of the hospital buildings in Estonia were built more than 25 years ago and their technical condi-

tion has deteriorated, with facilities that are functionally inefficient or unsuitable for a hospital. This is because the underlying principles of hospital construction were based on a different health care organization. The size and allocation of the hospitals was determined by military needs of Soviet Union, living standards were poor and the technical level of construction was inadequate. Thus the construction of hospital buildings is not aimed at increasing the number of the hospital beds, but at adapting the existing buildings to changes that have been taking place in political, economic and demographic situation in general and in health care organisation and medicine (new methods and technologies) specifically.

The need for reconstruction will very much depend upon the future size and capacity of the individual hospital. Therefore, there will be an individual development plan approved for every single hospital by the Minister of Social Affairs. These individual development plans have to be in accordance with the overall Hospital Network Development Plan. All investments in the hospital buildings will be made based on individual development plans.

Hospitals with low area standard in ward-departments may need an enlargement if the calculated cut in bed capacity does not compensate for the need of improved area standard. The area standard in general in Estonian hospitals is very low compared to the standards in Western Europe. The average gross area per bed is 66.8 sqm. The aim is to improve the area standard to be 85-110 sqm depending on the type of the hospital.

Another reason for enlarging a hospital is derived from expanding or additional functions. This will occur in areas where specialities will have to be moved between hospitals in order to reach the aimed concentration of units.

In some cases, the construction of a new hospital building will allow to concentrate the care that has been provided in several buildings into one building. This allows to avoid the duplication of several supporting units that can be centralised, allow better logistics, efficiency and quality of care.

The need for improved logistics is one of the main reasons for a major rebuilding. For instance, in modern hospitals a close connection is needed between the emergency ward and intensive care ward, but also supporting units, such as radiology department, laboratory department and operation theatres.

In addition hereto, large investments have to be made concerning the infrastructure of the buildings. New mechanical ventilation systems, canalisation ducts, shafts and fan rooms, approved fire doors and other necessary fire protection systems in order to reach prescribed fire protection, new handicap toilets, new elevators, ramps to main entrances, levelling out differences in floor levels to make improvements for handicapped people, replacement of old windows in order to save energy and eliminate unhealthy draft, etc.

Thus there is a need for reconstruction even if the overall number of acute care beds will be cut down.The hospitals specified in the Development Plan will be reconstructed within 15 years. The actual timetable of reconstructions will very much depend on resources available and on preparedness of individual hospitals to launch the reconstruction.

The total cost of reconstruction of acute care hospitals specified in the Hospital Network Development Plan is estimated to be 4.3 billion Estonian crowns. Although the financing is coming from different sources, the ERDF assistance is of major importance for a vital launch of reconstructions. Therefore reorganization of hospital network will be an ongoing priority also for the next programming period.

Thus there is a need to focus only on the urgent and important needs for the current period. Taking into account the available budget for the measure the plan for 2004 – 2006 is to support the design and construction of at least 3 hospital buildings, included in the Hospital Network Development Plan The aim is not to scatter the resources to make some minor improvements in many hospitals but to canalise them into projects that considerably improve the functioning of a hospital as a whole. Thereby the requirement that the building must be operational shortly after the completion of the project will be followed. Procurement of medical equipment, which will be installed as part of the construction, could also be supported. However, taking into account the limited time and budget there could be also some projects supported that involve only design of the building. By the selection of the projects it will be verified that only projects that are in accordance with Hospital Network Development Plan are supported.

Indicative Operations

The following activities related to the hospital buildings will be implemented:

- design;
- construction;

- equipment

Examples of Intended Final Recipients

- Operators of hospitals specified in the Hospital Network Development Plan

State Aid

No State aid falling under Article 87 (1) of the EC Treaty shall be granted under this measure.

3.4.6. MEASURE 4.5: INFORMATION SOCIETY DEVELOPMENT (ERDF)

Objectives

The measure is aimed at supporting the realisation of objectives set in the Estonian information policy document "Principles of Information Policy 2004-2006" as well as in "e-Europe 2005". The specific aims of the measure are the following:

- development of one-stop channel for citizens and ensuring the interoperability of information systems;
- further development of public sector e-services;
- development of digital content and provision of easier Internet access for the population.

Rationale

Estonia has achieved significant success in the development of Information Society. Owing to the early liberalisation of the telecommunications market the necessary basic infrastructure has been put in place. Fair competition has brought down the prices of Internet connections as well as those of telephone services. As a result, the number of Internet users has steadily grown over years and the number of mobile phone users is among highest in Europe. Government actions have been crucial in the development of Estonian Information Society. From creating favourable legal environment and leading the way by computerising the whole public administration, a number of significant e-services have been developed by the public sector that have been useful for attracting people to use the Internet.

Security in using e-services has been ensured through the introduction of ID-card the take-up of which has been rather high in Estonia.

However, a new level has to be reached in the development of the Estonian Information Society. To avoid the regional and social discrepancies from deepening and fulfil one of the most important aims of e-Europe – information society for all - more attention should be paid in the public sector for creating necessary preconditions in order to bring all citizens online and provide them e-services that are of practical significance for them. The measure will contribute to the creation and introduction of information society solutions that are highly potential with regard to the Estonian socio-economic development.

Development of One-Stop Channel for citizens and Ensuring the Interoperability of Information Systems

According to the objectives set in the state information policy "Information Policy Principles 2004-2006" basic electronic services provided by the public sector will be developed further at least to the extent of the main government online-services listed in the e-Europe Action Plan. The efficiency and cost-effectiveness of elaborating e-services will be ensured both from the aspects of provision and consumption of services. To provide the citizens with a one-stop channel for the communication with the state, existing solutions will be further developed. Majority of state registries and databases will be joined with the service layer of state registers. In order to ensure interoperability of solutions and save resources local governments will be engaged in cooperation for the development of e-services. ID-cards the aim of which is twofold – identification and giving digital signature – facilitate secure communication between the state and citizens, the state and businesses etc. ID-cards, digital signatures and electronic identification methods will be promoted to facilitate e-business. In addition, more ID-card applications will be developed to further promote efficient administration in society.

Further Development of Public Sector e-Services

Special attention will be paid to the development of e-environment in the fields of governance, education and health.

e-Governance - the use of electronic records management in the public sector will be widened and digital archiving will be launched. The development of databases will be aimed at ensuring quality, accessibility, integration and cross-usage of data.

e-Learning - the information technology base of educational institutions will be widened and more opportunities for the implementation of internet learning opportunities will be created.

e-Health project will be launched to enable the health care system use more modern IT solutions. The digital health record will be implemented. Thus an environment for information exchange within the health sector will be created to organise different data into one integrated system. This activity will be co-ordinated with Measure 4.4: Reorganisation of the Hospital Network

Development of Digital Content and Easier Internet Access for the Population

For widening knowledge about e-services and involving a needed critical mass of users awareness rising activities will be carried out. In digital content field attention will be paid to a more consumer-oriented approach by creating technological means for multilingual communication and creating applications what should help users to communicate with government and local authorities. Activities oriented towards raising awareness both among the users and non-users of the Internet will be carried out.

As a rule, development of the ICT infrastructure will not be supported. Exceptionally, the structural funds may finance ICT infrastructure in remote areas, where there is a market failure.

Indicative Operations

Development of public sector information technology solutions:

- for the creation and implementation of new IT solutions necessary for the development of information society (e-Citizen Portal, service layer of state registers and ID-card applications for communication citizens with state registers, etc.);
- for pilot-testing and demonstrating information society IT solutions;
- for creating a demand for innovative solutions;
- for upgrading the state's IT infrastructure for participation in the information society related initiatives of the EU (e-Europe 2005, IDA etc.).

Examples of Intended Final Recipients

Public sector

State Aid

No State aid falling under Article 87 (1) of the EC Treaty shall be granted under this measure.

3.4.7. MEASURE 4.6: LOCAL SOCIO-ECONOMIC DEVELOPMENT

Objectives

The overall objective of the measure is to contribute to Estonia's general viable and balanced economic development through the elimination of bottlenecks in local infrastructures and enhancing local attractiveness.

The specific objectives of the measure are:

- improving the availability and quality of public services (mainly concerning basic education, district heating)
- increasing the economic efficiency of local public infrastructure
- providing employment opportunities and raising the quality of life of local population (jointly with other measures)
- eliminating local bottlenecks that hinder the maximum use of local development potential
- developing specific competitive advantages of the regions

Rationale

The condition of regional technical and social infrastructures is one of the main factors shaping the quality of life, and it has a significant influence over the choice of where one will live and work. In this regard, the key factors are

good transportation between the working and living places, as well as the availability of several public services (e.g. educational, employment-related and various technical services).

Insufficient investments carried out during the Soviet period have caused a situation in which the majority of the infrastructure that shapes the physical living environment in Estonia does not meet contemporary needs. In addition, settlement and economic activities are concentrated in bigger areas and the number of inhabitants in smaller regions is decreasing. Proceeding from the fact that economy is clustered around town centres, the infrastructure at the points of concentration should be extended and adapted to modern conditions, while at the same time being made more available and cost-effective in sparsely populated areas. The national investment policies towards local public infrastructure together with the above-mentioned factors have created the situation where local bottlenecks are concerning different type of infrastructure in various localities.

Today the viability of different regions depends upon their capacity to define and develop their own specific features that could be of value in regional competition. This increases the attractiveness and competitiveness of the region for the local population, visitors and investors. Specific resources could be natural resources, natural landscapes, heritage of cultural figures related to the region. Each region has also specific problems of its own that are related to regional and historical features and that can be solved by relying upon local activities and resources of local importance.

The measure will aim at the provision of prerequisites necessary for sustainable economic development and for increased employment by making use of the specific potentials of the region. The implementation of the measure aims at the development of diversified integrated activities to enhance local assets and encourage economic develop**.**

The achievement of the objectives listed above assumes relying upon local initiative and involvement, expedient long-term development and planning efforts that should help to maintain sustainability after the end of this programming period. The sectors to be supported in complementarity with other measures of this programme will be: (a) education and social infrastructure for employment, (b) local tourism and recreation, (c) local transport infrastructure and (d) municipal technical infrastructure. The investments will be supported by the measure if they have a significant economic and/or social impact and, in addition, if:

- they are identified as bottlenecks in an updated and comprehensive local development plan, and/or;
- they follow, to maximum possible, integrated approach (to avoid scattered and isolated projects), and/or;
- they evidently contribute to socio-economic development (mainly by demonstrating the relationship with or link to other measures/operations or programmes), and/or;
- they have wider regional impact (joint projects of municipalities or benefit for many municipalities).

The above investments will supplement the operations in the other priorities of this programme (the most relevant measures are mentioned in section 5.8 of this document) while creating synergies for regional development.

Indicative Operations

- Comprehensive schools, kindergartens, local infrastructure necessary for employment stimulating social services.
- Developing attractions, exhibiting and opening of sites and objects of natural and cultural value, visiting harbours, museums, visiting centres, initiating regular events, when those operations have a significant economic/social impact (tourism).
- Preparing re-use of old military and industrial estates and sites.
- Bridges, viaducts, tunnels, road bypasses, harbours connecting the islands, access roads and parking places, when those operations have a significant economic/social impact.
- Boiler houses, district heating networks, street lighting systems.

During implementation of this measure possible overlaps with Measure 2.2: Business Infrastructure Development (ERDF) and Measure 3.5: Renovation and Development of Villages (EAGGF) will be excluded via information exchange at level of implementing bodies. Possible overlaps with Measure 4.1 Development of Transport Infrastructure (ERDF) are avoided by differentiation of beneficiaries. The present measure enables to support only municipal infrastructures, when Measure 4.1 excludes municipalities as beneficiaries.

Examples of Intended Final Recipients

- Local municipalities

- Municipal companies
- Foundations
- Non-profit organisations (NGOs), including local government associations
- State institutions administrating nature objects and objects culturally valuable for local development

State Aid

This measure includes state aid. The relevant aid schemes will be notified following the interim procedure agreed in the Accession Treaty.

3.5. PRIORITY 5: TECHNICAL ASSISTANCE

3.5.1. GENERAL ORIENTATION

The general objective of the priority is the efficient and effective implementation of the Programme.

It will be implemented through two measures:

- Measure 5.1: Programme management and implementation
- Measure 5.2: Information dissemination, publicity and computerization

3.5.2. MEASURE 5.1: PROGRAMME MANAGEMENT AND IMPLEMENTATION (ERDF)

Objectives

The general objective is efficient and effective implementation of the programme.

The specific objectives are:

- coherence and quality of activities
- ensuring good, regular use of financial resources in conformity with rules; auditing of funds.

Rationale

Preparation, implementation and monitoring of the programme as well as single projects; the development and functioning of relevant administrative and monitoring systems. The current measure helps to:

- enhance the capacity of final beneficiaries for project preparation and management; this capacity is the primary precondition for the effective use of Structural Funds;
- ensure purposeful ex-ante evaluation of projects and monitoring of implementation;
- ensure efficient monitoring of the programme;
- ensure efficient control system over the use of funds.

Indicative Operations

- costs related to preparation, selection, ex ante evaluation and monitoring of assistance and operations;
- costs related to the Monitoring Committee and other management structures;
- audits, on-the-spot checks;
- launching the preparation of projects;
- supporting applicants in preparing and implementing projects;
- wages eligible for the implementation of the activities listed above.

Examples of Intended Final Recipients

- Managing Authority
- Paying Authority
- Auditing Authority
- Intermediate bodies
- Final beneficiaries

State Aid

No State aid falling under Article 87 (1) of the EC Treaty shall be granted under this measure

3.5.3. MEASURE 5.2: INFORMATION DISSEMINATION, PUBLICITY AND COMPUTERISATION (ERDF)

Objectives

The general objective is efficient and effective implementation of the programme. The specific objectives are:

- coherence and quality of activities
- dissemination of information concerning the contribution from Structural Funds and raising awareness of SPD objectives

Rationale

Preparation, implementation, monitoring and evaluation of both the programme and single projects requires establishment and implementation of respective administration and monitoring systems. This measure will aim to:

- enhance the capacity of final beneficiaries for project preparation and management, this capacity is the primary precondition for effective use of Structural Funds' assistance;
- ensure purposeful ex-ante evaluation of projects and monitoring of implementation;
- ensure efficient monitoring of the programme;
- ensure efficient control system over the use of funds
- inform the beneficiaries and the public in large of the contribution and support available from the Structural Funds

Indicative Operations

- research, seminars and information dissemination
- evaluation
- purchase and installation of electronic management, monitoring and evaluation systems

Examples of Intended Final Recipients

- Administration of the Structural Funds
- Final recipients of the assistance

State Aid

No State aid falling under Article 87 (1) of the EC Treaty shall be granted under this measure.

4. CONSISTENCY OF THE STRATEGY WITH COMMUNITY AND NATIONAL POLICIES

4.1. GUIDELINES OF THE COMMISSION FOR PROGRAMMES IN THE PERIOD 2000-2006

The Communication of the Commission: The Structural Funds and their coordination with the Cohesion Fund, Guidelines for programmes in the period 2000-06 (Guidelines) concentrates on the three following main priority areas:

- Regional competitiveness
- Social cohesion and employment
- Urban and rural development.

The Estonian SPD is analysed in the framework of these broad priorities below.

The following topics are related to the regional competitiveness according to the Guidelines:

- Transport infrastructure
- Energy
- Telecommunications
- Environmental infrastructure
- Research, technological development and innovation
- Financial support to businesses
- Business support services
- Areas with particular potential: environment, tourism and culture, social economy

The transport infrastructure will be developed in accordance with the Guidelines – preferring the TEN–T network - in close co-ordination of the assistance from the Cohesion Fund (with that of the ERDF). The main investments will be funded from the Cohesion Fund. The measure of SPD ***Development of transport infrastructure*** will support first of all the sections of national roads having immediate economic importance. In Estonia the improvements of transport infrastructure have been aimed at increasing of efficiency and safety of traffic. Major modal shifts cannot be expected.

In the energy area there is no need for extensive development of new networks stressed by the Guidelines. The national energy company ***Eesti Energia*** will take care of renovation of existing transmission networks. The assistance from Cohesion Fund will be used for large-scale environmental oriented projects aimed at the introduction of new more efficient and less polluting oil-shale combustion technologies in the power stations. The ERDF assistance will be directed towards increasing the share of renewable energy sources and promoting energy saving.

The telecommunication services are provided on free market in Estonia. In compliance with the Guidelines Estonia will prefer on the one hand promoting elaboration of new ICT services/applications and on the other hand training of various categories of users.

Following the requirements of Community environmental directives and fulfilling the commitments taken in the accession treaty will be the highest priority in developing the environmental infrastructure – first of all in the areas of water and waste management. As the air pollution by the oil shale based energy sector is a particular concern in Estonia, remarkable funding will be directed also for reducing that kind of pollution. It is foreseen to prepare and implement the water and waste management plans.

The support by the Cohesion Fund and ERDF will be delivered in a co-ordinated manner. The major share of environmental activities will be assisted from the Cohesion Fund. The ERDF support will be used for smaller projects related to local municipalities where it is difficult to combine them into packages large enough for the Cohesion Fund

In compliance with the Guidelines Estonia will promote innovation in businesses, as well as the respective international networking. Those activities will be supported also by raising the qualification of researchers, engineers and managers. The funding will have a high priority in improvement of co-operation between research institutions and business on extension of risk.

A preference in developing entrepreneurship will be given to the SMEs as recommended in the Guidelines. In Estonia the main form of public financial support to businesses is providing state guarantees that will not be supported by the Structural Funds. The Structural Funds assistance will be used for co-financing of various investment grants, as an example for:

- start-up of SMEs
- infrastructure investments
- non-agricultural entrepreneurship in rural areas
- modernisation of manufacturing of the agricultural and fish products

The support services for businesses are delivered through the network of regional business advisory centres that in compliance with the Guidelines make up a system of one-stop service offices. Those service centres provide access to training and consultancy grants, start-up grants and grants for participation in fares. It is planned to co-finance part of those support schemes from the Structural Funds.

Among the areas with particular potential tourism is very important. It is foreseen to use the Structural Funds for promoting development of tourism products, training, rural tourism and improvement of information systems. Among the sightseeing and attractions the cultural heritage has a remarkable role. Preservation and making use of the heritage in tourism will as well be supported . There is intention to make the first steps in developing social economy supporting setting up of social firms.

The following topics of the Guidelines are related to the ***social cohesion and employment:***

- Active labour market policies
- Inclusive society, open to all
- Promoting employability, skills and mobility through life-long learning
- Developing adaptability and entrepreneurship
- Positive action for women

The labour market policy supported by the Structural Funds is foreseen to be active, in compliance with the Guidelines. It is planned to rise the quality of vocational training introducing new curricula, apprenticeship schemes and improving education and training of teachers. The material conditions of vocational training will be improved too. In the framework of active labour market measure***s*** training will be provided both to the employees who have received redundancy notice as well as to the unemployed people.

Among the least favoured groups of the labour force the ethnic minorities will be supported in learning Estonian both in the education system and in the further training. That will contribute to their competitiveness in labour market. Employment grants will be provided to employers who provide jobs for less competitive unemployed. Operations for preventing and decreasing of social exclusion will be implemented.

Opportunities for life long learning will be improved both in educational system and in further training. Actions to decrease the drop-out from education and prevent entering of non-prepared young people to the labour market are foreseen. Possibilities for vocational training of the students having difficulties in compulsory school will be created. The possibilities for life-long learning and individual further education for the adult persons will be increased. As recommended in the Guidelines for the lagging behind regions, the capacity and effectiveness of the whole education system will be improved.

Adaptability of firms will be dealt with in the framework of the ***Human resource development increasing the competitiveness of enterprises*** measure. That includes also the aspect of improvement of reconciliation of working and family life. Two measures (under the priorities 1 and 3 respectively) are immediately aimed at further training of labour force that improves both its skills and adaptability. The training of entrepreneurship is included both under the measure of ***Human resource development increasing the competitiveness of enterprises*** and ***Inclusive labour market*** measures. That kind of training is supplemented by measures supporting to investments of the start-ups.

Equal opportunities for women and men as part of the mainstreaming approach is pursued through all the measures and while implementing all the activities.

The topics connected to the ***rural and urban development*** are:

- Urban development within an integrated regional policy
- Rural development for modernisation, diversification and environmental protection

- Synergies between urban and rural areas: balanced development
- Specific measures for fisheries areas.

In Estonia, where the major urban centres in general perform much better than the surrounding areas, no special integrated measure is foreseen for urban areas.

In compliance with the Guidelines the rural development comprises a separate priority implemented through a large number of measures. The priority includes, inter alia, a LEADER-type measure, as LEADER will not be implemented as the Community initiative in Estonia during the present programme period.

The need to enhance synergy of urban and rural areas is taken into account in a number of its aspects in the present SPD. The most important of these are:

- Development of the production chains of agriculture and fishery as a whole
- Introduction of regional water and waste management plans
- Development of tourism centres of national importance
- Modernisation of networks of vocational education and hospitals, keeping in mind the regional needs
- Intended preference of municipalities' infrastructure and development projects that satisfy common needs of larger areas.

The present programme includes fisheries measures. The measures aimed at the fleet comply with the preferences of the Guidelines – they include an adaptation of fishing capacity and modernisation of the fleet and fishing methods. Proceeding from the particular situation in Estonia, the remaining measures are directed towards modernisation of the full production chain that improves its competitiveness. The measures must also alleviate the social risks for the fishermen caused by the restructuring of the sector.

4.2. COMMUNITY INITIATIVES

During the present programming period Estonia will implement two Community Initiatives – Interreg and Equal. Below the complementarity and coordination between them and the present SPD is outlined.

Interreg

The complementarity with Interreg programmes both in the programming phase as well as in the implementation phase have been taken into account. In principle the overlaps in the content of the programmes have been avoided and a mechanism for ensuring double financing of activities have been prepared.

Estonia will participate in 3 Interreg programmes in the current programming period:

- North Zone Interreg IIIC programme
- Baltic Sea Region Interreg IIIB programme (incl. IIIA priority for Estonian-Latvian-Russian cross-border co-operation)
- Southern Finland – Estonia Interreg IIIA programme

In general terms Interreg programmes will complement Objective 1 SPD to a certain extent in the following manner.

North Zone Interreg IIIC programme will provide support for enhancing inter-regional co-operation across EU in the fields of activities supported under Objective 1 SPD. Thus the Interreg programme contributes for developing best policy approaches.

BSR Interreg IIIB programme will provide a transnational framework in which Objective 1 measures can be implemented. On the other hand joint transnational projects supported under Interreg programme can lead to more concrete and financially bigger follow-up projects (especially regarding infrastructure) to be financed through Objective 1 SPD or Cohesion Fund support.

Southern Finland – Estonia Interreg IIIA programme will complement Objective 1 SPD to a certain extent. In light of the content of the Interreg programme Priority 2 "Improving the preconditions of Employment and Competitiveness", the Interreg programme promotes cross-border networks that will give added value to the objectives of Priority 1 and 2 in Objective 1 SPD. Both programmes include the development of transport connections, Objective 1 supports the development of domestic infrastructure, whereas Interreg IIIA underlines the functionality of cross-border connections. The protection, improvement and monitoring of the environment are tasks that have been

upgraded in importance in the Interreg IIIA programme in comparison to that of Objective 1. This arises from the fact that the Gulf of Finland has an essential role to play in the Interreg III A programme area, and it is seen to be very important to invest in protecting this vulnerable body of water. The principle basis for financing projects from the Southern Finland – Estonia Interreg IIIA programme is that they have a clear cross-border element, either they entail direct co-operation between partners from both sides of the border or they support the preconditions for cross-border co-operation. Thus the overlaps are avoided also by eligibility criteria set for the projects. The Steering Committee together with Estonian Ministry of Internal Affairs will be responsible for ensuring that this requirement is fulfilled.

Estonia-Latvia-Russia cross-border priority within BSR Interreg IIIB programme will complement Objective 1 SPD to a certain extent. The aim of the priority is to contribute to the achievements of the SPD objectives by utilising the added value of cross-border co-operation in the border regions. The division of work between these two programmes is assured by the basic project eligibility criteria in Interreg priority. Under this priority projects must benefit two countries in terms of impact and the projects must avoid double financing by any other EU grant. The Steering Committee together with Estonian Ministry of Internal Affairs will be responsible for ensuring that these requirements are fulfilled.

Equal

Both the SPD and Equal programmes are strategically related to the European Employment Strategy and the Inclusion process, which ensures the overall coherence between the two programmes. Due to the specificity of Equal, the measures foreseen are more targeted and the groups addressed are smaller, but the overall strategic framework is the same for the SPD and the Equal CIP. As for the foreseen administrative structure for Equal, it is very similar to the one of measure 1.3 of the SPD with the purpose of using the existing structures and competencies in the most efficient way. This way necessary coordination can be arranged and the risk of overlaps is reduced to minimum.

4.3. ENVIRONMENTAL POLICY

4.3.1. LEGISLATIVE BASIS

In the Amsterdam Treaty promoting sustainable development and environmental protection was established as one of the main priorities of the European Union. As a result, integrating the requirements of environmental protection into the implementation of the EU policies became a binding obligation.

In Estonia, the integration of environmental objectives into all spheres of life also plays a central role in the implementation of environmental policies. On the most general level this is laid down in the Sustainable Development Act (1995).

By the present time, Estonia has brought its environmental policies into accordance with the EU environment policy requirements and therefore they constitute a common framework of this Single Programming Document. Below a brief overview on environmental law and environmental policies of both the EU and Estonia will be presented across different areas. The present Programme shall be compatible with these agreements.

Bio-diversity protection is regulated in the following acts: Sustainable Development Act, Protected Natural Objects Act, Act on Protection of the Marine and Freshwater Coast and Shores , Protection and Use of Wild Fauna Act, Deliberate Release of Genetically Modified Organisms Into Environment Act. The principles of protection of bio-diversity are also taken into consideration in legal acts regulating the use of natural resources.

On the basis of the respective EU directives (Directive 79/409/EEC on wild birds and Directive 92/43/EEC on the conservation of natural habitats) aimed at conservation and protection of certain habitats and species, the national programme *Estonian NATURA 2000 for 2000-2007* has been adopted.

The management of water protection and water consumption in Estonia rests on the Water Act (1994). The overall objectives and main principles of the water protection and management are defined in the National Environmental Strategy (1997). In addition, several international conventions (Convention on the Protection of the Marine Environment of the Baltic Sea Region (HELCOM), Convention on the Protection and Use of Transboundary Watercourses and International Lakes) and agreements (Agreement between the Government of the Republic of Estonia and the Government of the Republic of Finland on water protection, Agreement between the Government

of the Republic of Estonia and the Government of the Russian Federation on cooperation in the field of Protection and sustainable Use of Transboundary Watercourses) are being followed.

According to Water Act Amendment Act (adopted in 2000) the water management will be organised according to the river basin management approach. General water management plan and sub-river basin management plans shall be adopted by 2008 at the latest.

To reduce the nitrate pollution resulting from agricultural activities the requirements of nitrate directive (Directive on Nitrate Pollution from Agricultural Sources (91/676/EEC)) shall be implemented.

In water sector, the following transition periods have been agreed.

- Urban Waste Water Directive (91/271/EEC) – transition period until 2010 for the renovation / construction of sewerage systems and wastewater treatmenet facilities;
- Drinking Water Directive (80/778/EEC) – transition period until 2013 for the renovation / construction of water supply systems and water treatment facilities

The basis for ***ambient air protection*** arises from several international agreements and EU directives. Considering the international agreements and Council Directive 88/609/EEC on the limitation of emissions of certain pollutants into the air from large combustion plants (currently replaced by directive 2001/80/EC), a National Programme for 1999-2003 on Reducing Pollutant Emissions from Large Combustion Plants has been adopted in Estonia.

Different national strategies and action plans are aimed at combined generation of heat and electricity and limitation of the relative share of oil shale. Estonia is expected to meet the requirements of directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market aimed at increasing the share of renewable sources of energy to at least 12% of the total electricity production.

Estonia ratified the United Nations Framework Convention on Climate Change in 1994, and the Kyoto Protocol in 2002. Also, the National Programme for reducing the emission of greenhouse gases for 2003 - 2012 is currently being prepared.

In 2000, Estonia adopted the Convention of Long-Range Transboundary Air Pollution and its three protocols referring to sulphur compounds, nitrogen dioxides and volatile organic compounds. The act on joining the Cooperative Programme for Monitoring and Evaluation of Long-Range Transmission of Air Pollutants in Europe (EMEP) protocol has also been adopted.

In Estonia, the legal framework for a transition to contemporary ***waste management*** has been established. The EU and bilateral foreign assistance is being used for initiating the updating of the municipal waste management system; a national system for collecting hazardous waste has been established.

The national legislation concerning waste management is based on the two European Union waste management framework directives - directive 75/442/EEC on waste and directive 91/689/EEC on hazardous waste. The EU legislation enforced on the basis of the framework directives can be divided into two categories – firstly, directives that set the requirements to the waste management enterprises (directive 2000/76/EC on the incineration of waste; directive 1999/31/EC on the landfill of waste), and secondly, the acts dealing with specific types of hazardous waste, for example batteries and accumulators, oils, end-of-life vehicles and also waste containing PCTs and PCBs.

National Programme for Implementation of the Basel Convention for years 2000 - 2005 has been drawn up and is being implemented. The National Waste Management Plan was endorsed by the Government of the Republic on 18 Juni 2002 and was submitted to the Parliament. The National Waste Management Plan includes the same objectives that are laid down in the EU environmental action plans and in the Common Waste Management Strategy/SEC (89)934.

Radiation protection activities are carried out in accordance with the Radiation Act and corresponding international conventions and treaties. Euratom Treaty (1957) serves as the basic document for the radiation protection and nuclear safety.

In Estonia, the radiation protection is aimed at strengthening and implementing a well-functioning national radiation protection infrastructure being compatible with all the international requirements. In 1997 the Radiation Act entered into force the basis of which was Council Directive 96/29/Euratom laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation.

According to the act, the state is responsible for the operation of early warning system of radiation accidents, assessment of radiation level and radiation monitoring.

The development directions on the use of natural resources and environmental protection are summarised in the Environmental Strategy of Estonia (1997) approved by the Parliament. According to the strategy, the national environment policy shall commit to the following ten objectives:

1. raising environmental awareness and promoting environment-friendly consumption patterns;
2. promoting the application of sustainable technologies;
3. reducing the negative impact of energy sector on the environment;
4. improving the air quality, incl. reduction of transport emissions;
5. developing waste management, decreasing the amounts of waste, and promoting waste recycling;
6. clean up of past pollution;
7. sustainable use and protection of groundwater resources;
8. protection of surface water and coastal sea and rational use of water-bodies;
9. preservation of landscapes and biological diversity;
10. modification of the built environment in line with human needs and environmental health requirements.

To achieve these goals, the Estonian Environmental Action Plan was prepared in 1998 (revised in 2001).

4.3.2. ENVIRONMENTAL OBJECTIVES OF THE PROGRAMME

Pursuant to the principle of meeting the environmental objectives and standards on a horizontal basis, this Programme shall be consistent with the general environmental policies of the European Union and Estonia. At the same time, considering the specific aim of the Programme, financial instruments available and implementation deadlines, more concrete environmental objectives for the SPD have been established for the practical reasons.

These objectives shall comply with general environment policy as well as with the available resources and the nature of the measures of the Programme.

The objectives of the Programme for environment policies are summarised below:

- Increasing awareness of the environment and promoting active attitude towards life;
- Securing safety of the environment (air, water, landscape, man-made environment) for human health and wildlife;
- Prevention of environmental emergencies and securing their liquidation, curbing environmental risks;
- Energy saving and employment of renewable energy sources wherever possible;
- Preservation of valuable landscapes and habitats;
- Achieving good status of the environment;
- Adjusting emissions levels to the corresponding requirements;
- Application of environmental management systems and best available technologies;
- Sustainable utilisation of environmental resources (forest, water, fish, natural resources)

As a rule, each of the environmental objectives is simultaneously supported by several measures of the Programme. The strategic integration of the environmental objectives into the Programme is reflected in the outlines of the measures and established eligibility criteria.

Positive impacts expected to occur by default are not considered to be strategic. As a positive strategic aspect, the mitigation of unavoidable negative impacts on the environment is foreseen within relevant measures. The environmental impact assessment carried out on project level ensures the consistency between activities and environmental standards and therefore, this is not dealt with hereafter.

The main relationships between the objectives and measures are shown in Table 57.

Table 57

Relationships between the environmental objectives and measures

Priority	Measure	Increasing awareness of the environment and promoting active attitude towards life	Securing safety of the environment (air, water, landscape, man-made environment) for human health and wildlife	Prevention of environmental emergencies and securing their liquidation, curbing environmental risks	Energy saving and employment of renewable energy sources wherever possible	Preservation of valuable landscapes and habitats	Achieving good status of the environment	Adjusting emissions levels to the corresponding requirements	Application of environmental management systems and best available technologies	Sustainable utilisation of environmental resources (forest, water, fish, natural resources)
Human Resource Development	Educational system supporting flexibility and employability of labour force and providing opportunities of lifelong learning for all (ESF)	+								
Agriculture, Fisheries and Rural Development	Investments into agricultural holdings (EAGGF)		+			+	+	+		
	Investments support for improving processing and marketing of agricultural products (EAGGF)		+		+		+	+		
	Renovation and development of villages (EAGGF)					+	+			
	Support for setting up and provision of farm advisory and extension services (EAGGF)	+								
	Forestry (EAGGF)					+	+			+
	Regulation of the fishing capacity of the fishing fleet									+
	Modernisation and renewal of the fishing fleet						+			
	Investment support measures for fisheries production chain		+		+		+	+		
Infra-structure and Local Development	Development of transport infrastructure (ERDF)		+	+						
	Development of environmental infrastructure (ERDF)	+	+				+	+		+
	Local socio-economic development				+	+				

Within the ***Infrastructure and Local Development*** priority the measure ***Development of environmental infrastructure*** will most immediately aim at achieving the environmental objectives.

The measure for ***Development of transport infrastructure*** will have a considerable environmental impact. Reconstruction of roads and airports will likely increase the negative impact on the environment but applying different project solutions and facilitating the development of public transport could mitigate this. Since negative impacts can only be reduced not avoided, several compensatory measures are to be implemented (such as liquidation of out-of-date and environmentally hazardous infrastructure and past pollution in territories surrounding railroads and roads, in ports and airports; establishing rest areas adjacent to the main roads; waste management, implementation of softening measures for increasing the safety of animals moving near the main roads with high volumes of traffic; establishing noise barriers near the main roads, integrating environment monitoring with the overall monitoring system).

The measures within the ***Agriculture, Fisheries and Rural Development*** priority also have a considerably large environmental effect.

The measure ***Investments into agricultural holdings*** includes activities aimed at developing environmentally sustainable agriculture and preserving traditional cultural landscapes. The activities will contribute to meeting the environmental requirements and help to enhance the competitiveness of agricultural production through supporting sustainable production. From the environmental aspect, support for construction and renovation of animal barns and livestock breeding facilities (incl. water supply and sewerage networks) will be of great importance.

One of the aims of the measure ***Investment support for improving processing and marketing agriculture products*** is ensuring its conformity with environmental and energy conservation requirements – investments aimed at meeting the environmental standards will be supported.

The measure ***Renovation and development of villages*** will also aim to conserve natural and constructional heritage of villages and to improve the outlook of settlements. Among others, activities related to the development of village culture and maintenance of natural and historical values will be supported.

Within the ***Providing support for setting up and provision of farm advisory and extension services*** measure, the vocational skills and competence of persons involved in agriculture and forestry will be improved. It will prepare the agricultural producers for good reorganisation of the production necessary to apply the farming practices that meet the standards of landscape preservation and improvement, and environmental protection.

By promoting sustainable forest management the ***Forestry measure*** will aim at maintaining and developing the economic, ecological and social values and functions of forests.

The measure ***Regulation of the fishing capacity of the fishing fleet*** is to achieve an optimal balance between the capacity of fishing fleet and the available fish resources. ***Modernisation and renewal of the fishing fleet*** introduces selective fishing technologies. ***Investment support measures for fisheries production chain*** aims to reduce level of environmental pressure accompanying the aquaculture and processing of fish. Investments in fishing ports will likely have a positive environmental impact, too.

The necessity to raise awareness on environmental issues is considered throughout the ***Human Resource Development*** priority.

4.4. EMPLOYMENT AND SOCIAL INCLUSION

The general goal of Estonian Single Programming Document is the rapid and sustainable socially and regionally balanced economic development. Focusing on the issues that influence the employment situation in Estonia will play a significant role in achieving this objective.

The principles of the EU Employment Strategy have been taken into account in the preparation of this Programme. Addressing the guidelines ensures the consistency with the Employment Strategy and its objectives and guidelines through the implementation of the agreed national action plans (NAPs).

The National Employment Action Plan is compiled in accordance with the new employment guidelines, involving three overarching objectives of full employment, improving quality and productivity at work and strengthening social cohesion and inclusion. In addition, the Joint Inclusion Memorandum and the National Action Plan on Inclusion serve as a basis for the implementation of the activities aimed at increasing social inclusion.

The main objective of the Estonian Employment Action Plan for 2003 is to improve employability and decrease unemployment by implementing active labour market measures, developing entrepreneurship, encouraging adaptability and promoting equal opportunities policies for women and men.

In order to increase the employability, the measures aimed at creating opportunities for different risk groups (long-term unemployed, young people, elderly, disabled, etc) in accessing to, and participating in the labour market will be further developed.

Other measures involve enhancing entrepreneurship and creating new jobs on both nationaland local level, improvement of the general employment situation by encouraging the use of flexible forms of work and developing the opportunities for lifelong learning and integrating the objective of promoting gender equality into all the programmes, action plans and measures in accordance with the gender mainstreaming principle (see also section 4.5.).

The first overarching objective of full employment is addressed by guidelines 1 and 2 of the new EES. The first guideline of the new European Employment Strategy foresees active and preventative measures for the unemployed and the inactive designed to prevent inflow into long-term unemployment, and to promote the sustainable integration into employment of unemployed and inactive people. These issues will also be addressed when implementing the Human Resource Development priority of the SPD. Measure 1.3 foresees retraining and continuing training (including entrepreneurship training) of the unemployed and job seekers declared redundant, employment aid, and other adapted employment arrangements and the enhancement of the administrative capacity of the employment services.

The second guideline – job creation and entrepreneurship – aims to encourage the creation of more and better jobs by fostering entrepreneurship, innovation, investment capacity and a favourable business environment for all enterprises. Policy initiatives will focus on promoting education and training in entrepreneurial and management skills and providing support, including through training to make entrepreneurship a career option for all. Above all measure 1.2 will foresee ESF support for training of persons employed in enterprises in order to improve and maintain employability, develop entrepreneurship, to promote the conditions facilitating job creation, as well as to boost human potential in research, science and technology. Potential entrepreneurs will be encouraged to start their own business by providing them with necessary business management skills.

The second objective – improving quality and productivity at work – is mainly dealt with guidelines 3 and 4. The fourth guideline is most important for promoting development of human capital and lifelong learning. It foresees implementation of lifelong learning strategies, including through improving the quality and efficiency of education and training systems. All four measures of the first priority are related with adult training and raising persons' competitiveness on the labour market.

Guideline 5 – increase labour supply and promote active ageing – aims to increase labour market participation by using the potential of all groups of the population through a comprehensive approach covering in particular the availability and attractiveness of jobs, making work pay, raising skills, and providing adequate support measures. For promoting active ageing access to continuing training is important. All four measures are supporting raising skills of population. The first measure will provide conditions for lifelong learning, the second one will support the training of persons employed in enterprises, the third one will organise training for unemployed people and measure four will increase professional skills in the public administration. Measure 1.3 foresees implementation of different active labour market measures for risk groups, among them for elderly people.

The third overarching objective of the EES, strengthening social cohesion and inclusion, is targeted by several guidelines and respective activities foreseen in the SPD. Among them, the seventh guideline foresees promotion of the integration of and combatting the discrimination against people at a disadvantage in the labour market. It aims to foster the integration of people facing particular difficulties in the labour market, such as early school leavers, low-skilled workers, people with disabilities, immigrants, and ethnic minorities, by developing their employability, increasing job opportunities and preventing all forms of discrimination against them. Measure 1.3 aims to facilitate access to employment of the most excluded from the labour market. Implementation of active labour market measures is very important especially for risk groups such as young people, the long-term unemployed, disabled people, elderly people and ethnic minorities. Indicative activities will include also supporting work capacity and employability of the most excluded from the labour market through rehabilitation and re-socialisation provisions. Measure 1.1 will foresee vocational pre-training to bring drop-outs back into the education system.

The gender equality principle is followed throughout the SPD. It aims through an integrated approach combining gender mainstreaming and specific policy actions, to encourage female labour market participation and achieve a substantial reduction in gender gaps in employment rates and unemployment rates. Attention will also be given to reconciling work and family life, notably through the provision of accompanying measures, encouraging the sharing of family and professional responsibilities and facilitating return to work after a period of absence. Indicative activities will include diminishing the barriers for women in entering/returning to the labour market and accompanying measures (e.g. day-care for children or dependent elderly) and the promotion of flexible work arrangements enabling the reconciliation of work and family-life (part-time work, tele-working, work with flexible timetable).

4.5. INFORMATION SOCIETY

According to the Lisbon Strategy objectives laid down in March 2000 by the European Council, the Strategy aims to make European Union the world's most innovative and knowledge-based economic region by 2010.

As a means for achieving this goal the EU has given a priority to the development of innovation and of information society based on elaboration and adoption of new technological solutions. Following the Lisbon Strategy, the **e**-Europe 2005 action plan co-ordinated by the European Commission aims to stimulate the take-up of internet services and other IT applications based on a widely available broadband infrastructure in both economy and the whole society.

The national strategic action plans for developing information and communication technologies (ICT) are grounded in the Principles of Estonian information policy approved by the Parliament, and the implementation plans for the Estonian information policy annually revised by the Government.

The Estonian R&D strategy – ***Knowledge-based Estonia 2001-2006*** – approved at the Parliament on 06 December 2001 highlights supporting user-friendly information and communication technologies and the development of information society as one of the three key areas to be promoted.

The objective of the strategy is to support the development of information society through elaboration and widespread take-up of innovative technologies aimed at shaping a competitive economic and living environment and achieving a forefront position in take-up of new technologies of user-friendly society.

These information society driven objectives will contribute to Estonia's active participation in implementing the EU Lisbon Strategy and achieving the goals of the **e**-Europe 2005. At the same time, they are consistent with the criteria applied to the ERDF support for the development of information society during the period 2000-2006.

Information society policies are being implemented as horizontal policies. However, the successful implementation of the policies depends on the presence of a functioning central co-ordinating body. Pursuant to the Government of the Republic Act, the Department of State Information Systems (RISO) in the Ministry of Transport and Communications (as of 1st Nov - the Ministry of Economic Affairs and Communications) is responsible for implementation of information technology policy and preparation of respective action plans.

Based on the **e**-Europe 2005 action plan as well as on the Estonian information policy documents and strategies, each year RISO prepares the Implementation Plan for the Estonian information policy to be endorsed by the Government.

The measure ***Information society development*** will serve as a major tool for implementation of the priorities established in the Plan. Above all, this shall ensure the co-ordination of the public procurements and take-up of ICT. Within the framework of the measure, a national technology programme will be launched being the key mechanism in horizontal co-ordination of Estonian information policy.

Several other measures in the Programme will contribute to the rapid development of information society. As one of the key areas to be promoted, ICT related research and development activities and innovation will be supported within the measures ***Promotion of research, technology development and innovation*** implemented in accordance with the strategy for Knowledge-based Estonia 2001-2006. Within the ***Tourism development*** measure tourism information systems and information management will be further developed. The measure ***Renovation and development of villages*** will support the construction and furnishing of public Internet centres in rural areas making the internet services more easily accessible than before.

The promotion of the information society is a horizontal issue in Priority 1.

4.6. EQUAL OPPORTUNITIES

The Programme will place a special emphasis to the promotion of equal opportunities for women and men that shall be pursued on a horizontal basis across the priorities and measures. In particular, the Programme commits to the mainstreaming approach to equal opportunities by recognising the potential of Structural Funds in helping to overcome the existing inequalities between women and men.

Equality for men and women is a basic democratic principle underpinned by the Treaty of Amsterdam. Its incorporation into all policies is no longer an option but an obligation. In this context, an overall mainstreaming approach for equal opportunities must be introduced into all Structural Funds programming[50].

Gender mainstreaming is defined by the European Union as ensuring that all general measures and operations openly and actively take into account – during planning, implementation, monitoring and evaluation – their effects on the respective situations of women and men. It also involves the complementary design, implementation, monitoring and evaluation of specific measures and operations to promote equality and to assist women to participate and benefit equally[51].

The commitment to gender mainstreaming will be reflected through the following objectives of the Programme:

- Systematic use of gender-disaggregated indicators for evaluation and monitoring, and setting quantified targets broken down by gender wherever feasible;
- Taking into account the principle of gender mainstreaming at all approriate levels (in particular, measure or project level); implementing special measures to promote gender equality and establishing project selection criteria and procedures in all relevant cases (for more detailed information, see Programme Complement);
- Promoting a balanced representation of women and men as members of the Monitoring Committee and other representative bodies involved in management and monitoring of the Programme;

Gender-disaggregated **indicators** and **targets** will be used for each relevant measure on the basis of its intended contribution to employment effects or the particular situation of a target group. The targets to be achieved will be established in such a way that a measure would promote gender equality in accessing to education and training, the labour market as well as to career and business development opportunities.

The programme will promote equal opportunities for women and men on the labour market by addressing the most persistent problems of gender inequality in Estonia through, above all, the implementation of active labour market measures and development of educational system.

Gender mainstreaming issues will be more thoroughly highlighted in the Programme Complement in all relevant measures where promoting gender mainstreaming is addressed as one of the horizontal objectives.

In Estonia, unemployment is slightly higher among men. However, after losing job women tend to leave the labour more frequently than men and become inactive. The levels of female economic activity are lower, especially so in rural areas. Non-flexible patterns of work adopted in companies and the lack of work-home reconciliation strategies by employers prevent many women from accessing to suitable jobs.

Within the measure ***Inclusive labour market*** a special attention will be paid to the obstacles hindering both women's return to the labour market and finding a job (e.g. training provided for women returning from the maternity leave, support for employers who hire a pregnant employee or employee raising a small child, etc). Awareness rising among employers on the benefits of developing flexible work arrangements aimed at balancing work and family life will be encouraged (disseminating best practice, arranging seminars etc). in the context of measure 1.2. In order to increase the effectiveness of the activities targeted to increasing the female labour force participation, simultaneous provision of accompanying measures such as child and elderly care services will be arranged.

Gender gaps still exist in obtaining education. In basic education, more than half of the students who drop out are boys and generally, women are better educated than men in Estonia. Boys tend to drop out of primary school almost twice as often as girls. Within the measure ***Educational system supporting the flexibility and employability of the labour force and providing opportunities of lifelong learning for all***, activities aimed at preventing and decreasing the drop-outs are foreseen taking into account the situation and needs of both gender.

The share of women among entrepreneurs is relatively small. The measure *Human resource development increasing the competitiveness of enterprises* will address the issue by providing special training courses for women who are about to start with a firm.

4.7. COMMON AGRICULTURAL POLICY AND EUROPEAN FORESTRY STRATEGY

In addition to the main objectives of the CAP to increase agricultural productivity and to ensure the fair standard of living of agricultural producers, the increasing attention is paid to rural development, food quality, environment protection and animal welfare. These objectives conform to the objectives of the measures of Estonian agricultural policy. The measures under SPD will complement the above mentioned objectives by investment supports to develop agricultural holdings and processing industry and development of villages.

The more detailed information about the relation and complementarity between accompanying measures of CAP and rural development measures in current SPD is given in Rural Development Plan 2004-2006 in section 6.10.

With regards to the new development of CAP, also some elements of the new CAP reform have been integrated into SPD, for example advisory services and training regarding CAP and CAP-related topics (cross compliance, etc.) will be supported under a special measure.

About forestry, all the activities that are planned under Forestry measure are in accordance with the EU Forest Strategy and with the Estonian Forest Development Plan. According to the Forest Strategy the attention should be put to the sustainable forest management in rural areas to ensure at the same time employment and other important forest functions and values.

4.8. COMMON FISHERIES POLICY

The Common Fisheries Policy (CFP) covers conservation, management and sustainable exploitation of living aquatic resources, aquaculture, and the processing and marketing of fishery and aquaculture products, where such activities are practiced on the territory of Member States or in the Community waters or by Community fishing vessels. The objective of the Common Fisheries Policy is to insure sustainable development of fisheries at the same time maintaining the balance of environmental, economic and social aspects. The primary focus of fisheries measures is on the adjustment of fishing capacity and bringing all the links in the fish-handling chain (vessels, ports, industries) into conformity with food safety, occupational safety and environmental protection requirements. Establishment of fish and crayfish farms will also be supported to compensate for decreasing fishing capacities and diversify the economic basis of rural life. The marketing of fish products will be facilitated to improve access to the markets. Accompanying social measures will be implemented for the fishermen affected by the restructuring of the fisheries sector.

Fisheries measures under the SPD Priority Agriculture, fisheries and rural development are based on, and therefore, in full conformity with, the structural policy of the CFP described above. The interventions concerning the protection of aquatic resources, aquaculture, processing and marketing, and inland fisheries are aimed at achieving sustainable economic effects. The envisaged structural actions are planned to give a sufficient guarantee of technical and economic viability and particularly avoid the risk of creating any production over-capacity.

4.9. COMPETITION POLICY

The consistency of the SPD with the EU competition policy is followed both on the strategic level and on the project level. While ensuring conformity of single projects with the horizontal policies of the community is dealt with in p.7.3.2 below, the strategic level is discussed here.

State aid and public procurement are the areas of the EU competition policy that must be observed in implementing the Structural Funds.

Consistency of the SPD with the state aid rules is ensured through following conditions:

- The implementation system of the SPD ensures that the state aid notification procedure foreseen by Article 88 of the EC Treaty will be followed;
- The measures that contain state aid follow the requirements of Article 87 of the EC Treaty allowing only such kind of state aid that may be considered to be compatible with the common market;

- The measures that involve state aid will be implemented respecting intensity rates and other restrictions established for granting state aid;

Article 87 (3) of the EC Treaty defines state aid that may be considered compatible with the common market, particularly:

(a) aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment;

(b) aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State;

(c) aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest.

Under the measures outlined in the SPD only ***deminimis*** aid or the categories of state aid which fall under the above-mentioned categories of aid are foreseen to be granted, namely aid in favour of:

- horizontal objectives:
  - small and medium-sized enterprises (SME)
  - research and development
  - environmental protection
  - employment
  - training
- regional objective.

In addition, state aid to agriculture and fisheries will be provided in accordance with Article 36 of the EC Treaty.

The entire territory of Estonia is regarded as an Objective 1 area what allows Estonia to provide maximum permissible intensities of state aid.

Public participation in financing operations under SPD measures will be done in accordance with state aid rules and regional aid map for Estonia.

The obligation of ensuring that state aid schemes and ***ad hoc*** aid implemented within the framework of the SPD would, according to Community rules, be notified to the Commission and its approval received before actual implementation of measures, lies with the SPD Managing Authority - the Ministry of Finance. In cases when schemes falling under the SME, training and employment block exemption regulations are used prior to accession, such schemes should be notified to the Commission under the Interim Procedure.

Public procurement policy is related to the SPD only on the level of implementation. Completion of the harmonisation of the Public Procurement Act of Estonia and secondary legislation in this field will be achieved in 2003. The State Public Procurement Register will start to use standard forms from 1 January 2004. Upon accession Estonia will carry out all public procurement incl. implementing the assistance from the Structural Funds for the SPD in full compliance with the EU directives.

4.10. DOMESTIC REGIONAL DEVELOPMENT POLICY

The Government of the Republic has set down the general goals of the Republic of Estonia related to regional development in the ***Guidelines of Regional Policy (***13/12/1994***),*** in the ***Regional Development Strategy*** (16/11/1994) and in the ***National Spatial Planning Document "Estonia 2010" (***19/09/2000).

The comprehensive goals set in the aforementioned documents are the following:

1. Ensuring of spatial accessibility necessary for meeting of basic human needs everywhere in Estonia. This goal aims to foster balanced settlement patterns and regional development through improving the freedom of mobility of the inhabitants, guaranteeing the diverse options and the quality of living environment, and providing additional options related to employment, education, services and recreational activities (including self-educating).
2. Improving the competitiveness of all regions of Estonia. Achieving the goal requires diminishing of time-space distances within the country, an improved utilisation of the specific regional advantages and potentials, and strengthening of both regional as well as cross-border co-operation between localities.
3. Strengthening the spatial connections of Estonia to the rest of Europe. A prerequisite of this task is to improve the transportation and communications between Estonia and Europe.

The first regional development goal supports the pursuit of the most general goal set in the present SPD through aiming at a balanced regional and social distribution of the benefits of economic development. The latter two aims support the general goal through fostering economic development and increasing its sustainability.

Balanced settlement patterns and regional development are largely influenced by the availability of means of transportation (Measure 4.1), by vocational and higher education opportunities (Measure 4.3), by tourism (Measure 2.4), by local living environment (Measure 4.6) and by support provided to encourage entrepreneurship (Measures 2.1, 2.2, 3.1, 3.2 and 3.3). To ensure the positive impact of the mentioned measures, it is important, when granting aid, to take into account not only the specific aims of the measures, but also the investment needs of the less developed regions. Grants for entrepreneurship in the fishery sector have considerable impact on maintaining the settlement patterns in the coastal regions and in Western-Estonian islands. Balanced regional development is further supported by active implementation of labour market measures in problematic regions and the enhancement of the role of Tartu as the second-largest centre in Estonia by promoting research and development activities. The impact of all the other measures on the achievement of balanced settlement patterns and regional development is presumably more modest.

The pursuit of the goal of raising the competitiveness of different regions in Estonia is further (in addition to aforementioned measures) supported by the development of environmental infrastructure (Measure 4.2) and educational system (Measure 1.1) as well as by encouraging social inclusion (Measure 1.3). In order to ensure the positive impact of all the aforementioned measures it is necessary to guarantee the correspondence of the provided grants with the long-term development priorities of the particular region. In order to develop transport infrastructure, the first priority should be to improve the transport connections between county centres. Restoration and development of villages (Measure 3.5), strengthening local initiatives in rural areas (Measure 3.6) and developing fishing ports (Measure 3.11) have positive impact on achieving the set goals as well. Yet, due to the relatively small amount of funds granted for the implementation of these three measures, the impact is likely to be modest or become manifest only in a few regions. The impact of other measures on the improvement of competitiveness of regions is expected to be relatively weak.

In addition to the Objective 1 SPD measures, strong impact on the competitiveness of regions is expected from implementation of Interreg programmes and the grants in environment sector of the Cohesion Fund. The grants provided for the transport sector by the Cohesion Fund are directly targeting the spatial connections of Estonia with Europe.

5. FINANCING

5.1. FINANCIAL PLAN

The financial plan is presented in Table 58. Only eligible expenditure is indicated in the table.

The contribution rate for ERDF, ESF and EAGGF is calculated in relation to eligible public expenditure. The contribution rate for FIFG is calculated in relation to the total eligible cost.

According to Article 29 (3) (a) of the Council Regulation (EC) No 1260/1999 "the contribution of the Funds shall be subject to ... a maximum of 75% of the total eligible cost" and "the Community contribution may rise in exceptional and duly justified cases to a maximum of 80% of the total eligible cost". On the basis of this rule, in the few cases where Estonia applies an 80% Community contribution rate, the justification is explicitly mentioned either in the introduction to each priority and/or in the relevant measure.

The Managing Authority will check that in any case the contribution of the Funds will comply with the provisions set up in Article 29 (4) of the Council Regulation (EC) No 1260/1999 of 21 June 1999 and, in particular, with ceilings set up in case of investment in infrastructure generating substantial revenue and in case of investment in firms.

Table 58

Financial table for the Estonian SPD by priority and year

Priority/Year	Total eligible cost	Public							Private eligible cost
		Total public eligible cost	Community participation					National public participation	
			Total	ERDF	ESF	EAGGF	FIFG		
	1	2	3	4	5	6	7	8	9
Priority 1: Human Resource Development	99,290,890	99,290,890	76,120,100	0	76,120,100	0	0	23,170,790	0
Total ESF related	99,290,890	99,290,890	76,120,100	0	76,120,100	0	0	23,170,790	0
2004	24,174,376	24,174,376	18,532,978	0	18,532,978	0	0	5,641,398	0
2005	32,640,916	32,640,916	25,023,744	0	25,023,744	0	0	7,617,172	0
2006	42,475,598	42,475,598	32,563,378	0	32,563,378	0	0	9,912,220	0
Priority 2: Competitiveness of Enterprises	97,583,884	97,583,884	73,187,913	73,187,913	0	0	0	24,395,971	0
Total ERDF related	97,583,884	97,583,884	73,187,913	73,187,913	0	0	0	24,395,971	0
2004	23,758,748	23,758,748	17,819,061	17,819,061	0	0	0	5,939,687	0
2005	32,079,727	32,079,727	24,059,795	24,059,795	0	0	0	8,019,932	0
2006	41,745,409	41,745,409	31,309,057	31,309,057	0	0	0	10,436,352	0
Priority 3: Agriculture, fisheries and rural development	109,526,615	97,166,615	69,267,700	0	0	56,798,282	12,469,418	27,898,915	12,360,000
2004	29,750,913	24,138,913	17,144,363	0	0	13,061,751	4,082,612	6,994,550	5,612,000
2005	34,994,271	31,740,271	22,630,983	0	0	18,621,486	4,009,497	9,109,288	3,254,000
2006	44,781,431	41,287,431	29,492,354	0	0	25,115,045	4,377,309	11.795,077	3,494,000
Total EAGGF related	78,758,218	78,758,218	56,798,282	0	0	56,798,282	0	21,959,936	0
2004	18,111,820	18,111,820	13,061,751	0	0	13,061,751	0	5,050,069	0
2005	25,821,116	25,821,116	18,621,486	0	0	18,621,486	0	7,199,630	0
2006	34,825,282	34,825,282	25,115,045	0	0	25,115,045	0	9,710,237	0
Total FIFG related	30,768,397	18,408,397	12,469,418	0	0	0	12,469,418	5,938,979	12,360,000
2004	11,639,093	6,027,093	4,082,612	0	0	0	4,082,612	1,944,481	5,612,000
2005	9,173,155	5,919,155	4,009,497	0	0	0	4,009,497	1,909,658	3,254,000
2006	9,956,149	6,4,62 149	4,377,309	0	0	0	4,377,309	2,084,840	3,494,000

Priority 4: Infrastructure and local development	181,853,156	181,853,156	138,150,693	138,150,693	0	0	0	43,702,463	0
Total ERDF related	181,853,156	181,853,156	138,150,693	138,150,693	0	0	0	43,702,463	0
2004	43,918,513	43,918,513	33,364,134	33,364,134	0	0	0	10,554,379	0
2005	59,958,853	59,958,853	45,549,702	45,549,702	0	0	0	14,409,151	0
2006	77,975,790	77,975,790	59,236,857	59,236,857	0	0	0	18,738,933	0
Priority 5: Technical assistance	19,516,061	19,516,061	14,637,046	14,637,046	0	0	0	4,879,015	0
Total ERDF related	19,516,061	19,516,061	14,637,046	14,637,046	0	0	0	4,879,015	0
2004	4,751,576	4,751,576	3,563,682	3,563,682	0	0	0	1,187,894	0
2005	6,415,709	6,415,709	4,811 782	4,811,782	0	0	0	1,603,927	0
2006	8,348,776	8,348,776	6,261,582	6,261,582	0	0	0	2,087,194	0
Total	507,770,606	495,410,606	371,363,452	225,975,652	76,120,100	56,798,282	12,469,418	124,047,154	12,360,000
Total ERDF related	298,953,101	298,953,101	225,975,652	225,975,652	0	0	0	72,977,449	0
Total ESF related	99,290,890	99,290,90	76,120,100	0	76,120,100	0	0	23,170,790	0
Total EAGGF related	78,758,218	78,758,218	56,798,282	0	0	56,798,282	0	21,959,936	0
Total FIFG related	30,768,397	18,408,397	12,469,418	0	0	0	12,469,418	5,938,979	12,360,000
2004	126,354,126	120,742,126	90,424,218	54,746,877	18,532,978	13,061,751	4,082,612	30,317,908	5,612,000
2005	166,089,476	162,835,476	122,076,006	74,421,279	25,023,744	18,621,486	4,009,497	40,759,470	3,254,000
2006	215,327,004	211,833,004	158,863,228	96,807,496	32,563,378	25,115,045	4,377,309	52,969,776	3,494,000

(euros – current prices)

5.2. ADDITIONALITY

The verification of additionality is to take place at two points in time for the programming period 2004-2006: ex ante and at the end of the period.

5.2.1. EX ANTE VERIFICATION

As indicated in Table 59 on the basis of information provided by the Estonian authorities, the Commission services and the Estonian authorities have determined the annual average of national public eligible expenditure to be maintained in the period 2004-2006 in the sum of all Objective 1 regions at 352.38 million euro (at 1999 prices). This is an increase of 18% compared to the average expenditure of the reference period . The reference period is defined as the average of the two most recent years for which final spending figures are available. In the case of Estonia these are 2000-2001.

The Estonian authorities will provide the Commission with appropriate information and inform the Commission at any point during the programming period of developments likely to call into question its ability to maintain this level of expenditure.

The decrease in expenditure can be justified on the basis of the specific circumstances of privatisation/ an exceptional level of public structural expenditure undertaken in the reference period/ national economic trends.

5.2.2. VERIFICATION AT THE END OF THE PERIOD

A verification shall take place before 31 December 2007. Additionality is regarded as verified if the annual average of national public eligible expenditure in the years 2004 to 2006 has at least reached the level of expenditure agreed on ex ante. The submission of no or methodologically insufficient information shall be regarded as non-compliance. Therefore, the [Estonian] authorities will present information according to the following calendar:

- by 31 July 2007: presentation of aggregate and annual tables with final data on the years 2004 and 2005 as well as provisional data for the year 2006;
- by 31 October 2007: if necessary, methodological improvements on the basis of the Commission's comments;
- by 31 December 2007: deadline for the submission of any additional information.

The Estonian authorities will inform the Monitoring Committee of the results of the verification which will be taken into account in the preparations of the subsequent programming period.

Table 59

Public or other equivalent structural expenditure in the Estonian Objective 1 regions

(mln euros, 1999 prices)

	Annual average 2000-2001						Annual average 2004-2006					
	Total [1]	of which: public enterprises[2]	SPD		Not EU co-financed	Total	Total	of which: public enterprises[2]	SPD		Not EU co-financed	Total
	Nat+EU	Nat	EU	Nat	Nat	Nat	Nat+EU	Nat	EU	Nat	Nat	Nat
1	2	3	4	5	6	7=2	8	9	10	11	12	13=11+12=8-10
1. Basic infrastructure	207.13	125.47			207.13	207.13	250.81	141.92	16.52	5.51	228.78	234.29
Transport	66.13	31.09			66.13	66.13	81.96	35.17	7.16	2.39	72.41	74.8
Telecommunication	8.71	0.00			8.71	8.71	11.57	0	1.71	0.57	9.29	9.86
Energy	94.47	94.38			94.47	94.47	106.85	106.75	0.00	0.00	106.85	106.85
Environment & water	17.86	0.00	NOT	NOT	17.86	17.86	22.59	0	2.39	0.80	19.40	20.2
Health	19.97	0.00			19.97	19.97	27.85	0	5.27	1.76	20.82	22.58
2. Human resources	61.17	0.00	APPLICABLE	APPLICABLE	61.17	61.17	98.31	0	27.89	9.30	61.12	70.42
Education	41.96	0.00			41.96	41.96	61.03	0	13.57	4.52	42.94	47.46
Training	3.95	0.00			3.95	3.95	12.58	0	6.88	2.29	3.41	5.7
RTD	15.27	0.00			15.27	15.27	24.69	0	7.43	2.48	14.78	17.26
3. Productive environment	30.55	0.00			30.55	30.55	68.40	0	23.97	7.99	36.44	44.43
Agriculture, rural development, fisheries	8.11	0.00			8.11	8.11	36.43	0	17.37	5.79	13.27	19.06
Industry and Services	9.16	0.00			9.16	9.16	14.22	0	3.87	1.29	9.06	10.35
Tourism	13.28	0.00			13.28	13.28	17.75	0	2.73	0.91	14.11	15.02
4. Other	0.00	0.00			0.00	0.00	6.05	0	2.81	0.94	2.30	3.24
Total	298.85	125.47	0	0	298.85	298.85	423.56	141.92	71.18	23.73	328.65	352.38

[1] Including national co-financing of Pre-Accession Instruments

2 The public enterprises included are following: Eesti Energia (Estonian Energy) , Eesti Raudtee (Estonian Railway), Elektriraudtee (Electric Railway), Tallinna Sadam (Port of Tallinn), Tallinna Lennujaam (Tallinn Airport)

6 EX ANTE EVALUATION OF THE MACROECONOMIC IMPACTS OF THE PROGRAMME

6.1. INTRODUCTORY REMARKS

This chapter presents a macroeconomic ex ante evaluation of the SDP impacts. The analysis is based on the Estonian version of the HERMIN model. To the extent that the Estonian HERMIN model provides a credible representation of the way in which CSF-type policies are likely to affect the economy, some reasonably robust quantitative conclusions concerning SPD impacts can be inferred. The model can be used to explore the extent that the aggregate SPD 2004-06 may have a greater impact than the sum of its individual parts, due to the existence of spill-over and externality effects that are difficult to conceptualise and measure at the more disaggregated level of analysis.

While the model-based macroeconomic analysis holds out the promise of quantification of SPD impacts, it is important not to over exaggerate the potential of this complex methodology. The manner of incorporating the SPD investment mechanisms into the HERMIN model draws on very recent economic research that itself has only begun to address the questions of the relationship between increased public investment and the consequences for economic growth and development. Consequently, the present analysis should be regarded as preliminary and exploratory.

In the light of the above observations, this report is structured in a way that contains some explanatory background material in order to provide a context for the model simulations. The model should not be regarded as a "black box", but that the nature and implication of the simulations should be explained in terms of the underlying mechanisms that operate within the model[52].

In what follows, first the summary is given of how the detailed SPD policy initiatives were aggregated into three main categories mentioned above: namely, physical infrastructure, human resources and direct aid to productive sectors. The policy initiatives supported by the Cohesion Fund are all classified as investment in physical infrastructure, and as such analysed as a part of the SPD. Below, we refer to the SPD 2004-06 as aggregate programme supported by the Cohesion Fund and the Structural Funds. Then, the methodology for arriving at a quantification of SPD impacts is described. It needs to be stressed that a crucial assumption was made regarding the magnitudes of the externality or spill-over parameters that capture the effectiveness of the SPD in terms of its long-term impacts on the level of activity and productivity. The higher the values that were assumed for these parameters, the better the likely long-term SPD impacts on the level of activity and productivity. Due to the absence of empirical studies of the impacts of infrastructure and human capital on the performance of the Estonian economy, it was impossible to select parameter values with any degree of precision. However, evaluation provides the best use of existing research findings, and attempts to isolate results that are most relevant to the Estonian economy, even when the published research was based on other regions and countries.

The report is concluded with presenting the results of the simulations of the impact of SPD-related investments and other expenditures on the Estonian economy for the period 2004-2015, i.e., for nine years after the SPD terminates in 2006. For purely technical reasons we made an explicit stylised assumption that no financing will be made apart from the initial 2004-06 SPD programme. However, it is very unlikely that there will be no follow-up programme.

6.2. AGGREGATING THE SPD INVESTMENT PROGRAMMES

Before any macroeconomic evaluation of the SPD can take place, the individual investment and other programmes need to be amalgamated into more aggregate economic categories. There are various reasons for this. First, although it is necessary to present the SPD in great administrative detail for the purposes of organisation and implementation, there is less rationale for this detail from an economic impact evaluation perspective. Second, if we aggregate the SPD expenditures into economically meaningful categories, we can make use of research on the impacts of public investment on the performance of the private sector.

The most useful and logical categories for aggregating the SPD are as follows:

1) Investment expenditures on physical infrastructure;
2) Investment expenditure on human resources;
3) Expenditures on direct production/investment aid to the private sector (i.e., manufacturing, market services and agriculture).

For each of these economic categories of SPD investment expenditure, there are three possible sources of funding:

1) EU transfers in the form of subventions to the domestic public authorities, as set out in the NDP treaties;
2) Domestic public sector co-financing, as set out in the NDP treaties;

3) Domestic private sector co-financing, as set out in the NDP treaties.

Below we show the SDP financing Table 60 that reflects the classification presented above. It takes into account both Structural Fund and Cohesion Fund investments:

Table 60

Division of financing of Estonian SPD 2004-06

(thousand euro)

	EU FINANCING			Domestic Public financing			Domestic Private Financing		
	2004	2005	2006	2004	2005	2006	2004	2005	2006
IGFCSF	68,445	143,871	252,622	15,211	30,932	53,463	0,0	0,0	0,0
GTRSF	22,739	30,703	39,954	4,819	6,506	8,467	0,0	0,0	0,0
TRIT	11,374	15,358	19,985	2,844	3,839	4,996	0,0	0,0	0,0
TRIN	7,509	10,138	13,193	1,877	2,535	3,298	0,0	0,0	0,0
TRIA	11,476	15,950	19,869	3,834	4,772	5,864	5,271	3,341	3,753

IGFCSF is investment expenditure on infrastructure; GTRSF is investment expenditure on human resources; TRIT, TRIN and TRIA are expenditures on direct aid to private sector.

6.3. AN SPD IMPACT QUANTIFICATION METHODOLOGY

SPD investment programmes influence the economy through a mixture of supply and demand effects. Short term demand (or Keynesian) effects arise in the models as a consequence of increases in the expenditure and income policy instruments associated with SPD policy initiatives. Through the "multiplier" effects contained in the Estonian HERMIN model, there will be knock-on changes in all the components of domestic expenditure (e.g., total investment, private consumption, the net trade surplus, etc.) and the components of domestic output and income.

These demand effects are of transitory importance and are not the **raison d'etre** of the SPD, but merely a side-effect. Rather, the SPD interventions are intended to influence the long-run supply potential of the economy. These so-called "supply-side" effects arise through policies designed to:

1) increase investment in order to improve physical infrastructure as an input to private sector productive activity;
2) increase in human capital, due to investment in training, an input to private sector productive activity;
3) channel public funding assistance to the private sector to stimulate investment, thus increasing factor productivity and reducing sectoral costs of production and of capital.

Thus the SPD interventions are designed in order to improve the aggregate stock of public infrastructure and of human capital, as well as the private capital stock. Providing more and better infrastructure, increasing the quality of the labour force, or providing investment aid to firms, are the mechanisms through which the SPD improves the output, productivity and cost competitiveness of the economy. In a certain sense, these policies create conditions where private firms enjoy the use of additional productive factors at no cost to themselves. Alternatively, they may help to make the current private sector inputs - that firms are already using - available to them at a lower cost, or the general conditions under which firms operate are improved as a consequence. In all these ways, positive externalities may arise out of the SPD interventions.

Recent advances in growth theory have addressed the role of spill-overs or externalities which arise from public investments, for example in infrastructure or in human capital. Furthermore this literature has investigated how technical progress can be affected directly through investment in training, research and development. Here too externalities arise when innovations in one firm are adopted elsewhere, i.e., when such innovations have public good qualities.

Two types of beneficial externalities are likely to enhance the mainly demand-side (or neo-Keynesian) impacts of well designed investment, training and aid policy initiatives. The first type of externality is likely to be associated with the role of improved infrastructure and training in boosting output directly. This works through mechanisms such as attracting productive activities through foreign direct investment, and enhancing the ability of indigenous industries to compete in the international market place. We refer to this as an ***output externality*** since it is well known that the range of products manufactured in developing countries changes during the process of development, and becomes more complex and technologically advanced.

The second type of externality arises through the increased total or embodied factor productivity likely to be associated with improved infrastructure or a higher level of human capital associated with training and education. We

refer to this as a ***factor productivity externality***. Of course, a side effect of increased factor productivity is that, in the restricted context of fixed output, labour is shed. The prospect of such "jobless growth" is particularly serious in Estonia where the recorded rate of unemployment as well as the rate of hidden unemployment is already very high and rising. Thus, the factor productivity externality is a two edged process: industry and market services become more productive and competitive, but labour demand is weakened if output is fixed. However, on the plus side, factor productivity is driven up, real incomes rise, and these effects cause knock-on multiplier and other benefits throughout the economy. Consequently, the role of the output externality is more unambiguously beneficial: the higher it is, the faster the period of transitional growth to a higher income plateau. Taken together, these two externality effects have the potential to produce beneficial impacts in terms of an increased level of economic activity and increased employment.

The elasticities, particularly in relation to infrastructure, have been chosen on the basis of an exhaustive literature review (details of which are available in a separate paper). The empirical literature suggests that the values for the elasticity of output with respect to increases in infrastructure are likely to be in the region between 5 and 40 per cent, with Estonia probably characterised by values nearer the upper end of the scale. With respect to human capital, elasticities in the same range also appear reasonable.[53] Elasticities for improvements in labour productivity in manufacturing and market services are 0.2 and 0.1, respectively. The difference in magnitude between the output externality elasticities and the factor productivity elasticities reflect specific characteristics of the existing human capital in Estonia (see Ch.1.3).

How enduring are the beneficial externality elasticities likely to be? The infrastructure deficit in Estonia is known to be very large, as documented in the draft Estonian SPD document, and is unlikely to match up to the level pertaining in the more developed EU countries until well after the year 2015. Given this fact, as well as the fact that there are substantial returns to the elimination of bottlenecks which will take some time to accomplish, it is quite reasonable to expect that the chosen elasticities will capture the benefits properly over the time period for which the simulations have been carried out, i.e., 2004-2015. For the same reasons it is unlikely that diminishing returns will set in.

6.4. SIMULATING THE MACROECONOMIC IMPACTS OF SPD 2004-06

6.4.1. METHODOLOGY AND ASSUMPTIONS

The SPD consists of major public investment programmes aimed at improving the quality of physical infrastructure, human resources (or human capital), as well as providing direct grant aid to the three main productive sectors (manufacturing, market services and agriculture). In this section we analyse the impacts of the SPD on a range of macroeconomic and macro-sectoral variables with the aid of the new Estonian HERMIN model.

The context in which we execute this macro-sectoral impact evaluation exercise is as follows:

1) A model simulation is carried out starting in the year 2001, i.e. three years before this SPD is to be implemented. The simulation is continued out to the year 2015. For this baseline simulation, the SPD expenditures are set at zero, and a series of other forecasting assumptions is made regarding the external environment for Estonia and the non-SPD Estonian policy environment. No other changes are introduced, and no attempt is made to design a "substitute" domestically funded public investment programme that would have replaced a "missing" SPD. This is a very artificial assumption, since in the absence of the SPD there almost certainly would have been a substitute domestically funded public investment programme, albeit smaller in magnitude.

2) Then, a second simulation is carried out where the SPD investment expenditures are set at their actual values. It is assumed that the following nine-year period will consist in two parts. First, the assumption is that SPD expenditures will be absorbed at latest in 2008. Second, it is assumed that SPD co-financing domestic public investment expenditures will terminate completely after SPD termination, and return to its pre-SPD level.

3) The SPD 2004-06 policy shocks are "extracted" by comparing the "with-SPD" simulation and the "without SPD" simulation.

4) Experiment is carried out with two versions of the SPD. The first (referred to as the "total" SPD) includes EU, local public and private co-finance. The second (referred to as the "EU" SPD) includes EU finance only.

5) It might be held that, in the presence of such large-scale public policy shocks, the underlying structure of the economy would change and that the use of Estonian HERMIN model calibrated with SPD-inclusive data is invalid (the so-called "Lucas critique" of the use of econometric models to analyse policy impacts). However, the Estonian HERMIN model contains explicit sub-models of the structural changes that are associated with the operation of the SPD, so the validity of the Lucas critique is weakened.

To assist in the interpretation of the CSF simulation results, it is useful to keep some summary measures in mind. The total size of the SPD relative to GDP is shown in Table 61. The actual SPD stops in 2006. We assume that the absorption capacity in Estonia will increase gradually, reaching its maximum in 2006. In particular, the following absorption distribution is assumed:

In 2004 -1/3 of 2004 planned SPD financing
In 2005 - 2/3 of 2004 planned SPD financing
In 2006 - 2/3 of 2005 planned SPD financing
In 2007 - 1/3 of 2005 planned financing plus 2/3 of 2006 planned financing
In 2008 - 1/3 of 2006 planned financing.

No explicit assumption is made regarding probable SPD follow-ups. We assume that the programming period ends in 2006, but expenditures of the funds received in 2006 will be absorbed in 2007 and 2008. However, it is useful to keep in mind that it is likely that SPD 2004-2006 will be followed up by another SPD or other strategic document where the proportions of co-financing expenditures will be at least sustained at their SPD 2004-06 level. The SPD expenditures have been calculated in national currency (kroon). In terms of the size of the investment shock, the "total" SPD is the largest of variants, since it includes the EU, the domestic public co-finance and the domestic private co-finance. At its peak in the year 2006 the size of the increased investment is assumed at 4.32 per cent of GDP.[54] The EU SPD shock is an intermediate case (3.51 per cent of GDP at its peak), and the "Public" SPD is the smallest (0.77 per cent of GDP at its peak).

Table 61

SPD expenditure expressed as a percentage of GDP

	Total SPD	EU SPD	Public SPD
2003	0.00	0.00	0.00
2004	1.89	1.48	0.35
2005	2.98	2.40	0.54
2006	4.32	3.51	0.77

A measure of the growth in the stock of physical infrastructure relative to the case where there had been no SPD (i.e., the no-SPD baseline), denoted by KGINFR, is shown in Table 62. A measure of the growth in the "stock" of human capital relative to its non-SPD baseline (KTRNR), is also shown in Table 62.[55] The increases in the stock of physical infrastructure and in the stock of human capital are similarly ranked. Thus, by the year 2010 the stock of infrastructure increases by 11.66 per cent relative to the no-SPD baseline, and the stock of human capital by 1.49 per cent, as a result of the "total" SPD shock.

Table 62

Percentage increase in stock of physical infrastructure and stock of human capital relative to the no-SPD baseline stock

(%)	Total SPD		EU SPD	
	KGINFR	KTRNR	KGINFR	KTRNR
2003	0.00	0.00	0.00	0.00
2004	1.10	0.17	0.90	0.14
2005	2.96	0.48	2.42	0.39
2006	6.29	0.85	5.16	0.70
2007	13.00	1.49	10.71	1.23
2008	14.31	1.65	11.80	1.37
2009	12.90	1.57	10.63	1.30
2010	11.66	1.49	9.61	1.24

KGINFR – "stock" of physical infrastructure; KTRNR- and "stock" of human capital

6.4.2. HERMIN MODEL SIMULATIONS OF SPD IMPACTS

In Table 63 we show the impact of the SPD on aggregate real GDP at market prices (as a ***percentage change*** relative to the no-SPD baseline), and on the unemployment rate (as a ***difference*** relative to the no-SPD baseline). This

simulation captures both the direct demand-side (or Keynesian) impacts as well as additional supply-side impacts that are associated with the improvement in infrastructure and human resources.

Table 63

Aggregate SPD 2004-2006 impacts on GDP and unemployment

	Total SPD		EU SPD	
	GDPM	UR	GDPM	UR
2003	0.00	0.00	0.00	0.00
2004	1.07	-0.13	0.85	-0.10
2005	2.23	-0.25	1.77	-0.20
2006	4.00	-0.40	3.26	-0.33
2007	8.56	-0.69	7.03	-0.57
2008	4.79	-1.24	3.95	-1.02
2009	2.18	-0.45	1.81	-0.38
2010	1.96	0.00	1.63	0.00
2015	1.19	-0.16	0.98	-0.14

GDP - Percentage change from no-SPD baseline; UR - unemployment rate: change from no-SPD baseline

For the "total" SPD the impact on GDP peaks in the year 2007 at 8.56 (i.e., the level of Estonian GDP is likely to be 8.52 per cent higher as a result of the SPD). In the same year, the rate of unemployment is cut by almost 0.7 percentage points (i.e., if the rate of unemployment had been X percent of the labour force in the no-SPD simulation, it would be (X-0.7) per cent in the "total" SPD simulation). As we move across Table 63 from the "total", to the "EU" SPDs, the effects become more modest. Note that by the year 2015 – by which time the SPD expenditures are assumed to have no direct impact on Estonian economy, and the difference with baseline forecasts arises purely due to the long-run supply side effects, the decrease in unemployment is actually more moderate. However, the reduction in unemployment and accompanying economic growth remain plausible due to increased competitive advantage and sustainable rise in productivity. We examine this phenomenon below.

In Table 64 we show the impacts of the "total" SPD on the level of real sectoral output. The impacts peak in the year 2007 at 8.89 per cent for manufacturing, almost 10 for market services, 2.33 for public sector output and above 8 for total GDP at factor cost. It should be noted that when the programming period is over, increased supply-side capacity keeps the output above no-SPD baseline. Thus, by the year 2015 the level of GDP is still higher than for the no-SPD baseline case by more than 1.2 per cent.

Table 64

Total SPD impacts on sectoral GDP

(% change over no-SPD baseline)

	OT	ON	OG	GDPFC
2003	0.00	0.00	0.00	0.00
2004	0.51	1.38	0.57	1.04
2005	1.44	2.77	1.09	2.16
2006	3.54	4.81	1.37	3.90
2007	8.89	10.00	2.33	8.35
2008	7.87	4.75	0.82	4.69
2009	6.60	1.27	0.00	2.17
2010	6.15	1.07	0.00	1.97
2015	3.90	0.58	0.00	1.21

OT - denotes output in manufacturing; ON - market services; OG - public services; GDPFC - total GDP

In Table 65 we show the impacts of the "total" SPD on sectoral employment numbers (in thousands). The impact on manufacturing employment numbers peaks in the year 2007 at over 3,000 extra jobs. Even by the year 2015, there is still an increase of just over 300 jobs. For market services, the peak increase is ca 7,000 extra jobs, but this falls significantly after SPD is wound down (to no extra jobs in 2015). The reason for this is that in the course of SPD productivity in manufacturing is driven up dramatically, whereas productivity rise in market services is more

modest. Also, the bulk of the construction activity is carried out within the market services sector (in the building and construction sub-sector), and this activity decreases after 2008.

The net effect is a slowdown of the previous rise in employment numbers, and a moderate fall in number of unemployed. However, the net effect is still significant. We believe that in the course of SPD the structure of Estonian economy will be transformed to become more competitive. Secondly, the domestic public investment expenditures are assumed to be "terminated" after 2008, returning to no-SPD baseline level. It is much more plausible to assume that the domestic public investment will be "frozen" at 2006 level, or even increased.

Table 65

Total SPD impacts on sectoral employment and unemployment

(thousand people, change from no-SPD baseline)

	LT	LLN	L	U
2003	0.00	0.00	0.00	0.00
2004	0,345	0,743	1,19	-1,19
2005	0,727	1,586	2,54	-2,54
2006	1,390	3,066	4,88	-4,88
2007	3,267	7,330	11,58	-11,58
2008	1,331	2,896	4,63	-4,63
2009	0,145	0,310	0,50	-0,50
2010	0,232	0,504	0,81	-0,81
2015	1,300	0,056	1,78	-1,78

LT - employment in manufacturing ;
LLN - employment in market services;
L - total employment; U - unemployed.

In Table 66 we decompose the "total" SPD impacts for manufacturing. We have already noted the significant increase in the level of output and employment. But in Table 7 we also see that the level of productivity (LPRT) increases steadily, and peaks at a rise of 3.3 per cent in the year 2008. Even in the absence of any other positive shock (i.e., over and above the SPD), due to the structural change this is not likely to substantially diminish the employment increase over time. In the case of the market services sector, we saw that the level of employment actually increases less dramatically compared to no-SPD level.

Table 66

Total SPD impacts on manufacturing sector:

(% change over "no-SPD" baseline)

	OT	LT	LPRT	IT
2003	0.00	0.00	0.00	0.00
2004	0.51	0.26	0.08	2.10
2005	1.44	0.54	0.39	4.44
2006	3.54	1.04	1.16	6.92
2007	8.89	2.46	3.05	13.97
2008	7.87	0.99	3.30	8.40
2009	6.60	0.11	2.98	4.69
2010	6.15	0.17	2.72	4.32
2015	3.90	1.02	1.74	2.79

OT - output in manufacturing; LT - manufacturing employment;
LPRT - labour productivity; IT- manufacturing investment.

In Table 67 we show the changes in the public sector borrowing requirement, the national debt and the net trade surplus, all expressed as a percentage of GDP. It is of interest to note that the "total" SPD relaxes the Estonian

borrowing requirement (by 1.58 per cent of GDP in the year 2007 relative to the no-SPD baseline), causes a fall in the national debt (by 13.3 per cent of GDP in 2010 relative to the no-SPD baseline), and causes a decline in the net trade surplus (by 2.76 per cent in 2010 relative to the no-SPD baseline). However, improved competitiveness of the export-oriented manufacturing will result in increase in exports, and net trade surplus will rise compared to no-SPD baseline immediately after SPD direct financing is stopped.

Table 67

Total SPD impacts on public sector deficit and net trade surplus

(% of GDP, deviation from baseline)[56]

	GBORR	RDEBT	NTSVR
2003	0.00	0.00	0.00
2004	-0.20	-0.45	-0.53
2005	-0.43	-1.16	-0.98
2006	-0.77	-2.32	-1.48
2007	-1.58	-4.90	-2.76
2008	-0.96	-4.83	-0.69
2009	-0.43	-4.27	0.55
2010	-0.34	-4.22	0.49
2015	-0.16	-3.81	0.33

GBORR - public sector deficit; RDEBT - national debt; NTSVR - net trade surplus.

In Table 68 we show the SPD impacts on the three main expenditure aggregates (i.e., private consumption, public consumption, total investment and total GDP). Thus, private consumption rises by 10.12 per cent over the baseline level in the year 2007; public consumption by 1.37 per cent; and total investment by almost 22 per cent due to remarkable increase in productivity. In the private sector these increases will be sustained even after the year 2008, though at less remarkable level.

Table 68

Total SPD impacts on expenditure:

(% change over no-SPD baseline)

	CONS	G	I	GDPE
2003	0.00	0.00	0.00	0.00
2004	1.30	0.33	3.19	1.09
2005	2.71	0.64	6.26	2.26
2006	4.74	0.81	10.68	4.05
2007	10.12	1.37	21.89	8.67
2008	5.48	0.48	9.07	4.85
2009	2.19	0.00	1.17	2.20
2010	1.85	0.00	0.99	1.98
2015	0.98	0.00	0.54	1.20

CONS - private consumption; G - public consumption; I - total investment; GDPE - gross domestic expenditure.

We conclude by showing in Table 69 the impacts of the "total" SPD on prices, wages and unit labour costs. The crucial assumption is sustainability of the fixed exchange rate mechanism and triviality of the mark-up element of prices on manufactures. Initially, the SPD induces a small increase in consumer prices and a bigger increase in wages above the no-SPD baseline level due to improved productivity of labour (and a consequent fall in real unit labour cost). However, both price and wage rise are slowed down towards 2015, and real unit labour cost remains below no-SPD baseline and reflects the improved competitiveness of Estonian economy.

Table 69

Total SPD impacts on prices and wage rates:

(% change over "no-SPD" baseline)

	PCONS	WT	ULCT	RULCT
2003	0.00	0.00	0.00	0.00
2004	0.05	0.16	0.08	0.06
2005	0.20	0.57	0.18	0.13
2006	0.41	1.32	0.15	0.11
2007	0.82	3.07	0.02	0.01
2008	1.03	3.21	-0.08	-0.06
2009	0.70	2.34	-0.63	-0.46
2010	0.39	1.90	-0.79	-0.59
2015	0.16	1.20	-0.53	-0.40

PCONS - consumer price; WT - wage rate in manufacturing;

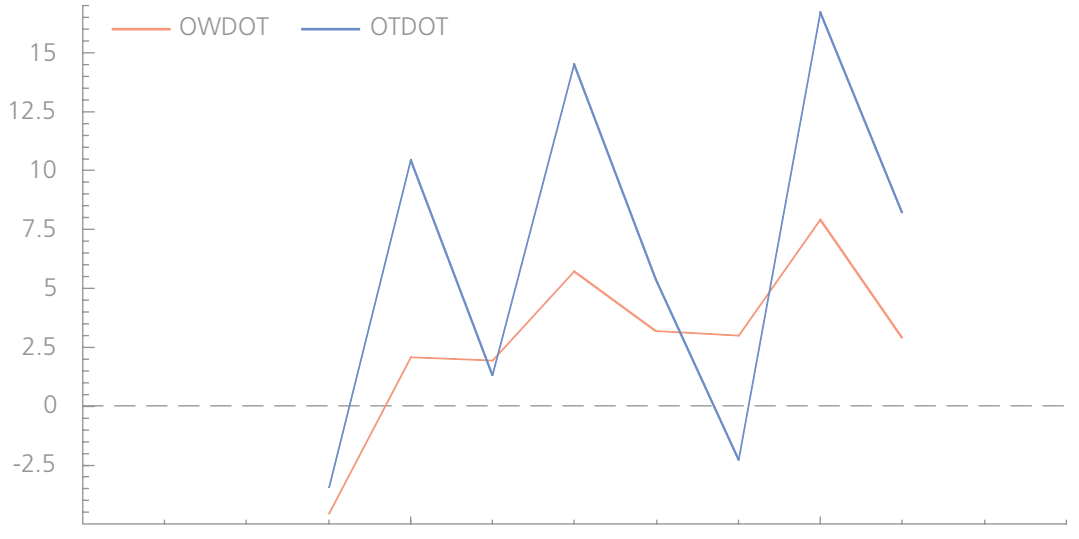
ULCT - unit labour costs in manufacturing; RULCT - real labour costs in manufacturing.

6.4.3. MANUFACTURING OUTPUT FUNCTION

Careful examination of the data on Estonian manufacturing has revealed a significant responsiveness to the developments of external (world) economy. The rise in the world output induces more than proportional increase in Estonian manufacturing production; the declines in world output, however, lead to fall in manufacturing production in Estonia (see graph; WOTDOT is growth in world output; OTDOT is growth in Estonian manufacturing output).

Figure 51

Growth rates of the world output and Estonian manufacturing output, 1994-2001



The parameters of the manufacturing production function reflect this extraordinary responsiveness. We imposed 0.75 elasticity on growth in world output. which is about half of what the equation calibration suggests; and 0.25 elasticity on growth in domestic absorption. Production is likely to be very sensitive to the fluctuations in real unit labour costs: a 1% increase in real unit labour cost appears to reduce manufacturing output by 1%. The resulting production function captures the openness and development potential of Estonian tradable sector that we believe will become an engine of long-run sustainable growth and convergence of Estonian economy.

7. IMPLEMENTATION

The description below represents the plans for operations as of November 2003. The functions will be more specifically laid down in the Structural Aid Act and secondary legislation to be enacted in the beginning of 2004.

Pursuant to Article 5 of Commission Regulation (EC) No 438/2001, Estonia shall give detailed information to the Commission on the organisation of the Managing Authority, the Paying Authority and Intermediate Bodies and their management and control systems within three months after approval of SPD. The information provided in this chapter is therefore subject to modifications which may be proposed at that period.

7.1. MANAGEMENT

7.1.1. MANAGING AUTHORITY, PAYING AUTHORITY, INTERMEDIATE BODIES AND FINAL BENEFICIARIES. ORGANISATION OF MANAGEMENT

Description of the main bodies involved in the management of the SPD is given in Annex 2. For the detailed list of tasks, please see the paragraphs below.

The Managing Authority of the Single Programming Document for 2004-2006 is the Ministry of Finance. The responsibility for organising the implementation of the programme in an efficient and correct manner according to Article 34 of Council Regulation 1260/1999 and with the principles of sound financial management lies with the Managing Authority. Pursuant to Article 34 of Council Regulation (EC) No 1260/1999 of 21 June 1999, the functions of Managing Authority shall be implemented by the Foreign Financing Department of the Ministry of Finance in co-operation with other involved departments (State Budget Department, Public Relations Department, Department of Information Technologies).

The Managing Authority shall perform its duties in co-operation with Intermediate Bodies and Final Beneficiaries. The responsibilities of the Managing Authority shall be to:

- co-ordinate at national level implementation of structural funds interventions and ensure synergy and complementarity of Structural Funds, other funds, programmes, interventions and actions;
- ensure systematic updates and instructions to the Intermediate Bodies and Final Beneficiaries about national and community law;
- ensure the correctness of operations financed with the European Union assistance, including the provision of national co-financing, and the correctness of operations of the Intermediate Bodies and the Final Beneficiaries and the issuance of guidance to this effect;
- ensure an adequate accounting code for all EU-funded transactions;
- ensure compliance with EU rules and policies, especially in issues related to competition, public procurement, environment and equal opportunities and the issuance of guidance to this effect;
- set up an IT network application supported system to gather reliable financial and statistical information on implementation, the monitoring indicators, evaluation and for exchanging data;
- act as secretariat to SPD Monitoring Committee;
- draw up and adjust the Programme Complement for approval by the Monitoring Committee;
- draw up the annual report and final report on SPD implementation, and after obtaining approval of the Monitoring Committee, submit the report to the European Commission;
- certify to the Paying Authority the consistency of operations with the decision to provide support and submit them to the Paying Authority;
- ensure an adequate audit trail;
- perform duties related to information and publicity.

The *Paying Authority* for the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Guidance Section of the European Agricultural Guidance and Guarantee Fund (EAGGF) and the Financial Instrument for Fisheries Guidance (FIFG) is the Ministry of Finance. The Paying Authority shall be responsible for the transfer of funds from the Commission budget to the Final Recipient. The Paying Authority performs its duties pursuant to Article 32 of Council Regulation (EC) No 1260/1999 and other EU set requirements for financial management. The Department of National Fund in co-operation with other relevant departments performs the functions of the Paying Authority in the Ministry of Finance.

The responsibilities of the Paying Authority shall be the following:

- preparation of consolidated declarations of expenditure and certified payment applications and their submission to the European Commission, in accordance with procedures laid down in writing, including provision for requesting further information from the Managing Authority and the Final Beneficiaries, carrying out on-the-spot controls if necessary (Regulation 438/2001 art. 9) and monitoring the results of independent system audits and sample checks (art. 10 of that Regulation);
- prompt initiation of the recovery of undue payments, reporting of irregularities to the Commission under Regulation (EC) No 1681/94, monitoring and registration of the funds to be recovered, submission to the Commission of an annual statement on recoveries as an annex to the fourth quarterly report on irregularities, and reimbursement of the amounts recovered to the Commission in accordance with Article 8 and Annex II of Regulation No 438/2001;
- compilation of consolidated cash-flow forecast and submission to the European Commission;
- ensuring that funds are fully disbursed to Final Recipients as soon as possible;
- keeping accounts on assistance received from the Community;
- participation in the work of the Monitoring Committee;
- ascertaining that commitments of funds by the Managing and the Monitoring Committee correspond to the total amounts of funds allocated for priorities;
- ascertaining in support of the expenditure declarations and payment applications it certifies to the Commission that Final Beneficiaries have followed the requirements set by Council Regulation (EC) No 1260/1999 of 21 June 1999 and Commission Regulation (EC) No 438/2001 of March 2001 and have validated the expenditures delegated to them;
- fulfilling other tasks imposed on the Paying Authority by the EU legal acts.

The Ministry of Finance, acting as Managing Authority and Paying Authority, shall ensure the separation of their responsibilities in the Ministry (see Annex 3, Ministry of Finance Organisation Chart dated August 15, 2003).

There are ***four Priority Intermediate Bodies:*** Ministry of Social Affairs for Priority 1, Ministry of Economic Affairs and Communications for Priority 2, Ministry of Agriculture for Priority 3, Ministry of Finance for Priority 4 and 5. There are ***seven Measure Intermediate Bodies:*** Ministry of Economic Affairs and Communications; Ministry of Internal Affairs, Ministry of Environment; Ministry of Social Affairs; Ministry of Education and Research; Ministry of Agriculture; Ministry of Finance. In cases where Intermediate Bodies at the priority and measure levels are the same institutions (for Priority 1 – Ministry of Social Affairs, for Priority 2 – Ministry of Economic Affairs and Communications, for Priority 3 – Ministry of Agriculture and for Priority 5 – Ministry of Finance), the responsibilities match.

The Intermediate Bodies will carry out functions delegated to them by the Managing Authority, Paying Authority and the Auditing Authority. A functional independence will be ensured between these delegated functions. The following represents a preliminary list of functions:

- Participation in drawing up the programming document (including submission of source data);
- elaboration of measures;
- submitting data for drawing up and amending the Programme Complement;
- ensuring planning of national co-financing in the state budget;
- monitoring and participation in the Monitoring Committee;
- elaboration of project selection criteria for grant schemes;
- proposing the allocation of EU and national co-financing between measures;
- checking the implementation of the measures in its administration;
- informing partners and applicants;
- approval of payments applications (three times a year);
- preparing certificates about the consistency of operations with the decision to provide support for and submission to the Managing Authority;
- (1681/1994 art 3,5 and 1260/1999 art 32(7)) Confirming the correctness of irregularity report and cash-flow forecast ***(decree of the Minister of Finance based on the Structural Aid Act)***;
- carrying out, through an independent department, sample checks on operations and system audits of Final Recipients additional to those performed by the Auditing Authority under Article 10 of Regulation 438/2001.

There are several ***Final Beneficiaries*** (this list is not final): Foundation Enterprise Estonia; Environmental Investments Centre; INNOVE; Road Administration; Railway Administration; Estonian Informatics Centre; Estonian Aviation Administration; Estonian Maritime Administration Labour Market Board; Ministry of Social Affairs; Estonian Agricultural Registers and Information Board; State Chancellery; Ministry of Finance, etc. These bodies may, in some cases, assume certain tasks of an Intermediate Body. In this case, the Managing Authority, Paying Authority and Auditing Authority may delegate certain functions to these bodies, for example:

- informing partners and applicants;
- arrangement of technical and financial assessment of project applications; and participating in it; assessment and selection of project proposals submitted under grant schemes;
- elaboration of project selection criteria for grant schemes;
- elaboration of decrees for implementation of measures;
- taking financing decision on applications;
- checking and endorsing payment claims submitted by Final Recipients, including verification of the provision of national co-financing;
- carrying out on the spot verification on final recipients to guarantee the reality of the expenditure declared and the implementation of the operation in compliance with EU rules and grant conditions;
- preparing payment orders and submitting them to the Paying Authority;
- preparing declarations of expenditures (three times a year) and submitting them to the Paying Authority (with a copy to Intermediate Body responsible for the measure and the Managing Authority);
- recovery of undue payments from final recipients;
- collection and consolidation of data necessary for monitoring and continuous updating of the electronic database.
- carrying out sample checks on operations through a service independent of the services involved in implementation and payment procedures.

Final Recipients will be (this list is not final): governmental organisations; municipalities; county governments; NGOs; entrepreneurs; SMEs; but in the case of public infrastructure investments, also the Final Beneficiaries are responsible for carrying out project activities, etc.

Co-ordination Role of the Managing Authority

Within the Foreign Financing Department there will be a Structural Funds Co-ordinating Division dealing with SPD management questions and there is a Monitoring and Evaluation Division dealing with SPD monitoring questions. In both units the division of tasks is priority and function based – each official has his/her fund he/she deals with, but the horizontal management subjects have also been divided among them. Additional staff of the Managing Authority operates in other departments of the Ministry: there is a lawyer, public relations and IT official in the respective departments.

Managing Authority will perform its co-ordination function through two different routes:

1) On the one hand there is secondary legislation attached to the Structural Aid Act that supports Managing Authority's functions. In those acts, the rights and obligations delegated by the Managing Authority (as well as Paying Authority) to the Intermediate Bodies (on priority and measure level) and Final Beneficiaries are described. The legislation will be amplified by further instructions and guidance where necessary. The Managing Authority will ensure that the SPD objectives and Managing Authority functions are being fulfilled at the Intermediate Body and Final Beneficiary level by confirming all the secondary legislation to be enacted for the implementation of SPD measures.

2) On the other hand, the Managing Authority also participates in a number of working groups.

On the monitoring side there will be SPD Monitoring Committee at SPD level and Priority Working Groups on priority level. The functions and composition of those groups are described in ch. 7.2 (Monitoring). In those groups the officials of both Monitoring Division and Structural Funds Co-ordination Division participate. That guarantees the overview of the implementation questions to the Managing Authority.

Besides the groups dealing with monitoring questions there may be established management groups on priority level. The main purpose of those management groups is to discuss day-to-day management questions. It is upon Priority Intermediate Body whether and how often it calls the management group together. In case of need the representative of the Managing Authority will participate in those groups. If question under discussion needs a solution on higher level, it will be brought on priority or SPD level.

Separate working group has been established for publicity and information campaigns. It is led by Managing Authority and consists of the representatives of Intermediate Bodies dealing with public relations.

The Ministry of Finance co-ordinates the assistance given to Estonia through different funds (in addition to the Structural Funds, also the Cohesion Fund and the Transition Facility), it also has available information about the implementation of the Interreg and Equal programmes and the Schengen Facility. In addition, the Paying Authority for all the above is the Ministry of Finance which will further contribute to avoiding overlap in funding projects.

7.1.2. PROJECT SELECTION

The objectives set in the programming document are achieved by implementing several operations as well as through support schemes.

The overall project selection criteria are (reflected in various questions of the application form):

- Project must comply with the strategy of the SPD and correspond to the objectives of a particular measure and priority under which a funding is applied for;
- Project must be relevant in terms of its content and timing – based on the relevant surveys, development plans and motivated needs;
- Project must give value for money;
- Project must be sustainable and create permanent or long-term added value;
- Applicant must be able to carry out the project.

In addition, projects that correspond to the overall selection criteria will be assessed on the basis of measure-specific requirements and preference criteria, described more detailed in the Programme Complement.

Establishing relevant application forms for the applicants ensures availability of the information, necessary for checking conformity of the projects with those criteria. It is a task of the Final Beneficiaries to check the eligibility of applications and applicants in accordance with the relevant secondary legislation.

Project Selection Process

Throughout the SPD, there are several options used within measures to carry out project selection.

1. Competition based procedure where applicant submits a project proposal to Final Beneficiary by an announced deadline. The FB organises technical checks of the application and content appraisal (against overall quality criteria but also other projects submitted by the same deadline) involving, when necessary, outside experts. The decision to finance a project is taken at the head of the FB level.
2. Queuing based procedure where applications can be submitted continuously throughout the year, the projects go through technical check and assessment involving, when necessary, external experts, in the Final Beneficiary. The decision to finance a project is taken at the head of the FB level.
3. A certain amount of operations will be implemented directly by the Final Beneficiaries. For these operations, there will be no competition, the measure/priority intermediate body approves the use of funds and ensures compliance with the SPD objectives.
4. For public infrastructure investment projects the government will decide once per programming period or once a year the list of investments to be co-financed from the Structural Funds, mainly the ERDF. The measure and priority Intermediate Bodies ensure compliance with the SPD objectives.
5. In case of local infrastructure investments the applications of municipalities will be prioritised at the county level and then submitted to the government for approval. The measure and priority Intermediate Bodies ensure compliance with the SPD objectives.

7.1.3. ENSURING COMPATIBILITY WITH COMMUNITY POLICIES ON PROJECT LEVEL

For ensuring the conformity of all single projects with Community policies, which are required by Article 12 of Council Regulation (EC) 1260/1999, in addition to orientations defined by the programming document and Programme Complement in relation to selection and implementation of single projects, detailed rules and procedures set by national legislation shall be observed. In situations where necessary rules and procedures have not been provided by Estonian legislation, additional rules and procedures shall be established for implementing the current programming document.

Especially on project level, conformity with the following EU policies will be ensured by means of documentary and on-the-spot checks: competition policy, environmental policy and equal opportunities policy.

Competition Policy

As for competition policy aspects, the Structural Funds are connected with state aid and public procurement. Legal bases of ***state aid*** are stipulated in the Competition Act and its implementing legislation, which is harmonised with EU legislation. The obligation for ensuring the observation of state aid rules in implementing EU Structural Funds lies with SPD Managing Authority – the Ministry of Finance. The Ministry of Finance shall be responsible for ensuring that support schemes implemented within the framework of the SPD and single support cases according to Article 87 of the Treaty are, according to Community rules, notified to the Commission and its approval received before actual implementation. Practical monitoring of state aid rules shall be ensured by secondary legislation on the implementation of aid schemes, according to which Final Beneficiaries operate. The Minister of Finance carries out supervision over granting state aid.

There will be a credible mechanism[57] established by the Estonian authorities to control the cumulation of aid under different schemes and from different sources.

The harmonised Public Procurement Act of Estonia and its general monitoring mechanisms guarantee that Structural Funds assistance is implemented in conformity with EU legislation related to ***public procurement.*** The Minister of Finance carries out supervision over public procurement.

Environmental Policy

The conformity of projects with the EU environmental policy is ensured primarily by environment related Estonian legislation that has been harmonised with EU environmental legislation. Making environmental impact assessment through relevant control questions and its consideration in making financing decisions shall be included in all rules of project application procedures. In addition, according to the Environmental Impact Assessment and Environmental Audit Act, in cases when it may be presumed that the planned activities have considerable impact on environment, environmental impact assessment shall be applied. A licensed expert shall conduct the assessment and the assessment programme and report shall be subject to public discussion. On the basis of the report, the competent authority issues the activity licence. The Ministry of Environment has the overall responsibility to monitor the implementation of the Environmental Impact Assessment and Environmental Audit Act.

Equal Opportunities Policy

The observation of equal opportunities policy on project level shall be primarily guaranteed by introducing a gender dimension to the processing of project applications. In project preparation and drafting, in every relevant case a requirement of applying the gender equality aspect shall be set in order to ensure that a project will promote gender equality related to the labour market, or at least does not lessen gender equality. Ex-ante evaluation shall be conducted through questions evaluating the impact of each project on gender equality on the labour market.

The observation of employment policy on project level shall be ensured by including the questions regarding employment impacts to the project applications. In project application the promoter has to indicate the overall impact to the employment and in every relevant case estimate the number of jobs created by implementing the project. The monitoring reports will compare the estimations and the actual achievement in job creation. Reporting on employment effects will be broken down by gender.

7.1.4. DATA COLLECTION AND ELECTRONIC TRANSMISSION

Ministry of Finance as Managing Authority will set up a Structural Funds Information System. The database will include information about all Structural Funds (EAGGF –guidance section, ERDF, ESF and FIFG), Cohesion Fund and projects of Community Initiatives and, possibly other assistance.

SF Information Systems

Ministry of Finance as Managing Authority will develop two systems:

1. Operative Information System for administering the applications and projects in the Final Beneficiaries. Also Intermediate Bodies can access the data on projects in application phase using the system. The additional functionality for operative system will be the Data Link with State Procurement Register to receive

information about on-going and finished tenders. Also the system should be able to keep accountancy on the state aids (incl aid under block exemption regulations and ***de minimis*** rule) approved as stated by EC Regulations. The employees of Final Beneficiaries will enter most of the data manually.

2. Structural Funds Central Monitoring Information System (SFC-MIS) will be built to collect all necessary data from operative information systems and to aggregate data to give necessary reporting and monitoring capabilities. SFC-MIS will provide information for Managing – and Paying Authority, Intermediate Bodies at both levels and EC about SF projects progress and financial transactions. Data will be imported into the SFC-MIS automatically from Operative Information Systems.

The SFC-MIS will accommodate the specific monitoring parameters of Managing Authority and the Monitoring Committee, with respect to the individual physical and financial indicators specified in SPD Programme Complement. The system also will be compatible with the European Commission's Structural Funds Common Database (SFC) which has been established to support the transfer for supporting information for payment applications.

The SFC-MIS will cover the following processes:

- Importing Data from Final Beneficiaries' operational information systems at the level of Applications/ Projects: the system has to be able to store project-related data of subject of the project, monitoring, financial transactions and auditing to satisfy full scale of reporting needs.
- Enable Financial Management and Auditing: SFC-MIS will allow the checking of the payment claims; accepting the payment-orders; tracking the financial transactions and correspondent reporting. The system else supports the recording of audit events and results (findings) in the system. (Paying Authority and Auditing Authority)
- Reporting on Fund Commitments: Fund expenditures and balances by priority, measure and project defined or occasionally needed by EC. Also reports based on aggregated data for projects by priority and measures. (EC, Managing and Paying Authority, Intermediate Bodies at both levels and Final Beneficiaries)
- Monitoring at the level of project, measure and priority: SFC-MIS will give the functionality to monitor the plan and fulfilment of the indicators per project and aggregated to the measure and also priority level. (EC, Managing Authority, Intermediate Bodies at both levels)
- Construct archival versions of required EC reports: storing each version of the reports created for the EC. (Managing Authority)

7.1.5. REPORTS

Annual Implementation Report

Pursuant to Article 37 of Council Regulation (EC) 1260/1999, the Managing Authority shall submit an Annual Implementation Report to the Commission within six months of the end of each full calendar year. The report shall be previously examined and approved by the Monitoring Committee. The Commission shall indicate to the Member State within two months after receiving the report if the report is considered to be unsatisfactory. Otherwise the report shall be deemed to be accepted.

The annual report shall include the following information:

- Any change in general conditions which is of relevance to the implementation of the assistance, in particular the main socio-economic trends; changes in national, regional or sectoral policies, or in human resource development frame of reference; and where applicable, their implications for the mutual consistency of assistance from different funds and the consistency between Fund assistance and that from other financial sources;
- Progress in implementation of priorities and measures for each of the Funds in relation to their specific targets, where possible quantifying monitoring indicators and indicators of results, and of impact at the appropriate level (priority or measure);
- The financial implementation of the assistance, summarising for each measure the total expenditure actually paid out by the Paying Authority, making a record of the total payments received from the Commission and quantifying financial indicators for monitoring;
- The steps taken by the Managing Authority and the Monitoring Committee for ensuring quality and effectiveness of implementation;
- Steps taken to ensure compatibility with Community policies and co-ordination of structural assistance;
- If necessary, a separate chapter on financing and the progress of major projects.

Pursuant to Article 34.2 of Council Regulation (EC) 1260/1999, each year after submitting the annual report the Managing Authority, in co-operation with the Commission, shall review the main outcomes of the previous year. Thereafter the Commission may make comments to the Government and the Managing Authority of the Member State. In case the Commission considers the measures taken inadequate, the Commission may lay down recommendations to the Government of Estonia and the Managing Authority for making adjustments in the system with the purpose of enhancing the effectiveness of SPD management and monitoring. If the Commission has made such recommendations, the Managing Authority shall demonstrate the steps taken to improve the management or monitoring arrangements, or it shall explain why the adjustments have not been made.

If the purpose of Commission's recommendations is to eliminate serious irregularities in management or monitoring arrangements, the response to the Commission's recommendations during the set timeframe pursuant to Article 32(3)(e) is one condition on which the transfer of funds to Estonia is based.

Final Report

SPD final report shall be submitted to the Commission within six months after the end of the programming period. Before submission of the report to the Commission, the SPD Monitoring Committee shall approve the final report. Substantive and procedure requirements set to the annual report shall be extended also to the final report. The Commission shall inform the Member State about approval or non-approval of the report within five months after receipt of the report.

7.1.6. INFORMATION AND PUBLICITY

Informing and publicity shall be done pursuant to Commission Regulation (EC) No 1159/2000 and the responsibility for its organisation lies with the SPD Managing Authority. The Managing Authority shall prepare a communications action plan of the Single Programming Document that is presented as a part of Programme Complement. Based on the action plan, the Managing Authority ensures transparent and purposeful use of European Union assistance and informs the European Commission on the implementation of the communications action plan. In addition to the Managing Authority, all institutions involved in the implementation of the Single Programming Document shall do their best to ensure public access to documents and to inform final beneficiaries and the public regularly about the issues related to the implementation of the Single Programming Document.

The Estonian Public Information Act contributes to ensuring publicity, according to which all information that has not been classified as secret has to be public and made available to the public.

7.2. MONITORING

Monitoring of SPD shall be performed pursuant to the requirements set out in Articles 34, 35, 36 and 37 of Council Regulation (EC) 1260/1999, with the main monitoring data recorded in the SFC-MIS database. The Ministry of Finance as the SPD Managing Authority shall ultimately be responsible and accountable for the organisation and functioning of SPD monitoring system.

The Monitoring and Evaluation Division in the Foreign Financing Department of Ministry of Finance shall be the focal point for co-ordinating the SPD monitoring and evaluation tasks. The Division will be the central unit responsible for providing methodological guidance to other institutions on the issues of indicators, monitoring and evaluation in the context of SPD.

The Monitoring and Evaluation Division will perform the duties of the Secretariat to the SPD Monitoring Committee. It will also ensure preparation and timely submission of the SPD Annual Implementation Reports and of the SPD Final Report to the SPD Monitoring Committee and to the European Commission.

The SPD monitoring and evaluation obligations are outlined in the Structural Aid Act to be enacted as of 1 January 2004.

In addition to the Act, secondary legislation will be introduced in Estonia in order to establish detailed obligations of various bodies in terms of the monitoring and evaluation tasks. The list of secondary legislation is outlined below.

- *The Regulation by Minister of Finance on monitoring and evaluation.* The Regulation will outline the various levels of monitoring reporting in order to adequately follow SPD progress and to analyse the results. Monitoring data collection has been envisaged at individual project level, measure level, priority level and at the SPD level. The tasks of data collection and data analysis will respectively be assigned at the Final Beneficiaries, Intermediate Bodies at measure level and Intermediate Bodies for the priorities and at the Managing Authority level.

- *The Decree by Minister of Finance on establishing the SPD Monitoring Committee.* The Decree will establish the membership and the Rules of Procedure of the SPD Monitoring Committee.
- *Regulations by respective line ministers on monitoring of priority and measure progress.* The Regulations on monitoring either of priority or the measure will outline the detailed obligations of the parties responsible for monitoring priority or measure progress. The tasks of the parties will include: collection of data, analysis of data, preparation of monitoring reports and submission of monitoring reports.
- *Decrees by line ministers on establishing Priority Working Groups.* The Priority Working Groups will be assigned an important task of analysing the progress and achievements (outputs and results) of the SPD priorities.

The Decrees issued by the line ministries will be confirmed by the Managing Authority in order to ensure internal coherence and compliance of the monitoring arrangements within the SPD.

Division of Tasks in Monitoring

Monitoring and reporting at the SPD level is the task of the Managing Authority. The task will be performed by the Monitoring and Evaluation Unit in the Ministry of Finance.

Monitoring at subsequent levels (i.e. priorities and measures) will be delegated by the Managing Authority. The delegation of tasks will be described in the secondary legislation as outlined above.

As regards the priorities of the SPD, the ministries in charge of the priorities (i.e. the Intermediate Bodies at priority level) are responsible for regularly collecting and reporting the monitoring data. The Intermediate Bodies at the priority level are obliged to ensure preparation and submission of biannual priority progress reports reflecting financial and physical progress of the priority and analysing the outputs and results achieved under the respective priority.

In respect to specific monitoring requirements and guidelines per specific funds, the Ministry of Social Affairs as the Intermediate Body in charge of ESF funded priority, will ensure compliance with ESF monitoring obligations throughout the measures under the priority and will carry out proper analysis of the achievements under the ESF funded priority. The Ministry of Social Affairs will also ensure compliance and link with the European Employment Strategy indicators. The data collection under ESF assistance will include individual beneficiaries as required by the "Guidelines for systems of monitoring and evaluation of ESF".

Compliance with the monitoring and evaluation requirements of EAGGF/FIFG will be ensured by the Ministry of Agriculture as the Intermediate Body for the EAGGF/FIFG funded priority. The Ministry of Agriculture will ensure compliance with the EAGGF/FIFG Guidelines throughout the measures under the priority of Agriculture and Rural Development.

The Intermediate Body at priority level shall appoint a structural unit to carry out the priority monitoring tasks. The respective structural unit shall be responsible for compilation of priority progress reports and for presenting the reports to the Priority Working Group meetings. In the priority progress report the achievements under the priority (outputs and results) will be analysed and assessed against the targets set in the programme document. The Priority progress reports endorsed by the Priority Working Group will be input for the Managing Authority in preparing the SPD Annual and biannual reports.

Monitoring of measures will be carried out in co-operation by the Final Beneficiary responsible for the measure and by the Intermediate Body of the measure. The Final Beneficiaries and the Intermediate Bodies are to appoint structural units and officials responsible for monitoring of the assistance.

The Final Beneficiary of the measure is charged with responsibility of regularly collecting the monitoring data (physical indicators) from individual projects and entering that data to the electronic information system. Following the collected data, the Final Beneficiary will prepare biannual measure progress reports, reflecting measure's physical and financial progress. The Final Beneficiary will submit its progress report to the Intermediate Body responsible for the measure. The Intermediate Body will review the report submitted by the Final Beneficiary and will supplement it by additional information (compliance to sector policies, assessment of the progress of the measure, etc). In the measure progress report the achievements under the measure (outputs and results) will be analysed against the targets set in the Programme Complement and also the measure implementation will be assessed. The measure progress report will be in turn submitted to the Intermediate Body of the priority, in order to enable preparation of the Priority progress report.

Data collection from individual projects is the task of the Final Beneficiaries. According to secondary legislation the Final Beneficiaries are to ensure regular collection of the monitoring data. Data will be collected from the projects via project progress reports. In the monitoring sheet the final recipient will report at regular intervals on the outputs

achieved and upon project completion, on results. The data collected via the monitoring sheet will be analysed by the monitoring official in the Final Beneficiary against the targets set out in the Project Application and respective financing decision.

In addition to collecting data via progress reports the Final Beneficiaries carry out the day to day monitoring of projects, checking of expenditure declarations and verifying of reality of expenditure claimed and compliance with EU rules and the grant conditions on the spot in accordance to ensure compliance with Art. 4 of Reg. No. 438/2001 (see above section 7.1.3). Any discrepancies will be recorded and appropriate action taken.

The monitoring data collected from the projects, including the results of verifications, will be inserted into electronic information system by the staff of the Final Beneficiaries. The electronic information system will enable comparison between the measure targets (outputs and results) as in Programme Complement and the actual state of achievement to date (outputs and results). The electronic information system will therefore facilitate presentation of data in the monitoring reports. The data however will need to be analysed by the respective monitoring officials at various levels of management.

The first cut-off date for the production of the reports at measure level has been set to 30 June 2004. The production of measure reports will be followed by the priority progress reports and thereafter by the SPD report. The first SPD report will be presented to the SPD Monitoring Committee for its meeting in late 2004 (tentatively scheduled to November/December 2004).

The monitoring reporting at individual project level and the respective intervals will be determined in the financing decision between the Intermediate Body/Final Beneficiary and the Final Recipient.

In compliance with the Regulation on monitoring and evaluation requirements by Ministry of Finance, the Intermediate Bodies of the measures will issue detailed ministerial regulations on monitoring of measures under its responsibility. The regulations will include respective monitoring report templates as annexes.

7.2.1. MONITORING COMMITTEE AND PRIORITY WORKING GROUPS

SPD Monitoring Committee

The SPD Monitoring Committee shall be set up pursuant to Article 35 of Council Regulation (EC) No 1260/1999. The Monitoring Committee shall be set up not later than three months after approval of the programming document.

The Ministry of Finance as the Managing Authority shall be responsible for setting up the Monitoring Committee and for co-ordinating its activities.

The Minister of Finance shall appoint the chairman of the SPD Monitoring Committee. A Deputy Chairman to the SPD Monitoring Committee will also be appointed.

The tasks of the Secretariat to the SPD Monitoring Committee will be performed by the Monitoring and Evaluation Unit in Foreign Financing Department. The Secretariat will be responsible for the preparation of documentation relating to monitoring, reports, agendas and summary records of meetings. Documentation required for the work of the SPD Monitoring Committee shall normally be available 3 weeks before the date of the meeting.

The partnership principle shall be followed while setting up the Monitoring Committee, and as for membership of the Committee, the principle of balanced participation of men and women shall aimed to be followed.

The members of the Monitoring Committee shall be representatives of the Intermediate Bodies, as well as socio-economic partners (employees' and employers' associations, local government unions, regional authorities, agricultural producers' organisations and non-governmental organisations). Representatives of the European Commission and the European Investment Bank shall participate in the work of the Monitoring Committee in an advisory capacity.

The Ministry of Finance will launch a consultation round prior to setting up the Monitoring Committee. After the extensive consultation round with the partners the SPD Monitoring Committee will be established by the Decree of Minister of Finance.

The Rules of Procedure of the SPD Monitoring Committee will be prepared by the Managing Authority and put forward for the approval to the members of the SPD Monitoring Committee at the first meeting of the Monitoring Committee.

The SPD Monitoring Committee shall convene at least once a year for monitoring SPD progress, however the Managing Authority is envisaging calling for two monitoring committee meetings per year. The SPD Monitoring

Committee meetings are in the indicative annual monitoring time-schedule planned for November/December and May/June respectively.

Pursuant to Article 35 of Council Regulation (EC) No 1260/1999, the SPD Monitoring Committee shall have the following functions:

- confirms Programme Complement, including the indicators to be used to monitor the Structural Funds assistance;
- considers and approves the adjustments to the Programme Complement proposed by the Managing Authority;
- approves the criteria for selecting the operations financed under each measure within six months after approval of SPD;
- reviews periodically progress made towards achieving the objectives as set out in the SPD;
- considers and approves the Annual and Final Implementation Reports;
- considers and approves proposals to amend the contents of the Commission decisions on the contribution of Funds;
- if necessary, proposes to the Managing Authority adjustments in order to improve management of assistance.

Preparing the start of eligibility period of Structural Funds assistance as of 1 January 2004, a preliminary SPD Monitoring Committee meeting should be held early 2004. The preliminary Monitoring Committee will adopt the Programme Complement and approve the general project selection criteria, as well as endorse the Rules of Procedure of the Monitoring Committee.

Priority Working Groups

Priority Working Groups shall be set up for following the progress of priorities and discussing the implementation rules (e.g. application form, project assessment and appraisal) for the measures. Groups convene at least twice a year. Intermediate Bodies at priority level shall manage the operations of these Groups. A representative of the Intermediate Bodies at priority level shall chair the Groups, and the secretariat for the Groups shall prepare the meetings.

These Groups shall consider and approve the half-year progress reports of the priority (the contents of the priority progress reports have been described above under monitoring reporting). The reports of priorities shall form the basis for drafting annual SPD report.

The members of the Groups are representatives from the SPD Managing Authority, the Intermediate Bodies of measures and priorities, and relevant partner organisations. The principle of balanced participation of men and women shall be followed in setting up the Groups.

Prior to approval of the rules of procedure of the Group on the first meeting the Intermediate Body of the priority shall consult the SPD Managing Authority on the rules of procedure. The Priority Working Groups will be established by the Decree by the ministry in charge of the priority.

7.2.2. MONITORING INDICATORS

Pursuant to Article 36 of Council Regulation (EC) No 1260/1999, monitoring of structural funds assistance shall be carried out by reference to the physical and financial indicators specified in the Single Programming Document and in the Programme Complement.

In the programming document and Programme Complement three types of indicators are set out: output, result and impact indicators. During monitoring exercise, the output and result indicators are collected and analysed against the indicators set for measures and priorities in the planning phase.

The achievement of impact indicators will be verified by the ex-post evaluation of the programme and by the ongoing evaluations commissioned over the lifetime of the SPD.

The context indicators, programme level indicators, priority indicators and a limited number of horizontal indicators have been established in Table 55 of the SPD. The European Commission Guidelines have been followed while establishing the system of indicators.

Physical and financial indicators to be achieved are presented in project application forms and will thereafter be collected from the projects via regularly submitted monitoring reports. For each project an output and result indicator will

be established in the project Application Form and these will be thereafter collected and monitored. As specified in regulation 438, a limited number of horizontal indicators will also be collected from each project. The Final Beneficiaries implementing the measures are to ensure regular collection of the monitoring data from the Final Recipients.

In the monitoring reporting the physical progress of measures will be followed by contrasting the data, i.e. planned targets for measure (outputs and results) against actual achievement (outputs and results) to the cut-off date of the monitoring report.

A limited number of core output and result indicators will be aggregated to priority level. These will be reported in the priority and SPD reports and thereby the priority progress will be measured.

The computerised monitoring and management information system is also based on physical and financial indicators. The Final Beneficiary bears the responsibility for inserting data into computerised information system. The computerised system will enable the various parties to follow physical progress of SPD implementation, as well as will it facilitate production of reports.

The progress of major projects will be monitored on a single project level against the established indicators.

7.3. EVALUATION

Pursuant to Council Regulation (EC) No 1260/1999, the ex-ante evaluation, mid-term evaluation and ex-post evaluation of the programme are required.

Pursuant to Article 42 of Council Regulation (EC) No 1260/1999, mid-term evaluation should be carried out within three years after a financing decision is made, but no later than 31 December 2003. In connection with Estonia's accession in 2004, the mid-tem evaluation shall not be implemented.

The ex-post evaluation of Structural Funds assistance shall be implemented as set out in Article 43. According to Article 43, ex-post evaluation is the responsibility of the European Commission. The European Commission, in collaboration with the Managing Authority, shall commission ex-post evaluation from independent evaluators. Ex-post evaluation should be completed not later than three years after the end of the programming period, i.e. by the end of 2009.

Ex-post evaluation shall analyse the effectiveness of the utilisation of assistance and its impact. It shall also draw conclusions on ensuring effectiveness of assistance regarding the policy on economic and social cohesion.

During SPD implementation, individual evaluations on the effectiveness and impact of the measures and priorities, as well as evaluations that concentrate on the horizontal policies and regional impacts of SPD, may be ordered from independent evaluators (ongoing evaluations).

In late 2003 and early 2004 the Ministry of Finance will prepare a National Evaluation Strategy. The preparation of the National Evaluation Strategy has been supported by Phare 2003 project "Accession Facility". The Evaluation Strategy will aim to cover the principles of evaluating the EU funded programmes as well as the nationally funded programmes. The aim of the National Evaluation Strategy is to establish methodological coherence between the various evaluations commissioned in Estonia irrespective of source. The process of selecting and deciding on the evaluation priorities, including assistance by the Structural Funds, will be further described in the Evaluation Strategy.

However, in principle when deciding on the evaluation priorities, the monitoring reports will be carefully analysed in order to commission an evaluation on a theme where a thorough analysis would be most needed.

The ongoing evaluation work plan of SPD will be coordinated by the Managing Authority, i.e. the Monitoring and Evaluation Unit in the Ministry of Finance. The Monitoring and Evaluation Unit will aim to ensure the methodological compatibility between the various evaluations commissioned in the context of the SPD. In principle the evaluations are to address the five key evaluation questions: rationale, continued relevance, effectiveness, efficiency and impact. The evaluation criteria and the evaluation question will be formulated however individually in case of each evaluation.

A dedicated official will be appointed in the Monitoring and Evaluation Unit to coordinate the evaluation activities of the SPD.

The Managing Authority will put the annual evaluation work plan forward for approval to the SPD Monitoring Committee. The work plan will be drawn up in cooperation with the line ministries and relevant partners and upon determining on the evaluation priorities, the information obtained via monitoring will be fully taken into considera-

tion. The SPD Monitoring Committee members may recommend to the Managing Authority priorities and evaluation questions for the evaluation work.

For the individual evaluations Steering Committees will be set up in order to formulate the evaluation question and to perform quality control over the evaluation.

The ongoing evaluations will be co-financed by the funds under the Technical Assistance priority. The funds for evaluation under TA will be budgeted annually in compliance with the work plan adopted.

The European Commission guidelines on evaluation will be followed while coordinating the individual evaluation activities.

As regards the evaluation experience in Estonia, the Phare Interim Evaluation Scheme in Estonia has been operational since 1997. In the context of EDIS process, the Ministry of Finance of Estonia has taken over the responsibility for Phare Interim Evaluations from the European Commission, DG Enlargement. Currently the services for performing the evaluations are in the tendering phase. The evaluation contract will be managed and coordinated by the Ministry of Finance.

Since 1997 however Ministry of Finance as a National Aid Coordinator has been a stakeholder in the Phare evaluation process and has gained knowledge on the evaluation activities. Ministry of Finance, EC Delegation and DG Enlargement have established the annual evaluation work plans in cooperation.

In 2002 the evaluation consortium commissioned by European Commission carried out the ex-post evaluation of Phare 1997/1998 programme. The Ministry of Finance as a stakeholder set up the local Steering Committee in Estonia and coordinated the evaluation process.

Currently in Estonia the SAPARD Mid-term Evaluation is being completed. The evaluation findings will be presented to the SAPARD Monitoring Committee in the month of November.

Evaluations have been commissioned and carried out in Estonia in relation to nationally funded regional development programmes, in order to obtain an independent view on the results and impact of programmes.

Capacity building for evaluation will be continued in Estonia. Ministry of Finance will coordinate seminars and training activities in order to further reinforce the authorities commissioning and managing individual evaluations.

7.4. FINANCIAL MANAGEMENT AND CONTROL

7.4.1. FINANCIAL MANAGEMENT

In applying for payments from the Structural Funds, the Final Beneficiary shall prepare declarations of expenditure according to the formats prescribed by the Paying Authority (as a general rule three times a year) and forward them together with required supporting documents to the Paying Authority, (with a copy to Intermediate Body responsible for the measure and the Managing Authority) Thereafter the Intermediate Body responsible for the measure shall prepare a note, according to the format prescribed by the Paying Authority, on the relevance of activities as laid down in the decision granting a contribution form the Funds, and send it to the Managing Authority. The Managing Authority shall confirm the correctness of the note and send it to the Paying Authority ***(decree of the Minister of Finance based on the Structural Aid Act).***

The Paying Authority shall check the documents received from the Intermediate Bodies and the Managing Authority in the light of the information received in accordance with section 7.1.1. above and prepare a consolidated declaration of expenditure, payment application and certificate. The mentioned documents shall be forwarded to the European Commission.

The Paying Authority shall present payment applications to the Commission at least three times a year, with the last payment application being presented no later than 31 October. (Art. 32.3 of Reg. 1260/99).

No later than 30 April of each year the Paying Authority shall send the Commission the updated forecasts of payment applications for the current year and the forecast for the following year. (1260/1999 art 32(7)) These are compiled by the Paying Authority on the basis of forecasts prepared by Final Beneficiaries, approved by the Intermediate Body responsible for the measure/priority and in co-ordination with the Managing Authority ***(decree of the Minister of Finance based on the Structural Aid Act).*** The Paying Authority shall forward the consolidated forecasts to the European Commission and copies to all the Intermediate Bodies responsible for the measures and to the Managing Authority.

The Commission makes three forms of payment: payment on account, interim payment and payment of the final balance. Based on the corresponding budget commitments, the Commission shall transfer funds to the main account opened in the Estonian State Treasury.

The transfer of funds to the Final Recipient depends on a given measure. The Final Beneficiary shall verify the payment claims and prepare, for presentation to the Paying Authority, payment orders and payment claim for transferring funds. The Paying Authority shall check the received payment claims and payment orders and thereafter order the Treasury to transfer the funds.

The Paying Authority shall send financial tables, which form the basis for preparing the annual implementation reports, to the Intermediate Body responsible for the measure.

The Paying Authority shall forward information on irregularities and the recovery of undue payments to the European Commission (1681/94 art 3,5,12), based on data received from the Final Beneficiary and the Managing Authority ***(decree of the Minister of Finance based on the Structural Aid Act).***

The Paying Authority has delegated the following tasks to the State Treasury Department of the Ministry of Finance of Estonia:

- (1260/1999 art 32 (1)) Payments – payment orders will be prepared by Final Beneficiaries in a special system ***(E-riigikassa).*** Paying Authority verifies payment orders before sending them for to the State Treasury who executes disbursements ***(decree of the Minister of Finance based on the Structural Aid Act; decree of the Minister of Finance based on the State budget act);***
- (438/2001 art 7 (2,3)) Accounting of assistance received from the Community – accounting of the SF will be done by the book-keepers of the State Treasury, the Paying Authority remains responsible for the correctness of the transactions and carries out reconciliation of the ledger of the State Treasury ***(according to internal procedures of the Paying Authority).***

The Paying Authority has delegated the following tasks to intermediate bodies by secondary legislation to be enacted on 1 January 2004:

- (438/2001 art 9) Ascertaining the relevance of activities of Final Beneficiaries as laid down in the decision granting a contribution form the Funds ***(decree of the Minister of Finance based on the SF law);***
- (1681/1994 art 3,5 and 1260/1999 art 32(7)) Confirming the correctness of irregularity report and cash-flow forecast ***(decree of the Minister of Finance based on the Structural Aid Act);***

The Paying Authority has delegated the following tasks to Final Beneficiaries by secondary legislation to be enacted on 1 January 2004:

- (438/2001 art 8) Keeping account of amounts recoverable from payments of Community assistance already made ***(decree of the Minister of Finance based on the Structural Aid Act);***
- (438/2001 art 9) Compiling a declaration of expenditure together with the report of eligible expenditure ***(decree of the Minister of Finance based on the Structural Aid Act);***
- (1681/1994 art 3,5 and 1260/1999 art 32(7)) Compiling reports of irregularities and cashflow forecast ***(decree of the Minister of Finance based on the Structural Aid Act).***

7.4.2. FINANCIAL CONTROL

The main responsibility of the Financial Control Department of the Ministry of Finance, as the Competent National Financial Control Authority, is to audit internal control (including financial control) systems of ministries and their governing area. The Financial Control Department will be designated (stipulated in the Structural Aid Act) as the Auditing Authority of the Structural Funds in Estonia. Also, the Department is responsible for checking whether the financial contributions made by the European Union Structural Funds and the Cohesion Fund are used purposefully and in compliance with EU Regulations. The Financial Control Department is authorised to carry out audits on the distribution of funds at every management and control level up to the Final Recipient. An audit manual has been composed, which gives detailed descriptions of the Structural Funds auditing procedures.

The Financial Control Department shall perform the following duties:

1) Carrying out independent sample checks and systems audits under art.10 of Regulation 438/2001 in order to guarantee that the contributions of the European Union Structural Funds and the Cohesion Fund are used as intended and according to EU Regulations;

2) Analysis and audit of the internal control (including financial control) systems in state agencies and other institutions arranging implementation of foreign assistance, in relation to application, implementation and monitoring of the EU Structural Funds and the Cohesion Fund;

3) Checking financing management, financial statements and financial reports in state agencies, as well as in institutions responsible for application, implementation and monitoring the implementation of the EU Structural Funds and the Cohesion Fund assistance, or in institutions using the EU Structural Funds and the Cohesion Fund assistance;

4) Checking that the operations of state agencies and other institutions that arrange application, implementation and monitoring over the use of the EU Structural Funds and the Cohesion Fund meet the set requirements.

The Financial Control Department is independent from the Managing Authority, Paying Authority and Intermediary Bodies, i.e. it does not participate in the management processes of the Managing Authority, the Paying Authority and the Intermediate Bodies. While carrying out financial control related duties, the Financial Control Department shall rely on the detailed rules for the implementation regarding the management and control systems for assistance granted under the Structural Funds (Articles 10, 11, 12, 15, 16 and 17 of Commission Regulation (EC) 438/2001). Annual plan of the system audits and sample checks will be provided to Commission by the end of each year. The Financial Control Department will inform the Commission by 30 June each year about the setup and establishment of the system of audit and sample checks on operations in the previous year as a part of the annual report required to sent to Commission according to Article 13 of Commission Regulation (EC) 438/2001.

The aim of the Financial Control Department's sample checks on operations shall be to:

a) verify the effectiveness of the management and control systems in place;

b) verify selectively, on the basis of risk analysis, expenditure declarations made at the various levels concerned.

Such checks carried out before the winding-up of the assistance shall cover at least 5% (15% in case of Cohesion Fund measures) of the total eligible expenditure and be based on a representative sample of the operations approved, taking account of the requirements mentioned below. The implementation of the checks should be evenly spread over the period concerned.

The selection of the sample of operations to be checked shall take into account:

a) the need to check an appropriate mix of types and sizes of operations;
b) any risk factors that have been identified by national or Community checks;
c) concentration of operations under certain intermediate bodies or certain final beneficiaries, so that the main intermediate bodies and final beneficiaries are checked at least once before the winding-up of each assistance.

The following has to be verified through checks:

a) the practical application and effectiveness of the management and control systems;
b) for an adequate number of accounting records, the correspondence of those records with supporting documents held by the intermediate bodies, final beneficiaries, and the bodies or firms carrying out the operations;
c) the presence of a sufficient audit trail;
d) for an adequate number of expenditure items, that the nature and timing of the relevant expenditure comply with Community provisions and correspond to the approved specifications of the operation and works actually executed;
e) that the use or intended use of the operation is consistent with the use described in the application for Community co-financing;
f) that the Community financial contributions are in accordance with the EU differentiation of the rates of contribution (Art. 29, EC Regulation 1260/1999) and are paid to final beneficiaries without any reductions or unjustified delay;
g) that the appropriate national co-financing has in fact been made available;
h) that the co-financed operations shall be in conformity with the provisions of the Treaty, with instruments adopted under it and with Community policies and actions, including the rules on competition, on the

award of public contracts, on environmental protection and improvement and on the elimination of inequalities and the promotion of equality between men and women.

It should be determined whether the problems encountered are of a systemic character, entailing risk for other operations carried out by the same Final Beneficiary or administered by the same intermediate body. Also, the causes of such situations should be identified, as well as any further examination that may be required and the necessity for corrective and preventive actions.

Besides the audit work of the Financial Control Department, the internal auditors in Intermediate Bodies and Final Beneficiaries will also independently carry out sample checks according to their own annual audit plan, which is co-ordinated with Financial Control Department. The audit methodology to be used is the same as followed by the auditors of the Financial Control Department.

The Financial Control Department has been designated to issue declarations on the winding-up of the assistance (both, for structural funds and for Cohesion Fund) under articles 15 and 13 of regulations 438/2001 and 1386/2002 respectively. Therefore, the Financial Control Department will be functionally independent from:

(a) the Managing Authority;

(b) the person or department within the Paying Authority responsible for drawing up the certificates of statements of interim and final expenditures;

(c) intermediate bodies.

The declarations on the winding-up of the assistance shall be based on an examination of the management and control systems, on the findings of checks already carried out and, and when necessary, on a further sample check of transactions. The Financial Control Department shall make all necessary enquiries to obtain reasonable assurance that the certified statement of expenditure is correct and that the underlying transactions are legal and meet the set requirements. The Financial Control Department shall perform its duties according to internationally recognised auditing standards. For that purpose the Final Beneficiaries, the Paying Authority, the Managing Authority and the Intermediate Bodies shall present all necessary data and provide access to the Financial Control Department to the accounting records and supporting data necessary for preparing declarations.

Declarations shall be drawn up on the basis of the indicative model prepared by the European Commission (Annex III of Commission Regulation 438/2001 and Annex III of Commission Regulation 1386/2002 in case of Cohesion Fund). They shall be accompanied by a report that includes all relevant information to justify the declaration, including a summary of the findings of all checks carried out by national and Community bodies to which the Financial Control Department has had access.

Final Beneficiaries shall submit the measure-based winding-up pre-declarations, appended with summaries of the main findings from their own audit work, to the Intermediate Body at measure level. Intermediate Bodies at measure level shall submit the measure-based winding-up pre-declarations, appended with summaries of the main findings from their own audit work to the Financial Control Department. Final Beneficiaries' pre-declarations are submitted to the Financial Control Department in their original form.

The Structural Aid Act and implementing regulations will provide detailed legal framework for sample checks and issuing of winding-up declarations. The detailed methodology and procedures are described in the Guidelines for Auditing Structural Funds of the European Union.

The Financial Control Department shall present annually a report to the European Commission (to relevant Directorates) that includes the main findings of the audits of the Managing Authority, the Paying Authority, the Intermediate Bodies and the Final Beneficiaries performed throughout the reporting year.

Also, the Financial Control Department shall submit and co-ordinate with the European Commission (relevant Directorates) the annual work plan, based on risk assessment results, for carrying out audits in the Managing Authority, the Paying Authority and the Intermediate Bodies.

An ***ex-ante control system,*** meeting the requirements of the European Union, shall be set in the Managing Authority and the Paying Authority, and in institutions to whom the duties shall be delegated (including Intermediate Bodies and Final Beneficiaries). The ex-ante control mechanism shall cover basic internal control criteria (double signature system, internal accountancy rules, the procedure for separation of duties, etc.).

Ex-post control shall be carried out independently at different management and control levels of Structural Funds and the Cohesion Fund. The control shall be guaranteed via internal audit units at the Managing Authority, Paying Authority, the Intermediate Bodies and the Final Beneficiaries level, and by the Financial Control Depart-

ment as regards the whole system. Internal auditors in the above-mentioned institutions shall be independent, they are subject to reporting requirement to the manager of the institution, and they are not included in the managing processes. The composition of the intermediate bodies shall include separate units that carry out technical surveys. When necessary, the units shall support internal auditors in framework of on-the-spot technical inspection.

In accordance with Regulation 2355/02 and Art. 38(6) of Regulation 1260/1999, Final Recipients - and all bodies involved in the management of the SPD funds - shall maintain the supporting documents justifying expenditure, the whole documentation concerning activities, expenditures and other outputs in the formats and ways set by the Managing Authority, or by an institution authorized by it, in order to guarantee the required audit trail.

The Final Recipients submit their project progress report to the Final Beneficiary together with the payment claim.

ANNEX 1: DEFINITION OF THE DIFFERENT AUTHORITIES AND BODIES, INVOLVED IN THE IMPLEMENTATION OF THE SPD *(TERMINOLOGY CORRESPONDS TO REGULATION 438/2001)*

Managing Authority (MA) - means public authority designated for the purpose of managing the assistance of the Regulation 1260/1999. MA has full responsibility for implementation of the SPD and setting up necessary implementing, monitoring, evaluation and control systems.

The Ministry of Finance, Foreign Finance Department, fulfils the MA tasks. The Minister of Finance makes up the Monitoring Committee and enacts the general regulation on structural fund monitoring and evaluation

Paying Authority (PA) - means public authority designated for the purposes of drawing up and submitting payment applications and receiving payments from the Commission. PA is responsible for quick and full transfer of the aid to final beneficiaries.

The Ministry of Finance, National Fund Department, fulfils the PA tasks. The Minister of Finance enacts the general regulation on financial reporting.

Auditing Authority (AA) - means public authority designated for the purpose of auditing the MA, the PA, the IBs, Final Beneficiaries and Final Recipients.

The Ministry of Finance, Financial Control Department, fulfils the AA tasks. The Minister of Finance enacts the general regulation on audit planning -methodology, audit and winding up procedures.

Intermediate Bodies (IB) - means the institutions functioning under the responsibility of the Managing Authority or the Paying Authority as regards Point 2 of Article 2 of Council Regulation (EC) No 438/2001 of 21 March 2001 to perform the tasks delegated to them by the Managing Authority or the Paying Authority.

There are two types of Intermediate Bodies: bodies, which are responsible for implementation of priorities - ***Priority Intermediate Bodies;*** and bodies, which are responsible for implementation of measures- ***Measure Intermediate Bodies.*** In Estonia, the IB are all ministries involved in implementation of the SPD.

Final Beneficiary - means the bodies which grant the aid: designated state authorities and foundations acting under state control.

The tasks and responsibilities of the Intermediate Bodies and the Final Beneficiaries are enacted by the Structural Aid Act and secondary legislation.

Applicant -.means the bodies and public or private firms applying for assistance.

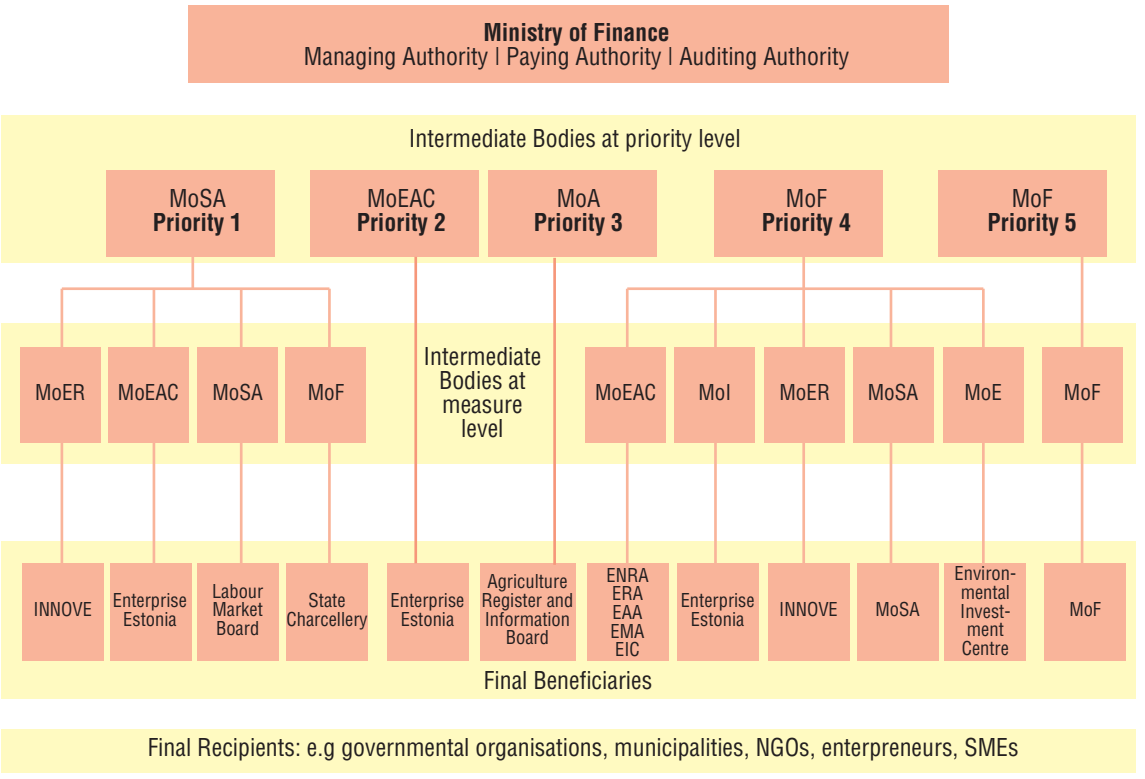
Final Recipient - means the bodies and public or private firms receiving the assistance and being responsible for commissioning operations.

Priority/Measure Working Group – a body carrying out functions related to monitoring at the priority/measure level.

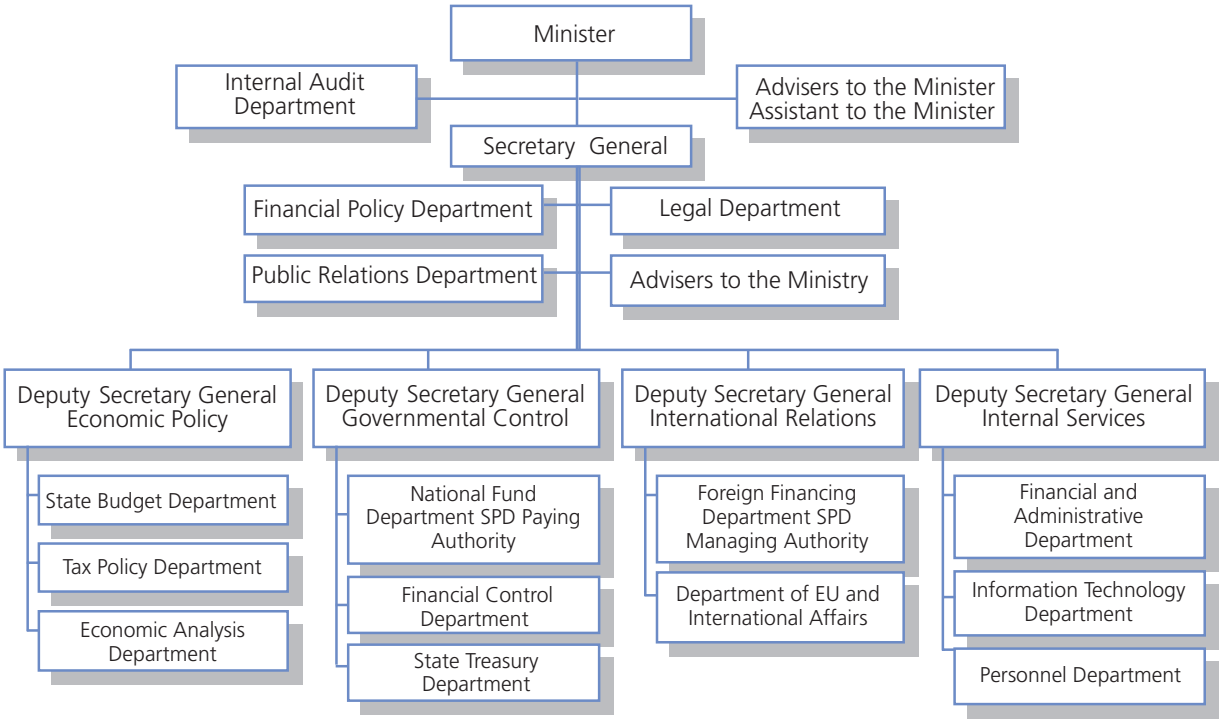
Payment application – a document of established form submitted 3 times a year by the Paying Authority to the European Commission (regulation 1260/1999 art. 32), also the documentation submitted to the Paying Authority by the Final Beneficiaries three times a year in order to contribute to the payment application to the Commission.

Payment claim – a document of established form submitted by the Final Recipient to the Final Beneficiary in the course of projects and subsequently submitted by the Final Beneficiary to the Paying Authority in order to pay the funds to the Final Recipient.

ANNEX 2: MAIN BODIES INVOLVED IN THE MANAGEMENT OF ESTONIAN SPD



ANNEX 3: MINISTRY OF FINANCE OF ESTONIA (AUGUST 2003)



ANNEX 4: MAIN FINDINGS OF THE EX-ANTE EVALUATION

The following is the summary of the main comments and recommendations presented in the ex-ante evaluation and in the final report on strategic environmental impact assessment of the Estonian National Development Plan – Single Programming Document (SPD) for 2003-2006. These reports reflect the National Development Plan draft as

of 12.11.2002 . The ex-ante evaluators have added their opinion on how their recommendations have been taken into account in the final version of the document.

Ex-ante evaluation report

The main content of the report is reflected in comments and recommendations. The recommendations are divided into two categories. Category A recommendations are foreseen for improving the current programming document, category B recommendations are foreseen primarily to be taken into account in the future programming cycles. The structure of the ex-ante evaluation report and the current summary follow the structure of the evaluated programming document.

1. Socio-economic situation

Comments

1.1 The ***international and cross-border framework*** in SPD analytical part 1 is insufficient. The question is: what is the role of Estonia - a country with small-scale open economy and decreasing population, located in the periphery region in Eastern Europe? Estonia has its specific characteristics (geographic position, low population density, historic and cultural closeness with Northern Europe, etc.) that could be taken into account in defining the future role of the country.

1.2 Globalisation is a univeral trend to which Estonia is very open. In the first part of SPD, the ***globalisation as well as regional co-operation*** framework is poor. We could refer to Baltic co-operation, to so-called "Nordic Dimension", to co-operation with Russia in the situation where the economic and trade-related co-operation between the European Union and Russia is getting closer.

1.3 The ***two main objectives of the analyses*** have been neither pointed out nor emphasised

- Identification of warning signals (and potential weaknesses) – in that case the main objective of state intervention via SPD is to eliminate (or at least decrease) negative impact of relevant market biases;
- Identification of potential economic growth and development opportunities - elaboration of a strategy and relevant measures that through intervention should ensure future development, is dependent on it.

1.4 The strategy that is elaborated later should be directed towards satisfying the state's main economic and social development needs - these ***needs*** (as an important category) have not been identified in SPD.

1.5 The preconditions of fast economic development can be created by transition form investments based economic model (the main emphasis is on reaching macro-economic stability) to ***innovation based economic model*** where the main emphasis is laid on long-term improvement of economic environment that is based on micro-economic knowledge. This would mean creating better conditions for promoting entrepreneurship in fast-growing economic sectors (IT, bio-technology, etc.) - that aspect has not been clearly discussed in SPD analytical part. The innovation based economic model is important also from the environmental aspect - technically more effective processes are usually also ecologically more effective.

1.6 The IT and more widely ***promotion of information society*** part in economy has been poorly presented. The analyses as it is at the moment do not give necessary basis for planning IT-expenditures in SPD context. The main problem in IT part is that IT has been pointed out only in service sector (telecommunications and use of IT), and in very insufficient way. IT-industry is an industry (not service) that is very service-intensive. Therefore the present division under service (as would also be its presentation under industry) is not very expedient. This chapter should include estimations of IT-production and service volumes (estimation of finances and employed workers) by different sub-areas.

1.7 The analytical part is ***unproportionally long*** and not perceivable. The objective of the analytical part should be an exhaustive analyses of the present situation in light of recent developments, in order to elaborate reasoned priorities, strategies, measures, etc. A summary should be added to the end of part 1 in order to explain which are the most important objectives and tasks in the areas of economy, people and natural environment. It should also be defined which of the planned activities are to be implemented in first place in order to avoid possible drawbacks. The next part of SPD "Strategic basis" is not well connected with part 1 and it does not substitute the need for the important summary part.

1.8 The missing general points of SPD part 1 creates a threat of scattering resources. It could happen that enough resources are directed neither into projects necessary for ensuring strategic success nor into neutralising developments threatening the whole country. At the same time such "wide front" approach is inevitable, if the priorities have not been discussed in consensus and are not fixed. A solution is offered by specified priorities in

the implementation part of the SPD and by setting adequate criteria to selection and evaluation of projects in the monitoring part.

Recommendations

Category A:

1.1 The analytical part should be more structured by bringing 2-3 strategic key problems/areas ***as a summary*** in the end of every subject area (it has been done in some cases), clearly indicating the grounds of selection. It would be reasonable to compile a 3-4 page concentrate (general summary) of these summaries, together with a summary table, identifying the most important ***needs*** for elaboration and implementation of the strategy.

1.2 The identified ***strategic key problems/areas*** should be harmonised and grouped, the numerical and other information in describing them as well as the language should be harmonised (a la compose a problem tree), i.e. reach unified language as for semantics (in the sense of meaning) as well as for the position of problem areas in the general scheme.

Category B:

1.3 To strengthen the ***international*** and ***cross-border framework*** in elaborating a national long-term strategic development plan, clearly define the vision about the future role of Estonia as a very small open economy located in a relatively peripheral area of Eastern Europe in the integrated Europe.

1.4 To emphasise more the role of ***globalisation*** (the future developments depend more and more on external factors) and ***regionalisation,*** i.e. to strengthen the present relatively weak framework of co-operation with Baltic and Scandinavian States and with Russia, as well as the role of the Nordic Dimension.

1.5 To rely more on ***innovation***- and ***knowledge-based*** economic model (handling more widely the society model, including also innovations of the public sector, etc.) - preconditions for fast and balanced economic growth could be created via innovation-based model, focusing on promoting knowledge-based micro-economic environment.

1.6 To shorten considerably the description of socio-economic situation of SPD part 1, and focus on identification of most important future social and economic development needs (it would be reasonable to present the necessary statistical information in analytical tables, adding also trend analyses).

2. Strategic basis

Comments

2.1 It is difficult to see this SPD version as national medium- or long-term ***strategic development plan*** for ensuring clearly defined vision of economic growth and social equality - it has been compiled rather for the purpose of grounding additional financing (support) from the European Union Structural Funds.

2.2 Compared to SPD part one, the description of the strategy part is unproportionally short and superficial. General theoretical-ideological basis is missing (for example via the national wealth conception) for formulation of priorities and relations between the priorities.

2.3 SWOT analyses ***part is not clearly connected*** with SPD analytical part - it is not very clear how the SWOT analyses table has been drafted and which methodology has been used. Methodological shortcomings could be found as well: only the list of factors has been presented, they have been neither prioritised nor related.

2.4 Although the main objective of Estonian economic policy and SPD has been fixed to be ***balanced and sustainable economic growth,*** sustainability is not an important priority on the level of concrete measures - the emphasis in the measures is laid rather on achieving short-term objectives and/or maintaining status quo.

2.5 The strategy and the relevant measures are not directed towards alleviating Estonian main economic problem - ***low productivity level,*** but towards diminishing social tensions instead of strengthening the main productivity growth factors: research and development, innovation and hi-tech activities, and ensuring that labour force meets labour market needs.

2.6 SPD is directed towards strengthening ***physical infrastructure and agriculture*** rather than promoting human resource development and information society and innovations. Reaching short-term objectives has been prioritised via strengthening infrastructure rather than reaching long-term results via human resource development.

2.7 The ***list*** of factors in the SWOT analyses table ***is not exhaustive*** and sufficient, for example: strengths (economic connections with the East, favourable infrastructure and logistical advantages); weaknesses (small-scale economy, administrative incapacity, social exclusion, negative demographic developments, shortage of qualified labour force, missing structural policy); opportunities (closeness to Nordic economic centres, economic connections with Russia); threats (threats proceeding form globalisation, outflow of qualified labour force).

2.8 The priorities are insufficiently grounded and generic, for example:

- ***Priority 1:*** there is no clear connection between training of labour force and research and development, main attention is paid to developing vocational education rather than to developing higher education (primarily degree education) and training of trainers.
- ***Priority 2:*** it does not include structural and cluster policy, co-operation and connections with relevant clusters of Nordic countries (haberdashery, IT industry), technology and know-how transfer.
- ***Priority 3:*** Main attention has been paid to maintaining and/or development of agricultural production instead of changing economic structure in rural areas for ensuring the future of rural development: it has not been considered that different regions have substantially different development opportunities.
- ***Priority 4:*** Restructuring of some critical regions is inevitable (North-east Estonia, Paldiski) - this has not been sufficiently reflected in SPD; many small and weak local governments have weak capacity to finance investments, i.e. implementation of Euro-projects precedes support from the central government and co-operation between local governments.

2.9 The number of ***quantitative indicators*** is very high, there is no relation between different levels of SPD: SPD (impacts and results), priorities (impacts and results), measures (impacts and outputs); the indicators characterising human resource development are oriented mainly towards promoting vocational education (rather than higher education and primarily degree education); there are no indicators in the areas of information society, IT and research and development. The indicators measuring the implementation of the strategy as a whole, are missing.

Recommendations

Category A:

2.10 Supplement the ***SWOT analyses*** part:

- Clearly link the SWOT analyses with SPD analytical part together with concrete references;
- The text and table parts of the SWOT analyses could be supplemented by additional strengths, weaknesses, opportunities and threats and the factors should be prioritised, referring to possible relations between them.

2.11 The ***priorities*** describing the content of the strategy should be opened further, their content should be more specified and grounded (some keywords):

- Priority 1: relation between training and R&D, training of trainers, higher education and especially degree education.
- Priority 2: structural and cluster policy, co-operation with Nordic Countries, technology and know-how transfer.
- Priority 3: changing economic structure in rural areas, alleviating regional unbalances.
- Priority 4: restructuring of critical regions (North-east Estonia, Paldiski), ensuring state support and co-operation between local governments.

2.12 Decrease the number of ***indicators*** and if possible, consider relations between indicators of different levels of GDP (SPD, priorities, measures).

Category B:

2.13 In drafting Estonian long-term strategic development plan ***a clear vision*** of Estonia's role in the united Europe's economy should be formulated, taking into account globalisation, integration and regionalisation processes. As a methodological recommendation we suggest to use ***trend analyses*** (it is especially important to analyse emerging and disrupted trends).

2.14 Strategy development should proceed from clear ***economic theoretical and ideological*** framework (it is recommendable that national wealth and sustainability concept is considered) in developing all stages of

strategic development plan (in describing socio-economic internal and external economic policy background, in setting priorities and elaborating measures, in developing implementation mechanisms).

2.15 A long-term strategic development plan should be directed more towards ***ensuring development*** rather than alleviating bottlenecks, i.e. towards human resource development (training highly qualified labour force with degree); information society, R&D and promotion of innovations; structural changes and economic integration. One should concentrate on what will bring more added value and revenue in the future.

3. Priorities

Comments

3.1 There is ***excessive number*** of measures (a total of 29 measures are planned), some of these have a very small financial weighting. The high number of measures disperses scarce financial resources and probably will make the administration of the implementation of measures more costly.

3.2 Some measures ***are not co-ordinated*** with other related measures, and there is danger that some activities of different measures overlap (see, for example, measures 3 and 5, measures 7 and 27, measures 12 and 16). Various planned measures may be joined into one in order to concentrate funding: measures 4 and 29; measures 3 and 5; measures 9 and 10; measures 11 and 13; measures 17 and 18; measures 19 and 20; measures 28 and 29.

3.3 The ***financial weighting*** of some measures in the frame of priorities is surprising and is not clearly founded on other parts of SPD (analytical framework and strategy): measure 2, which is aimed at improvement of competitiveness and R&D activities, has financial weight of only 8% in the priority "Human Resource Development", whereas the financial weight of measure 9 (investments into traditional agricultural production) is 35%, whereas measures oriented for restructuring rural development (measures 11, 13, 15) have in total even smaller financial weight; financial weight of measure 27 (IT and information society development) is four time smaller than that of measure 26 (reconstruction of hospitals), etc.

3.4 Measures of top importance in priority 1 "***Human resource development***" are oriented mainly towards diminishing social stress and increasing the satisfaction of vocational education pupils instead of focusing on training of trainers and increasing the share oh high-qualified labour with post-graduate technological education.

3.5 In frame of measures of the priority 2 "***Competitiveness of enterprises***" it is necessary to handle structural policy problems: in what sectors the development of the competitiveness is emphasised and to which sectors financial resources will be directed.

3.6 The number of measures in priority 3 "***Rural development and agriculture***" is too high: very often there are same target groups, final beneficiaries, supported activities and support schemes, implementing institutions; the co-ordination with other measures in the framework of this and/or other priorities is pointed out weakly.

3.7 In implementing measures of priority 4 "***Local development and infrastructure***", there might be a co-financing problem for small and weak local governments. Effective co-operation between small local governments would help to solve the problem, however, it has not been mentioned in SPD.

3.8 Under physical infrastructure measures it is recommendable to point out ***major projects and objects*** for utilising financial resources: which hospitals, schools, roads, cultural establishments etc. are the objects for additional investment and reconstruction?

3.9 The ***implementation mechanisms*** of many measures are unclear (see e.g. measures 1, 3, 5). We fear that there is no clear picture of what will be done in the fame of some measures, especially rural development and infrastructure measures.

3.10 In places, ***supported activities*** have not been opened and/or are declarative (see measure 1 and 2) or they are very vague and should be made more concrete (see measures 21, 22, 23).

Recommendations

Category A:

3.11 It should be considered whether to ***join interrelated measures,*** primarily in cases where the target groups, final beneficiaries, implementing agencies are the same (for example measures 11 and 13, 17 and 18, 19 and 20, 28 and 29), or alternatively at least refer to co-ordinated implementation.

3.12 Consider whether the ***financial scales*** of separate measures in frame of the priorities should be changed in favour of human resource development (primarily highly qualified labour force with degree and training of trainers), promotion of information-society (high-tech industries, training of trainers) and restructuring of rural development.

3.13 To plan national support schemes in case of measures that are planned to be co-financed ***by local governments*** and concrete projects, and ensure effective co-operation between local governments. It should be considered whether it could be expedient to set up a special fund for supporting local governments' investments, also to create relevant normative basis for applying for investment support.

3.14 Descriptions of the measures should be ***harmonised and concretised,*** including:

- Specify major concrete objects and projects (primarily for infrastructure development measures)
- Specify and concretise the activities to be supported, target groups, implementing agencies, final beneficiaries
- In reasoning the measures the general descriptive part should be shortened, and if possible implementation mechanisms should be specified.

Category B:

3.15 Consider the possibility of setting up county development agencies (in co-operation with the state, counties and the association of local governments) for co-ordinating, arranging and managing local development support.

4. Consistency of the strategy with Community and national policies

Comments

4.1 Estonian SPD is consistent with the guidelines of the Commission. All the SPD measures should be handled in this framework and it is reasonable to compile a relevant summary table with a title "Consistency of the Estonian SPD priorities with the European Union priorities". At the moment a question arises with which EU priority the SPD measure 4 "Enhancing administrative capacity" matches.

4.2 The social cohesion and employment related themes follow the European Union guidelines. The horizontal themes of the European Social Fund (local employment initiatives, labour market and social dimension of information society and equality of men and women) is presented weakly. Also, little attention has been paid to social economy theme, that is a relatively new theme in Estonia in this area.

4.3 Generally the gender equality theme is not very visible in the programming document. It has not been referred to in the strategy part, the only measure where theme has been reflected is measure 3 under implementation of active labour market measures. Programme achievement indicators have not been divided by gender. The experts think that the idea of ensuring equal opportunities involves more than implementation of gender equality (creating equal opportunities for minorities, disabled people, to all needing education and health care services, etc).

4.4 It was not clear for the experts why in this section of SPD the only internal policy that has been handled is Estonian regional policy. SPD does not include unified development production chains of agricultural and fish products, the measures of priority 3 are scattered by departments and sectors, not to mention ensuing unified regional developments. Even less can be talked about the modernisation of vocational education that proceeds from regional needs or preference of local government projects. It has been recommended to acknowledge the mentioned shortcomings and emphasise the necessity to eliminate the shortcomings in designing national policies.

Recommendations

Category A:

4.5 Similarly to environmental policy area, collect the ***relations*** between the objectives of horizontal priorities and the SPD measures into a summary table.

Category B:

4.6 Acknowledge that several SPD measures are ***wider in their essence,*** that has to be considered in elaborating long-term national developing strategy: ensuring equal opportunities is not limited only to ensuring gender equality; development of information society does not include only technological aspects.

4.7 Several important ***national economic policy*** areas are missing in Estonia or are weakly elaborated, for example town and settlement centres policy; regional and cluster policy; population policy. Decreasing regional disparities and disproportions without those can not be very successful. The same goes for other important economic policy areas and relevant strategic documents (for example education and research policy, on which the human resource development and promotion of information policy depend) – the long-term strategic development plan can not be well set before these bottlenecks are removed.

5. Financing

Comments

5.1 The summary financial tables should include information by all measures, showing financial weighting by measures and priorities - in addition to the information presented, additional calculations should be made for getting clearer picture of the financial plan. If this can not be done because of technical or regulative reasons, it would be reasonable to present the relevant table as an annex.

5.2 The financial weighting of technical assistance is unnaturally big as compared to some other important measures. For example the funds foreseen for technical assistance are almost 2.5 times higher than that of measure 2 "Human resource development for increasing economic competitiveness in SME and research and development sectors (ESF)".

5.3 The experts have several questions related to financial weightings of single priorities. For example the financial weighting of the first and most important priority "Human resource development" is the lowest – below 10% (taking into account also the Cohesion Fund support), however the financial weighting of priority 4 "Infrastructure and local development" is more than half (57%). However in Estonian SPD, the importance of the human resource development priority has been justifiably emphasised, and it has been placed as the first priority.

5.4 The way the financial table has been presented, it does not reflect the adequate costs of human resource development. Indirectly the measures planned in the frame of other priorities support human resource development as well. Hence the current way of presentation decreases the costs of human resource development. The experts think that it would be reasonable to assemble all the costs planned for human resource development. Secondly, it should also be taken into account how much the costs will rise as compared to their current level and whether the absorption capacity is sufficient. As for human resource priority, it is relatively limited.

5.5 Of course, the main question is who and on what reasoning has set the financial scales of the priorities? Which limitations are set by Commission regulations on the Structural Funds and the Cohesion Fund and how flexible they are. Part 5 "Financing" lacks explanations and comments and the experts do not possess relevant adequate information either.

Recommendations

Category A:

5.6 Present financial amounts and weights of single measures as an annex to SPD. Part "Financing" should be complemented by ***explanations/comments*** for reasoning the weights of priorities. The same should be done in an annex as for financial weights of single measures.

5.7 Present separately the amounts and weights planned for ***human resource development*** and ***promotion of information society,*** that at the moment are fragmented between several measures of different priorities.

5.8 Decrease the financial weight of priority 5 "***Technical assistance***". Alternative: present more profound reasoning together with concrete projects under measures 28 and 29.

Category B:

5.9 Setting financial weightings of the priorities of the long-term national strategic development document presumes preceding ***social agreement*** (by involving the general public) and reaching ***political consensus*** – it would be reasonable to describe shortly the ways for reaching it.

6. Implementation

Comments

6.1 Different parts of the programming document have been drafted by different ministries and are not unified. Therefore a question rises as for implementation - who bears general responsibility and for example responsibility for the activities financed by European Social Fund and their co-ordination. The mechanism of channelling funds to the final beneficiaries remains unclear.

6.2 The experts see a certain problem in the fact that the whole implementing mechanism (management, data collection and forwarding, reporting, monitoring, financial management and control) is actually under the control of the ***Ministry of Finance,*** which may become a "super ministry" among others.

6.3 It is not clear from the document how the separation of responsibilities and rights related to SPD implementation (separation of functions of Managing Authority and Paying Authority) will be ensured.

6.4 It is not very clear, who are final decision-makers and how the decisions related to SPD implementation will actually be made. The procedure concerning informing the public is not clearly presented either.

Recommendations

Category A:

6.5 Determine one ***implementing agency*** (line-ministry) for every Structural Fund for concretising co-ordination and responsibilities, that would co-ordinate the work of other relevant institutions and be responsible for SPD implementation in all the implementation areas.

6.6 It would be expedient to elaborate a detailed description of the decision-making process and to plan measures for informing the public about implementation of the SPD and the results.

Category B:

6.7 In the future the Managing Authority should be formed by Prime Minister's Office that would be superior to all line-ministries and would enable to enhance administrative capacity of the Office. One concrete possibility would be to reorganise the current Sustainable Development Committee into a functioning institution.

6.8 The ***chairman of the SPD Monitoring Committee*** (MC) could be Prime Minister – this is, after all, a national development plan. MC should not consist of the representatives of implementing agencies. So, the implementing agencies should be left out, representatives of the main beneficiaries: local governments, NGOs, etc. should be added. It should be followed that the MC would not be very big, and the MC institutional participation should be set already in the SPD.

7. Final conclusions of the expert group

The experts greet and thank the authors of the Estonian National Development Plan – Single Programming Document for the efforts to draft the first strategic programming document covering development of the country in medium-term perspective. Although there are several shortcomings (some of which could be easily removed) and a lot has still to be done for compiling a real long-term strategic development plan, this programming document is sufficient for justifying the application for co-financing from the European Union Structural Funds, considering the following:

- In the first part of the SPD a very good overview of Estonian socio-economic situation in quickly changing domestic and foreign environment has been presented, based on adequate statistical data.
- The general objective for developing the state, strategy for achieving the objective, quantitative objectives have been elaborated in frame of priorities that are in compliance with the Community and Estonian national economic policies (as far as they exist).
- In frame of the set priorities concrete measures have been elaborated (together with defining objectives, supported activities, target groups, final beneficiaries and implementing agencies) and the financial scheme for implementation, including EU Structural Funds support.
- A satisfactory implementation mechanism has been elaborated for organising the management, monitoring, evaluation, financial management and control of the SPD.

- The results of macro-modelling show that national intervention through SPD (including the EU Structural Funds, public and private sector funding) gives several important macro-economic results and contributes to Estonia's integration to the European Union and to convergence process.
- It is realistic to implement SPD measures and this will bring along also several important positive social and ecological result: decreasing unemployment and creation of new jobs, increasing social inclusion, ensuring higher social equality, liquidation of residual pollution of natural environment, valuing rural development, etc.

8. Annex to the ex-ante evaluation report: how the recommendations of SPD ex-ante evaluation report have been taken into account

8.1. In the part Socio-economic situation both A-category recommendations have been taken into account:

- In the end of each field a summary of main strategic problems has been fixed - these summaries in their turn have been concentrated into the general summary presented in the beginning of the document.
- The presentation of main strategic problems has been unified, inaccurate numerical information has been corrected and complemented, several parts that were weakly presented in the previous SPD version (for example part 1.2.5 "Business"; part 1.2.6 "Research and technology development and innovation"; part 1.3.4 "Healthcare"; handling higher education in part 1.3.2 "Education") have been considerably amended and unified as for semantics as well as for identification of problems.

To a certain extent the category B recommendations have been considered for setting international and cross-border framework and paying more attention to the role of globalisation and regionalisation - see for example the SPD part "Development prospects".

8.2. Part 2 Strategic basis has been almost entirely rewritten. Both A category recommendations have been taken into account:

- The SWOT analyses is more related to SPD analytical part; the textual part and the SWOT table have been supplemented by additional strengths and weaknesses as well as by opportunities and threats; the conclusions part of the analyses includes relations between different parts of the SWOT analyses.
- The content of formulated priorities has been better opened and grounded, the proposals of evaluators have been considered partly (for example training of trainers, higher education part, promotion of R&D and innovations, changing economic structure of rural areas, ensuring co-operation between local governments).
- Although the number of indicators measuring the objectives of the programme is still high, more attention has been paid to their reasoning.

8.3. In part 3 Priorities, the recommendations of ex-ante evaluators have been generally taken into account (except the number of measures, that has even been increased):

- The financial weighting of measures has been changed in favour of human resource development and rural restructuring - the same can not be said about promotion of information society, as it is included in several measures.
- In case of all measures it has been defined whether a measure includes state aid or not.
- The descriptions of most measures have been harmonised; the activities supported and target groups have been specified and made more concrete, however, the implementation mechanism of several measures is still unclear.
- The titles and content description of technical assistance measures has been specified.

8.4. Part 4. Coherence of the Strategy with Community and national policies has not been considerably changed.

8.5. Part 5 Financing has mainly remained unchanged (new numbers in financial tables). The summary of financing has expediently been presented in SPD summary in the beginning of the programming document. The recommendations of ex-ante evaluators have been considered also in the summary part, where the volumes and financial weighting by separate priorities has been presented in summary form together with reasoning.

8.6. Part 6 ex-ante evaluation of SPD macro-economic influences is a completely new part and the evaluators see it as a very important part of the programming document. The methodological basis of quantifying SPD influence and analyses of macro-economic influences via HERMIN model (different simulations) have been competently presented. Attention should be paid to the conclusion of the compilers that Estonia's economy is extremely dependent of foreign economic environment.

8.7. In part 7 Implementation, according to the recommendation of evaluators the part 7.1.2. "Project selection and implementation" has been added together with description of decision making process, the content of the report to be presented by the Managing Authority (part 7.1.5) and the principles of the work of Priority Working Groups (part 7.2.1) have been specified.

In summary, during redrafting and amending the SPD (taking into account the results of consultations as well as recommendations of ex-ante evaluators), its quality has been considerably improved and the programming document is sufficient for reasoning the co-financing application from the Structural Funds.

9. Annex: Main findings of the ex-ante evaluators on the SPD thematic aspects

9.1. Labour Market Situation and Human Resource Development

In general the HRD priority is consistent with the main needs of the Estonian labour market identified by the SWOT analyses and the priorities defined in NEAP and JAP. Although, the measures are more oriented towards alleviating social tensions and give only small contribution to the SPD central strategic objective – "Fast, socially and regionally balanced sustainable economic development". The HRD priority itself accounts for 18.6% of the SPD. However, as some of the measures foreseen under Priority 4 also support indirectly the development of HRD, the total contribution of the Structural Funds to the HRD can be estimated at least 27%. Our main concerns regarding the HRD part are the absorption capacity (because of sharply increasing funding and many new activities) and co-ordination (too powerful role of the Ministry of Finance).

9.1.1. Socio-economic background.

In general the labour market analyses is comprehensive, although the linkages between the different subparts could be stronger. For example, the impact of the demographic situation on labour market, the links with economic situation and regional development could be more visible in the text.

It could be useful to assess the ability of the country to achieve the EU employment objectives for 2010 (employment rate 70%, employment rate for women 60%, employment rate for older workers 50%). Also, the skills shortages faced by different sectors could be more discussed in the text (e.g. the need for care workers as a result of workforce ageing).

9.1.2. Strategy and priorities.

Investment into human resource development is not really seen as a possible source for technology development and economic growth, but rather as a tool for alleviating social tensions. Moreover, there are no interrelations between training the labour force and R&D and lack of emphasis on higher education.

The priorities and measures identified in the Plan are consistent with the priorities defined in NEAP and JAP and the link between these documents is clearly emphasised throughout the text as well as in the Policy Frame of Reference. However, ESF horizontal priorities could be reflected more clearly.

9.1.3. Measures.

In general the selection of the measures is consistent with the objectives of the SPD as well as NEAP and JAP. The main weakness on the HRD part is the lack of emphasis on research, science and technology development and post-graduate training, which is a precondition for developing the new generation of trainers in vocational education as well as for raising the productivity and competitiveness of the economy in general.

Measure: Educational system supporting the flexibility and employability of the labour force and providing opportunities of lifelong learning for all. Given the high level of structural unemployment and skill shortages in certain sectors, the interventions under this measure are clearly justified. Although, it seems that the emphasis is on developing systems, but not on individuals' benefit from the measure. It is not evident what will be the linkages between the system of in-service training and re-training for workers under this measure and in-service training and re-training foreseen under the next measure .

Measure: Human resource development increasing the competitiveness of enterprises. The rationale for the measure is clear and well justified. We would recommend to discuss the structural policy under this measure (e.g. in which economic sectors the competition will be enhanced and where the financial resources will be directed (high-tech production, biotechnology)).

Given the importance of improving competitiveness and R&D activities, the negligible weight of the measure is problematic (8%).

Measure: Implementation of active labour market measures. The measure is fully in compliance with the EU Employment Strategy as well as NEAP and JAP, which all emphasise the importance of active labour market policies. The recent analyses of the effectiveness of Active Labour Market Programmes in Estonia by PRAXIS Centre for Policy Studies, shows that the participants in the programmes are on average 7-15% more likely to be employed than non-participants. The cost-benefit analysis suggests that training programmes are also cost-effective. Therefore, the increased investments in this area can be further justified.

However, the active labour market policies should be well targeted, be relatively small in size and their implementation must be monitored and evaluated carefully. Therefore we suggest including development of monitoring and evaluation system under this measure.

Measure: Enhancing administrative capacity. We recognise that ensuring the administrative capacity of the public administration in order to cope with the EU requirements is of utmost importance. However, incorporating the measure under human resource development priority is questionable.

Measure: Increasing social inclusion. The rationale of these measures is clearly re-distributive. The activities and target groups under this measure overlap to some extent with the Active Labour Market Measures and it is not really clear through which institutions these activities will be implemented. Since the concept of social inclusion is not well defined in Estonia and the Joint Inclusion Memorandum will be finalised only by the end of 2003, we think that this measure needs further elaboration.

9.2. Promoting Equal Opportunities for Women and Men

9.2.1. An appraisal of the situation in terms of equality between women and men.

The analysis of the present situation as for equal opportunities between men and women has been included in the SPD mainly in the labour market and education context. Gender inequality at the labour market is lower according to the main indicators than the average in the EU. The higher unemployment rate of men is a serious social problem. However, for women low employment rate and high inactivity is a problem. As for basic education, the drop-out rate of boys from the basic school is more than twice higher that that of girls.

Women have concentrated mainly on jobs where the average salary is lower, there are much less women on leading positions than men: in 2001, the proportion of men on leading positions was 15.1% and that of women only 8.6%. The salary of women is 1/4 lower than that of men and women earn less money than men in all professions. Household work and taking care of children and elderly is mainly the job of women: women spent for that twice more time. In 2001, the share of entrepreneurs among men was 10.2% and among women 4.6%. It can be stated that in Estonia work-related gender segregation appears horizontally as well as vertically. At the same time women's employment is an unused human resource that has significant economic dimension.

Generally, the analyses of the part describing obstacles that prevent women form participating at the labour market could be more thorough. No attention has been paid to the fact that in 2001 and 2002 the share of young unemployed women (aged 15-24) has grown and exceeded the unemployment rate of men at the same age by 8 percentage points and the average unemployment rate by 12 percentage points. Additional analyses should be conducted on accessibility to children's day-care and how its absence prevents women from participating in the labour market; obstacles that exist for genders in accessing education; women's average salary is lower than the average salary of men, but is the salary lower for equal work, etc. In summary, gender equality is not seen as a special problem in Estonia, this has not been highlighted in the SWOT analyses and has only been slightly mentioned in the strategy. Separate measures for promoting gender equality are not foreseen in Estonian SPD, although the principle of promoting gender equality passes horizontally all SPD measures.

9.2.2. Appraisal of the implementation mechanism and the expected impact of the strategy and assistance.

The experts think that the equal opportunities theme is relatively modestly discussed in SPD, thorough analyses of the theme and clear vision of what should be achieved are missing. Nevertheless, we agree that a separate measure for developing gender equality would not be appropriate, although more attention should be paid to gender equality primarily in the frame of the whole human resource development priority. However, the topics handled under the

gender equality theme are in compliance with the National Employment Action Plan (NEAP) and Joint Assessment of Employment Priorities in Estonia (JAP).

Gender mainstreaming, which means systematic consideration of impact on men and women in planning and implementing all policies, action plans and concrete measures, is expressed in SPD as follows:

- Using gender differentiated evaluation and monitoring indicators and indicators of achievement.
- Considering gender equality in measures and priority criteria and specifying special activities in the programme as a whole and on measure level - as a general rule by specifying priority criteria for projects.
- Ensuring gender equality in SPD management, for example by setting up gender equal SPD Monitoring Committee and priority monitoring committees.
- In the frame of active labour market measures attention is paid to the factors that prevent women from returning to the labour market and getting jobs.

It can be stated that implementation of the measures foreseen in Estonian SPD enables to achieve some positive impact on the main aspects of ensuring gender equality (some of them are quantifiable and set as objectives, and some are qualitatively identified):

Integration of men and women into the labour market - will be achieved primarily via active labour market promotion measures, quantitatively identified number of created and retained jobs by gender on the level of relevant measures.

Equal participation of men and women in education and vocational education - will be achieved primarily via human resource development measures, quantitatively identifying the number of participants and graduates of training by gender, also by specifying measure-specific selection criteria.

Promotion of female entrepreneurship - will be achieved via the measures of enhancing business competitiveness priority, by quantifying the number of supported and/or created new enterprises differentiated by gender, also by specifying measure-specific selection criteria.

Reconciliation of work and family-life - will be achieved primarily by applying active labour market measures, by setting measure-specific selection criteria.

According to the evaluation of the expert group all the themes have been handled in the frame of SPD, however systematic handling of the theme and the vision of what will be achieved are missing. At the same time increasing women's employment potential could be an important input in achieving sustainable increase. Bigger attention should primarily be paid to reconciliation of work and family -life, in case of which the analyses and measures are very general. However, as in SPD it has been emphasised for several times that the equality principle will be considered on project level, it is difficult to evaluate the possible impact of the programme on how equal opportunities are ensured. In conclusion we think that probably considering the equality principle on project level will help primarily to acknowledge the issue in the society and that gender aspect will be followed in projects implemented in the frame of SPD. Wider impact depends on the effectiveness of activities foreseen in the frame of different measures.

It should also be mentioned that gender equality act has not yet been passed by the Estonian Parliament, although relevant discussions have been held for years.

9.3. Rural Development and Agriculture

- Almost 25% of arable land was not used and overgrew with bushes,
- the share of agricultural production in GDP decreased from the 1992 level of 11.7% to 3.4% in 2000,
- the proportion of export of agricultural products fell during the same period from 17.5% to 5.8%,
- the share of people employed in agriculture fell from 15% to 5%,
- the need to invest into agriculture exceeds the real investments almost ten times,
- the unemployment rate in the countryside is higher (in 2001 13.4%) than the average unemployment rate in Estonia,
- the number of inactive people in work-age and those who have lost hope to find a job has increased.

9.3.1. Analysis of disparities, gaps and potentials of the current situation in Estonian agricultural sector.

Estonian agriculture and rural development as a whole has undergone big changes and reorganisation during the transition period. Changes in agricultural policy, but also oversights in conducting land reform and privatisation led to a drastic worsening of the competitiveness of Estonian agricultural production and the quality of rural life (ca 1/3 of Estonian population lives in rural areas):

The development potential of Estonian agriculture and rural development, lies in the following:

- Relatively clean living environment, small distances that enable to develop alternative activities and to make rural life more attractive to people working in urban areas and to help to create new jobs in rural areas.
- Free and relatively cheap land for developing agricultural and other activities in rural areas, taking into account also the versatile, interesting and relatively well retained cultural heritage.
- Relatively well developed physical and other infrastructure (rural schools, service establishments, etc.).
- Existence of specialists (advisors, trainers) who have passed many-sided contemporary training and specialists with prior agricultural education.

The activities implemented in the frame of SAPARD have effectively helped to realise the development prospects, that formed basis for the EU Common Agricultural Policy and rural development policy implementation in Estonia.

9.3.2. Assessment of the consistency of the proposed strategy.

Estonian SPD agriculture and rural development priority is in compliance with the three main priorities of the Commission Guidelines "The Structural Funds and their co-ordination with the Cohesion Fund. Guidelines for programmes in the period 2000-06" and primarily with the priority "Development of urban and rural areas". It is important to emphasise that the synergy of developing urban and rural areas has been considered in the priority. The priority is also in compliance with national economic policies.

The SPD strategy part points out clearly enough the important SWOT regarding agriculture and rural development. Promotion of agriculture and rural development is one of the four priorities of Estonian SPD. Together with structural measures of the SPD, the following attendant measures are planned to be used: support for adjusting to EU requirements; agri-environmental support; support for farms in unfavourable areas; support for afforestation of arable land; support for adjusting semi-subsistence farms.

It is important to emphasise that the integration of environmental requirements into measures of the priority have been considered in implementing the agriculture and rural development priority. The priority contributes to promotion of information society for example by enabling public access to the Internet in rural areas; the equality principle has been considered on the measure level (for example supporting alternative activities to agriculture); the measures of the priority have been co-ordinated with the measures of the infrastructure and local development priority, as living and business environment also in rural areas is ensured by infrastructure services offered by the state and local governments.

The financial weighting of the agriculture and rural development priority is ca 21% of the total expenditures planned in SPD, which should be optimal, considering also the other priorities (primarily the weight of the human resource development priority). The weights of single measures are generally in balance, considering the importance of the measures in the priority. Connections and co-ordinated activities between measures have been specified, the policies passing the programme and connections with measures of SPD other priorities have been considered as well. The international and national environmental protection obligations have been taken into account on the measure level.

9.3.3. Assessment of the expected impact of the measures of the priority.

The global objective i.e. impact of implementing the measures of the agriculture and rural development priority is ensuring balanced and sustainable economic and social development in medium-term perspective. The concrete beneficiaries are specified on the measure level and they are mainly agricultural producers and rural population.

The expected results of the planned state intervention are quantified on the measure level. They are realistic, considering financial weighting and volumes of concrete measures. The operational objectives, i.e. outputs are also specified on the measure level (buildings, equipment, number of projects to be financed, etc.).

The expected impact of implementing the measures of the priority are many-sided: improving living conditions of rural population, making the structure more expedient, increasing employment and retaining existing jobs, increasing incomes of rural population, increasing competitiveness of agricultural production and improving the quality of products, improving the quality of forest and water resources and natural environment.

9.3.4. Quantification of targets.

The targets are quantified on the measure level, including impact, result and output indicators. The main targets of the priority are the following:

- Number of jobs created – 515
- Number of jobs retained after implementing the measures – 2150
- Number of new enterprises existing 18 months after receiving support - 85

9.3.5. Verification of the proposed implementing arrangements.

The SPD Managing Authority, Paying Authority, general co-ordinator and the responsible institution is the Ministry of Finance. The Implementing Agency for EAGGF and FIFG resources is the Agricultural Registers and Information Board (ARIB), that is responsible for selecting project applications, implementation and management; informing partners and beneficiaries and arranging financing; collecting information necessary for monitoring, setting up and structuring databases.

The Ministry of Finance is responsible for monitoring SPD measures. For that purpose the SPD Monitoring Committee will be set up. For promoting the priority, the priority Monitoring Committee (Priority Working Group) will be set up, which will include representatives of the Managing Authority, Implementing Authorities (Ministry of Agriculture and Ministry of Environment), Implementing Agency (ARIB) and other relevant partner organisations. Screening, assessment and selection of projects to be financed will be done via evaluation committees according to the project selection criteria that have been specified on the measure level and are approved by the Monitoring Committee. The Implementing Agency (ARIB) will arrange regular monitoring and on-the-spot checks on the progress of the financed projects.

ANNEX 5: MAIN FINDINGS OF THE SPD STRATEGIC ENVIRONMENTAL ASSESSMENT EXPERT TEAM

Strategic Environmental Assessment (SEA) was carried out simultaneously with the programming. During different stages of the work, the assessors explained to the programming team and the public the reciprocal connections between the economy and the environment and the principles of sustainable development. They also submitted their proposals for improvement of the SPD. Both the methodological working group, co-ordinating the drafting, and the ex-ante evaluators followed majority of the recommendations.

1. Analytical Part and Strategy

1.1. The extensive work in collecting and organising background information has not been sufficiently generalised. A conclusion based on the background material should be added to the end of Section 1 of the SPD – primary objectives and tasks in the areas of economy, human development and environment. In addition, urgent activities necessary for the prevention of considerable setbacks should be defined (for example, in the area of environment delays in the collection of abandoned hazardous wastes has resulted in some areas in contamination of drinking water and can cause contamination of foodstuffs).

1.2. Implementation of the SPD should also ensure adherence to environmental objectives, in addition to the priorities and objectives of the National Development. Failure to emphasise clear preferences may create a situation where sufficient means are not directed to projects necessary for ensuring strategic success or preventing developments dangerous for the whole state. One example is ensuring environmental safety where the environmental accidents remedial sums exceed the "saved" sums by several times.

1.3. Balanced and sustainable economic growth is the main objective of the Estonian economic policy and the SPD. This, however, is not defined explicitly at the level of necessary measures. The concept of sustainable development is not sufficiently explained. The definition of sustainable development is not clear for the public. ***To understand the idea of sustainable development, the objective of the SPD should be explicitly stated: the objective is a balanced development of economy, social sphere and environmental protection.***

1.4. Activities necessary for the achievement of environmental goals should be integrated into all activities, which is a natural precondition for help from the EU. To greater or lesser extent, this has been done in the SPD. The respective procedures should be explained in the implementing part (complementary to the programme). ***All planned measures should be completed and should include environmentally necessary activities. Each ministry should take care of the environmental issues within their jurisdiction. This includes the elimination of the hazards resulting from earlier activities*** (neutralising past pollution and reconditioning the damaged areas to industrial space, controlling the spread of alien species, elimination of unused objects, etc.)

1.5. The environmental situation in Estonia can be briefly characterised as follows.

The state of the environment in Estonia as a whole is good, but we have to deal with a number of problems:

- The state of the environment of Northeast Estonia, Tallinn and intensive agricultural production areas is poor in some aspects (aquatic environment, landscapes);
- Pressure on the environment is growing in the industrial, agricultural and transport sectors;
- A significant part of the Estonian territory is damaged by past pollution that causes risks of spreading of hazardous substances;
- The frequency and likelihood of environmental accidents is high;
- The environmental awareness has degraded;
- Due to the decreasing practice of traditional land use, the preservation of habitats in valuable areas requires constant effort;
- Opportunities for using landscapes for recreational purposes become worse: some recreation areas surrounding towns are used for house building or littered;
- Promotion of environmental awareness;
- Safety of environment (air, water, landscapes, built environment) regarding people's health and wildlife;
- Prevention of environmental accidents, ensuring solving of such accidents and reduction of environmental risks;
- Implementation of environmental management systems and best available technology;
- Providing for survival of valuable landscapes and habitats.

1.6. In the current SPD programme period it is recommended to focus on environmental investments to accomplish environmental safety and urgent environmental objectives (group I). Accomplishment of the objectives related to achieving a good state of environment and to sustainable use of resources (group II) remains largely a current task in the coming programme periods.

Group I Environmental Objectives

- Achieving a good state of environment;
- Reconcile emissions with EU and Estonian requirements;
- Saving of energy and using renewable sources of energy, if possible;
- Sustainable use of natural resources (forest, water, fish, mineral resources).

Group II Environmental Objectives

2. Assessment of Measures

2.1. Actions in ***measure: Human resource development for increasing the competitiveness of enterprises*** need to combine business consulting and training with environmental consulting and for development of environmental management systems in companies.

2.2. The essential precondition for accomplishment of environmental objectives and economic development is sufficient ***administrative efficiency. Measure: Enhancing administrative capacity*** should include not only training of officials, but also application of modern management system both at municipal and state levels. It is also important to support development of cooperation of different offices.

2.3. ***Measures: Implementing active labour market measures and Increasing social inclusion*** allow involving the unemployed and marginal groups in environmental projects. It is recommended to specify such pilot projects in programme supplements (e.g. projects on reconditioning the landscape in North-East Estonia and Paldiski, or participation in extensive projects on residual waste (cleaning, landscaping etc.)).

2.4. For enhancing positive environmental impact of the ***measures: Business development and Promotion of RTD and innovation*** descriptions of measures should include support for implementation of environmental management systems and best available techniques.

2.5. The objectives of the ***measure: Investment into agricultural holdings*** are inherently contradictive, as they include both the objective to increase competitiveness of agricultural production and the objective to preserve cultural landscape heritage. The concept of environmentally friendly agriculture needs to be clarified in the programme document or in the programme complement. The experts of SEA take 'Environmentally friendly production' to mean the following: organization of production aimed at the meeting environmental objectives and involving implementation of environmental management systems and best available techniques (BAT).

- In supported actions: investments for implementation of best available technology (BAT) to prevent acquisition of outdated technology and ensure overall integrity of the technological process;
- Elimination of past pollution (hazardous and abandoned storage sites of chemicals, storage sites of liquid fuel, storage sites of fertilisers).

We recommend including the following activities to the measure:

- Renovation of environmental structures of fishing harbours to meet the requirements, removal of past pollution;
- Ensuring qualification of harbour personnel, including in the field of environmental protection.

2.6. We recommend including the following items in the list of supported actions under the ***measure: Modernisation of fishing ports:***

2.7. Under the ***measure : Development of transport infrastructure*** adding of following activities should be considered:

- Providing waste management on transport highways and bordering area;
- Establishing bicycle lanes and cycling tracks and improving the pedestrian traffic in the towns and in the rural areas through which the highways under construction or renovation passes;
- Developing the system of preventing and swift solving of environmental accidents of transport (including providing access ways in case of forest fires).

3. Supervision and Inspection

Estonia does have a general environmental supervision system, which enables to provide environmental supervision of projects. In some cases (e.g. application of hydropower, establishment of fish farms), the project-centred approach may not prevent potential negative cumulative impact of several projects. Prevention must be based on preparing corresponding thematic planning with assessment of environmental impact. If financing of development projects is subject to allotment, it must proceed from company's integrated action plan, which includes the necessary environmental management system elements.

4. Consideration Given so far to Recommendations of SEA

4.1. The proposals for complementing the environmental part and adding the section on past pollution have been followed.

4.2. The team of SEA reviewed the environmental objectives and indicators provided in the current documents. These were generalised in co-operation with the departments of Ministry of the Environment into regular environmental objectives and indicators of the SPD. The objectives and part of the indicators are included in the SPD.

4.3. The measure of developing transport infrastructure was considerably complemented regarding the environmental impact mitigation.

4.4. Environmentally safe disposal of old fishing vessels was included among the eligible activities.

ANNEX 6: STATE AID IN THE ESTONIAN SPD

Measure number	Title of aid measure	State aid number	Reference	Duration
1.1	Any aid granted under this measure will be in conformity with the ***de minimis*** regulation	***De minimis*** BER		2004-2006
1.2	Any aid granted under this measure will be in conformity with the ***de minimis*** regulation	***De minimis*** BER (from accession Training aid BER)		2004-2006
1.3	Any aid granted under this measure will be in conformity with the ***de minimis*** regulation	***De minimis*** BER (from accession employment, training and SME aid BER)		2004-2006
1.4	No State aid falling under Article 87 (1) of the EC Treaty shall be granted under this measure			
2.1	Any aid granted under this measure will be in conformity with the ***de minimis*** regulation	***De minimis*** BER (from accession SME BER and ***de minimis*** BER)		2004-2006
2.2	Investment support for business infrastructure development	To be authorised by application of interim procedure		2004-2006
2.3	Collaborative Research Program of Technology Agency	EE/1/2003	Interim list	2003-2007
	Programme of Estonian Technology Agency "Financing of Industrial Research and Pre-competitive Development Activity Projects"	EE/1/2002	Treaty list	2001-2004
2.4	**Regional aid scheme: Tourism product development and marketing support scheme (in addition this measure can also contain aid granted in conformity of *de minimis* BER)**	**To be authorised by application of interim procedure**		2004-2006
3.1	Investment support for agricultural production	This measure will be implemented in compliance with Council regulation (CE) No. 1257/1999 of 17.5.1999		2004-2006
3.2	Investment support for improving processing and marketing of agriculture products	This measure will be implemented in compliance with Council regulation (CE) No. 1257/1999 of 17.5.1999		2004-2006
3.3	Investment support for diversification and development of economic activities in rural areas	To be authorised by application of interim procedure (EE/7/2003)		2003-2006
3.4	Investment support for integrated land improvement	This measure will be implemented in compliance with Council regulation (CE) no. 1257/1999 of 17.5.1999		2004-2006
3.5	Investment support for renovation and development of villages	To be authorised by application of interim procedure (EE/6/2003)		2003-2006
3.6	Any aid granted under this measure will be in conformity with the ***de minimis*** regulation	***De minimis*** BER		2004-2006
3.7	Any aid granted under this measure will be in conformity with the ***de minimis*** regulation	***De minimis*** BER		2004-2006
3.8	**Support for provision of farm advisory and extension services**	This measure will be implemented in compliance with Council regulation (CE) No. 1257/1999 of 17.5.1999		2004-2006

3.9	Adjustment of the fishing capacity of the fishing fleet	State aids under this measure are covered by the provisions of Article 19 of Regulation No 2792/1999, as amended by Regulation No 2369/2002.		2004-2006
3.10	Modernisation and renewal of the fishing fleet	State aids under this measure are covered by the provisions of Article 19 of the Regulation No 2792/1999, as amended by Regulation No 2369/2002.		2004-2006
3.11	Investment support measures for fisheries production chain	State aids under this measure are covered by the provisions of Article 19 of Regulation No 2792/1999, as amended by Regulation No 2369/2002.		2004-2006
3.12	Other fisheries related measures	State aids under this measure are covered by the provisions of Article 19 of Regulation No 2792/1999, as amended by Regulation No 2369/2002.		2004-2006
4.1	Scheme for development of state owned small ports, regional airports and railway companies operating on infrastructure for public use	To be authorised by application of interim procedure		2004-2006
4.2	Grants for development of environmental infrastructure	To be authorised by application of interim procedure		2004-2006
4.3	Any aid granted under this measure will be in conformity with the ***de minimis*** regulation	***De minimis*** BER		2004-2006
4.4	No State aid falling under Article 87 (1) of the EC Treaty shall be granted under this measure			
4.5	No State aid falling under Article 87 (1) of the EC Treaty shall be granted under this measure			
4.6	Development of local living environment	To be authorised by application of interim procedure		2004-2006
	Increasing the attractiveness of regions	To be authorised by application of interim procedure		2004-2006
5.1	No State aid falling under Article 87 (1) of the EC Treaty shall be granted under this measure			
5.2	No State aid falling under Article 87 (1) of the EC Treaty shall be granted under this measure			

Note:

In conformity with its duties under Article 34(1)(g) of Council Regulation No 1260/1999, the Management Authority will keep the above State aid table up to date and will inform the Commission of any modification of the table.

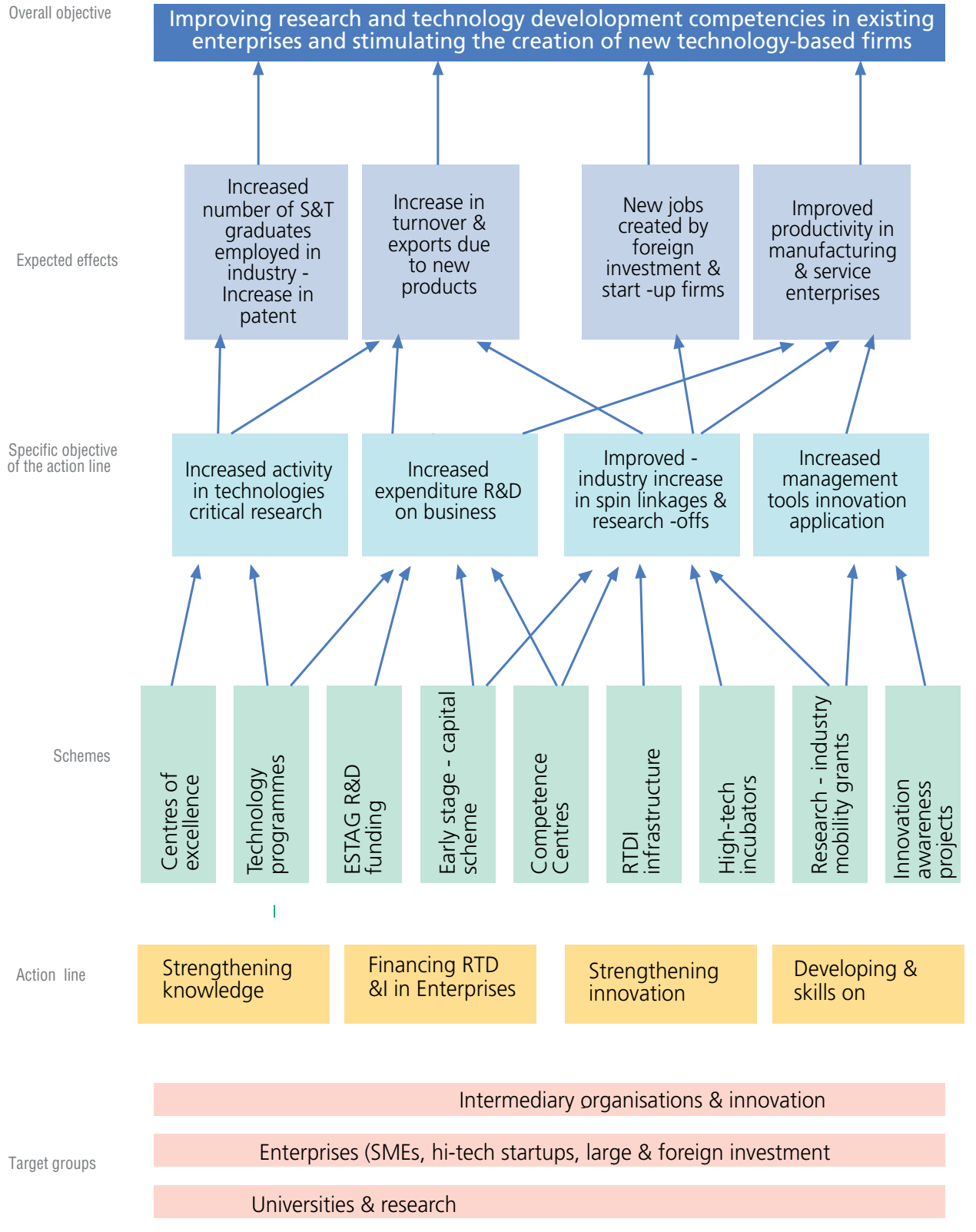
The introduction of a new aid scheme or ad hoc aid requires a modification of the assistance by a formal decision.

Article 4 of the Commission Decision approving the present programme (suspensive clause concerning State aid) applies to measures which contain State aid that is subject to appropriate measures or have not yet been authorised by the Commission. At the present stage this Article applies to following measures:

Measure 2.2: Business Infrastructure Development
Measure 2.4: Tourism Development
Measure 3.3: Diversification of Economic Activities in Rural Areas

Measure 3.5: Renovation and Development of Villages
Measure 4.1: Development of Transport Infrastructure
Measure 4.2: Development of Environmental Infrastructure
Measure 4.6: Local Socio-Economic Development

ANNEX 7: SUPPORT SCHEMES WITHIN THE MEASURE PROMOTION OF RESEARCH, TECHNOLOGY DEVELOPMENT AND INNOVATION



ANNEX 8 SOCIAL PARTNERS INVOLVED IN THE PREPARATION OF THE SPD

Table

The full list of co-operation partners of the SPD*

Institution

1. Estonian Bank

2 Ministry of Education

2.1. Association of Estonian Cities
2.2. Estonian Confederation of Employers and Industry
2.3. Education Forum
2.4. Council of Rectors
2.5. Agency for Vocational Education and Training Reform
2.6. The Association of Estonian Adult Educators

3 Ministry of Environment

3.1. Estonian Private Forest Union
3.2. Estonian Waste Management Association
3.3. Estonian Forest Industries Association
3.4. Estonian Ornithological Society
3.5. Estonian Package Association
3.6. Estonian Radiology Association
3.7. Friend of the Earth
3.8. Estonian Water Association
3.9. Estonian Waterworks Association
3.10. Estonian Fund for Nature
3.11. Estonian Seminatural Community Conservation Association (ESCCA)

4. Ministry of Culture

5. Ministry of Economic Affairs and Communications

5.1. Estonian Energy Research Institute
5.2. Estonian Hotel and Restaurant Association
5.3. Estonian Chamber of Commerce and Industry
5.4. Estonian Business Association
5.5. Estonian Association of Travel Agencies
5.6. Estonian Confederation of Employers and Industry
5.7. Estonian Research and Development Council
5.8. Estonian Association of SMEs
5.9. Estonian Foreign Trade Union
5.10. NGO "Estonian Rural Tourism"
5.11. Tartu University, Institute of Geography
5.12. Estonian Agricultural University
5.13- Estonian Sustainable Development Institute
5.14. Estonian Biomass Association
5.15. Center for Ecological Engineering
5.16. Estonian Fund for Nature
5.17. Estonian Wind Power Association
5.18. Society of Nõmme Tee
5.19. Tallinn Technical University, Department of Thermal Engineering
5.20. Estonian Power and Heat Association
5.21. Union of Protected Areas of Estonia
5.22. Estonian Association of Health Resorts and Rehabilitation Treatment
5.23. Estonian Marine Tourism Association
5.24. Estonian Ecotourism Association
5.25 Estonian Adventure Tourism Association
5.26 Union of Estonian Automobile Enterprises
5.27. Association of Estonian International Road Carriers
5.28. Ship Owners Union
5.29. Habours' Union

5.30. Foundation for Development of Estonian Internal Waterways
5.31. The Estonian Union of Co-operative Housing Associations
5.32. Estonian Information Technology Society (EITS)
5.33. The Association of Estonian Information Technology and Telecommunications Companies (ITL)

6. Office of the Minister for Population and Ethnic Affairs

6.1. Government Commission of Children and Family Policy

7. Office of the Minister for Regional Affairs

8. Ministry of Agriculture

8.1. Central Union of Estonian Gardening and Apiculture
8.2. Estonian Gardening Union
8.3. Estonian Private Forest Union
8.4. Estonian Fish Farmers Association
8.5. Estonian Fish Union
8.6. Estonian Fishermen Union
8.7. Association of Estonian Rural Advisors
8.8. Movement of Estonian Villages and Small Municipalities "Kodukant"
8.9. Estonian Meat Union
8.10. Estonian Veterinary Association
8.11. Estonian Rural Women's Association
8.12. Union of Rural People's Resource Centers
8.13. Estonian Berries Association
8.14. Association of Estonian Apiarists
8.15. Estonian Young Farmers
8.16. Union of Estonian Associations of Local Authorities
8.17. Estonian Milk Union
8.18. The Estonian Chamber of Agriculture and Commerce
8.19. Estonian Food Industries Union
8.20. Estonian Mill Owners Association
8.21. Estonian Ecotourism Association
8.22. Estonian Co-operative Union
8.23. Estonian Nature Fund
8.24. Estonian Agricultural Producers Central Union
8.25. Estonian Farmers' Federation
8.26. Fur Animal Raisers' Association
8.27. Rural Development Institute
8.28. NGO "Estonian Rural Tourism"
8.29. Estonian Sustainable Development Institute
8.30. 4H Estonia

9. Ministry of Finance

9.1. Center for Policy Studies "Praxis"
9.2. Tallinn Technical University
9.3. Tartu University

10. Office of the Prime Minister

11. Ministry of Internal Affairs

11.1. Confederation of Estonian Trade Unions
11.2. Estonian Council of Civic Organisations (ECCO)
11.3. Association of Estonian Cities
11.4. Union of Estonian Associations of Local Authorities
11.5. Council of County Governors
11.6 Movement of Estonian Villages and Small Municipalities "Kodukant"
11.7. Network of Estonian Nonprofit Organizations

12. Ministry of Social Affairs

12.1. Confederation of Estonian Trade Unions
12.2. Estonian Medical Association
12.3. Estonian Hospitals' Union
12.4. Council of Leaders of Estonian Social Care Establishments
12.5. Union of Leaders of Estonian Child Care Establishments

12.6. Association of Estonian Cities
12.7. Union of Estonian Associations of Local Authorities
12.8. Estonian Red Cross
12.9. The Estonian Chamber of Disabled People
12.10. Estonian Confederation of Employers and Industry
12.11. Estonian Association of SME's

*as of 22.11.02

Source: Ministry of Finance

FOOTNOTES

[1] Data presented in this sentence are as given by Eurostat to facilitate comparison with other EU countries. They may differ slightly from those in the text of part 1.3.3 where most data are as given by the Statistical Office of Estonia.

[2] Estonian Statistical Yearbook 2001, data from 1999.

[3] The rates of special waste released by the existing power stations, mg/Nm3: SO2 – 1720; NOx – 210; volatile ashes – 1510. The respective internal standards to be observed by the existing power stations from 1.1.2003: SO2 – 2000; NOx – 450; volatile ashes – 400; for new power stations: SO2 – 400; NOx – 400; volatile ashes – 50.

[4] For additional information concerning the processing of agricultural and fish products, see 1.2.2, Rural Economy and Rural Development

[5] For additional information concerning the wood processing see 1.2.2, Rural Economy and Rural Development

[6] Stapel, S. Value Added, Employment, Remuneration and Labour Productivity in the Candidate Countries. – Eurostat. Statistics in Focus, No 13/2001, 7 p.

[7] On 31.03.2002, Bank of Estonia. Total foreign investments amount to 4 billion euro (62 billion kroons).

[8] On 31.12.1998, Bank of Estonia.

[9] Outcome of a survey "Foreign Investor 2000", organised by University of Tartu.

[10] FIR (Flight Information Region) – lennuinformatsiooni piirkond

[11] One of respective surveys, completed by McConnell International (2001) in his report Ready? Net. Go! Partnerships Leading the Global Economy, has pointed out Estonia's success in the application of IT. The report states that the Estonian situation in the spheres of e-government, human capital and e-business environment is favourable.

[12] Economic Impact Assessment of International Tourism. – CHL Consulting Group, 1997.

[13] Foreign Tourist Survey, 2000, Estonian Tourism Board.

[14] Private and public sector organisations want to make capital investments in tourism (according to the estimations made by investment plan survey, carried out by EE Tourism Agency), amounting to 640 million euro (10 billion kroons) in 2004-2006, also making use of EU Structural Funds. This is three times more than the real investments in 2000-2002. Evaluation and Design or Tourism Support Measures. ECO, CHL 2002.

[15] Operating enterprises – enterprises that have submitted their economic indicators to the Tax Board at least once per year, with the exception of trading companies with zero-turnover. In accordance to the information of Commercial Register, in 2001 there were 52,834 enterprises and 19,443 sole proprietors (SP) in Estonia.

[16] Micro-enterprise: 0-9 employees; small enterprise: 10-49 employees; medium-size enterprise: 50-249 employees; large enterprise: 250 or more employees.

[17] This figure is based on the number of operating trading companies. The figure adds up to 66 when we consider all the SPs who have been registered (as we leave out the trading companies and SPs operating in primary sector the respective figure is 53). In EU the respective indicator is 52 (without the operating enterprises in primary sector) but as we compare the definitions of SP this figure cannot be compared to the situation in Estonia.

[18] Information provided by Statistical Office of Estonia, base prices, SPs not included.

[19] Survey "Quality 2000" (Tallinn Technical University, 2000)

[20] Based on the assessment published by the Estonian Institute of Economic Research – data has been gathered from enterprises and experts.

[21] See "The Global Competitiveness Report 2001-2002". World Economy Forum, 2001; The World Competitiveness Yearbook 2001, Institute of Management Development (IMD), 2001.

[22] The definition of Competitiveness used is that adopted by the European Commission in its Communication on Productivity: the Key to Competitiveness of European Economies and Enterprises (21/5/2002).

[23] See Eurostat. Statistics in Focus Theme 2 n°13/2001: Value added, employment, remuneration and labour productivity in the candidate countries.

[24] Tertiary education level includes senior secondary education after general secondary education, university education, master's and doctor's degrees.

[25] Based on the results of research "Innovative activities in Estonian companies 1998-2000" (research is part of EU research Community Innovation Survey III).

[26] Enterprises that had brought new or essentially improved products (goods/services) to the market or taken into use new or essentially improved technological processes, supplying methods of products.

[27] Over one fifth of innovators declared they had no expenditure on innovation in 2000 and only 21% had expenditure in excess of 64 thousand euro (1 million kroons).

[28] A pilot survey carried out by the European Venture Capital Association reflects the levels of funds and investments in 2001. The results of the survey have not been published yet. In future, this survey will enable to compare Estonia with other candidate countries and EU member states.

[29] Average study period characterises the productivity of a specific academic year. In a case study of 85 of 100 people aged 16, the importance of the 16-year-old students to the average study period amounts to 0.85 academic years. As we add up the academic years for all the age groups under observance, calculated with this formula, we will get the average expected study period for a specific age group and academic year.

[30] Data in this part are given as by the Statistical Office of Estonia, for enabling a broader overview of the Estonian labour market situation. The indicators reflect annual averages as opposed to the II quarter data provided by the Eurostat.

[31] According to the survey "Social inequalities in health in Estonia" (World Bank and the Ministry of Social Affairs, 2002).

[32] "Although a significant number of civil servants are now taking part in various training programmes including training in EU affairs, there is a need to improve and co-ordinate training standards across various public administration bodies" (EC Progress Report 2001, p 17).

[33] 61% of local self-governments justify their non-participation in training with lack of funds "Analyses of the economic situation, organisation management and training needs assessment of local self-governments", EMI-ECO, 2001.

[34] See also Ch. 1.2.3. Industry, Energy and Oil Shale Mining.

[35] Naturally occurring radioactive material.

[36] Tiit Tammaru. Hinterlands of Estonian Towns and Commuting. Tartu, 2001.

[37] Unity, solidarity, diversity for Europe, its people and its territory. Second report on Economic and Social Cohesion. Vol 1-2. Office for Official Publications of the European Communities, Luxembourg, 2001.

[38] Based on the Pre-Accession Economic Programme 2003.

[39] The Commission's end-2003 forecasts are based on 5.1% GDP growth in 2005.

[40] Varblane, U. et al (2002) Price disparities of Estonian agricultural products in Estonia and the European Union: forecasts for the pre-accession and post-accession period. Tartu.

[41] Varblane, U. (2000) Changes in Estonian foreign trade policy after accession with the European Union - Lectures of the European College. Volume 2. Tartu.

[42] COM (2002) 565. Communication from the Commission on the European Research Area: Providing New Momentum, Strengthening - Reorienting - Opening up new perspectives.

[43] Philips, K. et al. (2002) The impacts of integration with the European Union to the level of prices and free movement of the labour. Tartu University.

[44] Reiljan, E. (2001) The position of Estonia as a country of destination for foreign investments in the context of the EU enlargement - Lectures of the European College. Volume 10. Tartu.

[45] Kilvits K., Purju, A., Lumiste, R. (2002) The competitiveness of Estonian industry sector in the European Union. Tallinn Technical University (working document of the report).

[46] According to the rural development plan, the following accompanying measures are applicable:
- support for getting adjusted with EU requirements,
- agro-environmental support,
- support to farms in less-favourable areas,
- support for the afforestation of agricultural land,
- support for the adaptation of semi-subsistence farms.

[47] Indicators: Requirements for the 2004-2006 Programmes. Brussels, 11 September 2003 REGIO.A.3 / VG D(2003).

[48] Data presented in this paragraph are as given by Eurostat to facilitate comparison with other EU countries. They may differ slightly from those in the text of part 1.3.3 where most data are as given by the Statistical Office of Estonia.

[49] Economic Impact Assessment of International Tourism. – CHL Consulting Group, 1997.

[50] Commission Communication concerning the Structural Funds and their coordination with the Cohesion Fund. *Guidelines for programmes in the period 2000 to 2006* (1999/C 267/02).

[51] Technical Paper 3: *Mainstreaming equal opportunities for women and men in structural fund programmes and projects* (March 2000).

[52] Bradley, Kangur and Morgenroth (2001) gives full details.

[53] For example, a one per cent rise in the stock of physical infrastructure is assumed to be associated with an per cent rise in manufacturing output, where the elasticity lies between 0.05 and 0.40. We assume elasticities for Estonia at 0.4 for both infrastructure and human capital.

[54] GDP is taken as Ministry of Finance official forecast.

[55] The manner in which the stock of physical infrastructure and of human capital are defined is described in a separate note.

[56] Note: A "+" sign indicates a deterioration (or rise) in the borrowing requirement (GBORR) but an improvement (or rise) in the net trade surplus (NTSVR), both expressed as a percentage of GDP.

[57] While applying for structural funds' assistance, each applicant has to indicate whether, how much and from which sources it has received aid during the last three years. In each case of approving aid, it will be clearly indicated to the final recipients and documented in the structural funds information system.

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