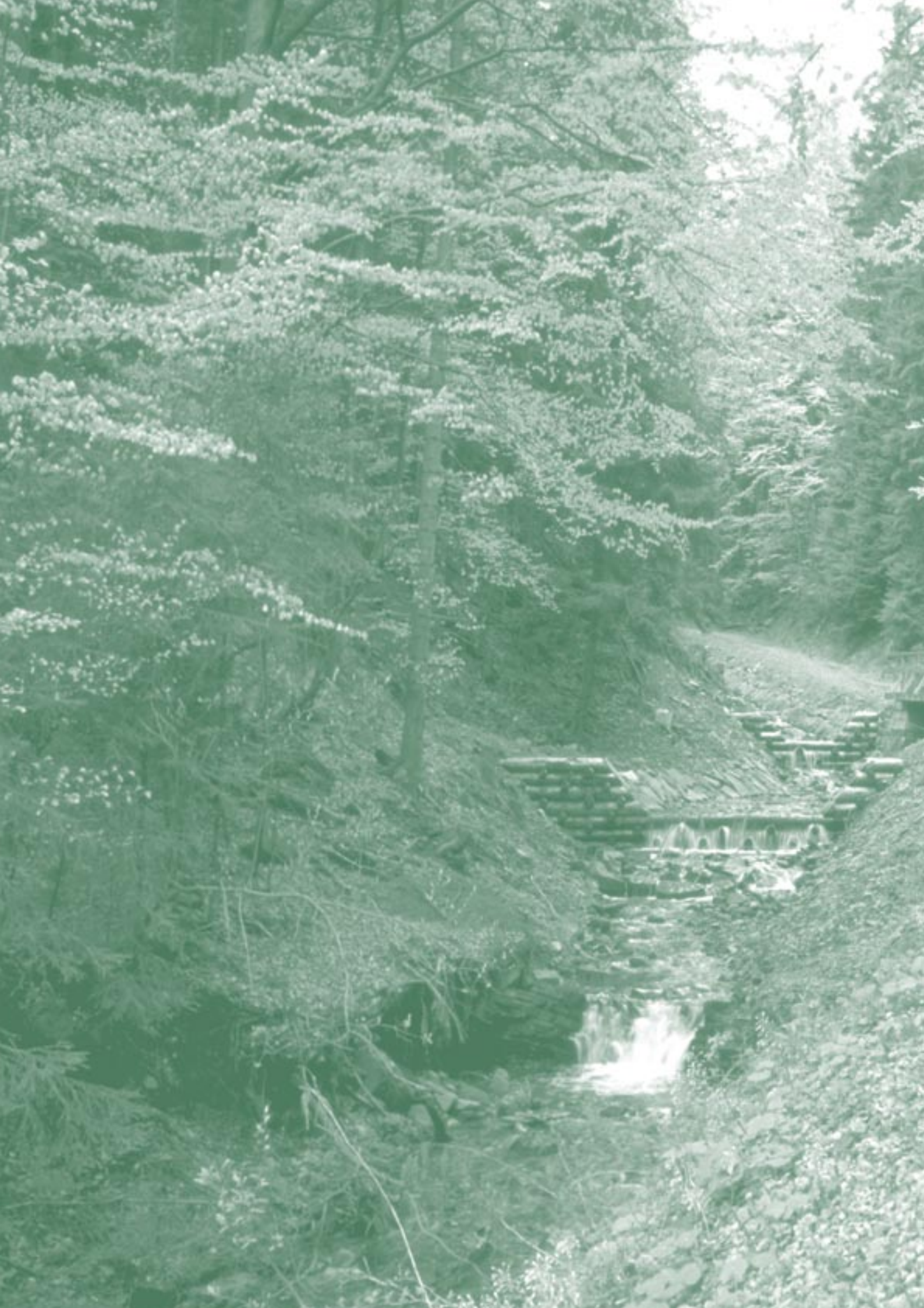




NATIONAL FOREST PROGRAMME



MINISTRY OF AGRICULTURE
OF THE CZECH REPUBLIC
FORESTRY DEVELOPMENT DEPARTMENT



INSTEAD OF PREAMBLE

National Forest Programme as a Professional Response to the Ideas from Strasbourg, Rio and Helsinki

.... Foresters have to attempt to join all forces in order to formulate the problem of forestry as a strategic problem important for the whole society. Foresters have to assume the vast task of elaborating a concise national forest programme as a general project with unified coordination of carefully selected high-priority problems of contemporary forestry as a newly conceived sector based on the principle of sustainable, functionally integrated management in all forests irrespective of proprietorship boundaries.

Jan Kubík et al.,
Sustainable Forest Management in the Czech Republic, Prague 1993

.... NFPs should build upon existing policy and planning processes and to be integrated into wider programmes for sustainable land use, in accordance with Agenda 21 and other international conventions and arrangements such as CBD... Programmes of actions should be properly coordinated with activities in other sectors, for example agriculture, energy and industry.

Intergovernmental Panel on Forests 2000

.... countries are requested to establish sound national mechanisms for coordination and to develop partnerships (national and international), which include "partnership agreements", to promote the implementation of national forest programmes.

Fifth Session of CSD, 2000

.... National forest programmes, as specified in the IPF and IFF, are frameworks for a holistic country process to formulate policy and implement sustainable forest management.... It provides strategic orientation to the forestry sector and ensures coordinated implementation of sustainable forest management by all stakeholders.

Committee on Forestry, 2003

Living Forest Summit – Common Benefits, Shared Responsibilities

.... As representatives of the Signatory States and the European Community, we commit ourselves to use national and sub-national forest programmes as a means for effective inter-sectoral co-ordination, reflecting a balanced decision making process,...

Vienna Declaration, 2003

Strengthen Synergies for Sustainable Forest Management in Europe through Cross-Sectoral Co-operation and National Forest Programmes

.... building on the consensus achieved by the Intergovernmental Panel on Forests, we agree that, as developed in the MCPFE Approach to National Forest Programmes in Europe, a national forest programme (nfp) constitutes a participatory, holistic, inter-sectoral and iterative process of policy planning, implementation, monitoring and evaluation at the national and/or sub-national level in order to proceed towards the further improvement of sustainable forest management as defined in Helsinki Resolution H1, and to contribute to sustainable development,

Resolution No. 1 of the 4th MCPFE in Vienna, 2003



The Government of the Czech Republic adopted a Resolution No. 666 of the 3rd July 2000 "Definition of Objectives and Tasks Ensuing from the State Environmental Policy". The minister of agriculture was charged to work out National Forest Programme of the CR by the 31st December 2002 in co-operation with minister of the environment.

National Forest Programme (NFP) is based on obligatory international and national programme and conceptual documents laying down the management of forests.

NFP has been conceived for the period 2003-2006. It is an open programme responding to newly arising problems and to a change in the conditions of its implementation.

Efforts aimed at internationally coordinated programmes supporting sustainable development of the forest sector in particular countries are embodied in documents approved by United Nations Conference on Environment and Development at Rio de Janeiro in 1992. They summarized crucial issues of the contemporary forest sector and accentuated the need of joint action of all countries throughout the world that would focus on forest conservation.

A postulation to work out national forest programmes was formulated in conclusions of International Panel on Forests, established in 1995, which were approved by Decision No. 1995/226 of United Nations Economic and Social Council. Also resolutions of the 3rd Ministerial Conference on Protection of Forests in Europe held at Lisbon (1998) dealt with NFPs. In its communication "Forest strategy for EU" (1998) the Council of European Union accentuated the need of existence of effective forest programmes in member countries. Their importance was confirmed by conclusions of the 6th session of the Conference of Parties of Biological Diversity Convention (Hague 2002) where forests were the key subjects on the agenda.

A fundamental legal regulation laying down management of forests in the Czech Republic is Act No. 289/1995 on Forests and Amendment of Some Laws (Forest Act) with its latest amendments. Act No. 114/1992 on Nature and Landscape Conservation with its latest amendments regulates the protection of forest ecosystems.

Developmental priorities of the forest sector were defined in Guidelines of State Forest Policy adopted by the CR Government in 1994. In 1997 to 1998 a sector Forest Programme was elaborated under co-ordination of the forest sector of the Ministry of Agriculture. In 2000 the Government approved a Concept of Sector Policy of Ministry of Agriculture before Accession of the Czech Republic to European Union that besides concepts of agriculture and water management comprises a Concept of Forest Policy; its final chapter is devoted to National Forest Programme. Its target is to analyse selected problems of state forest policy and to propose their solutions.

Conceptual intents formulating the position of forests and forest management in the CR environmental policy are also embodied in State Programme of Nature and Landscape Conservation dating from 1999 and in State Environmental Policy of the CR which was updated by Government Resolution No. 38 of the 10th January 2001.

NFP provides new stimuli to reflect the importance of wood – ecologically important and renewable raw material produced by the forest sector – in the Concept of CR Industrial Policy from July 2001. An issue how to specify the use

of wood in a continually updated State Programme for Savings of Energy and Renewable Energy Sources is also mentioned.

NFP is a complex and interdepartmental programme respecting the needs of the forest sector development and accentuating an important position of forests in the environment. Non-wood-producing functions of forests, their importance as a renewable source of ecologically friendly raw material and importance of wood use and processing for the country's economics are underlined.

Sustainable forest management is the basic principle of NFP while the state's administrative interventions are minimized, the motivation action of state forest policy supports public interests and the responsibility of forest owners for their property increases.

An emphasis is laid on the dominant implementation nature of NFP in relation to other legislative conceptual and programme documents where forest and its effects and production are mentioned. NFP also contains suggestions and recommendations for their adjustment in order to increase their effectiveness and to take into account actual conditions and recent knowledge.

NFP strategic objectives are based on the EU forest strategy that was adopted by a resolution of the EU Council "Forest Strategy for EU" from the 14th December 1998.

The core of EU strategy is sustainable forest management as defined by the 2nd Ministerial Conference on Conservation of European Forests, and acceptance of the principle of multifunctional role of forests. EU forest strategy also takes over European criteria and indicators of sustainable forest management adopted at the 3rd Ministerial Conference on Conservation of European Forests at Lisbon (1998). NFP accepts these criteria without reservation.

It is these six criteria:

- conservation and adequate increase of forest resources and their contribution to the global cycle of carbon,
- maintenance of the health status and viability of forest ecosystems,
- maintenance and support of wood-producing functions of forests (production of wood and other products),
- conservation, protection and appropriate enlargement of biological diversity of forest ecosystems,
- maintenance and appropriate enhancement of protection functions in the forest sector,
- maintenance of other social and economic functions and conditions.

With respect to the above criteria NFP is focused on these priorities:

- forest management in accordance with principles of sustainable management – a fundamental strategic priority
- development of wood-producing and non-wood-producing functions of forests,
- conservation and development of biological diversity of forest ecosystems,
- support to raw timber production and use,
- management of forests in specially protected areas,
- protection of forest ecosystems against harmful factors.

Measures to implement the above priorities are described in particular chapters of NFP.





The Czech Republic is a country with high forest coverage. Currently, forest lands cover the area of 2 637 290 ha, i.e. 33.4% of the total surface area of this country. The forested area has been increasing since the second half of the twentieth century. There was a significant increase after 1966 when unused agricultural lands were afforested. The area of unused agricultural lands suitable to be afforested continues increasing at present. The afforestation of agricultural lands is higher than the area of forest land deforestation for extraction of raw materials and investment construction: the result is an increase in forested area.

After restitution of an overwhelming majority of private and communal forests terminated, a predominant proportion of forests is in state ownership. State forests (including forest property of forest schools) account for 63.4%, municipalities and their forest co-operatives are owners of 14.5% of forests and private owners possess 22.1% of forests.

According to prevailing functions (in the sense of categorization laid down by Act No. 289/1995) in the CR 76.7% are commercial forests, 19.8% are special-purpose forests and 3.5% are protection forests.

A majority of forests is situated in specially protected areas delimited in accordance with provisions of Act No. 114/1992. Total area of forests in the existing specially protected areas (SPA) is about 700 000 ha, i.e. ca. 25.3% of total forested area in the CR. The ratio of the size of protected areas to the country's surface area exceeds the European average.

The species composition of forests in the CR was altered in the past in order to increase wood production and to satisfy demand for the most frequently asked-for tree species. It has positive impacts on economics even today when market realization of softwood supplies is more profitable than that of hardwood supplies. Consequently, the ratio of coniferous tree species (76.5%) is currently disproportionately higher than that of broadleaved.

The present age structure mostly consists of even-aged forest stands. The representation of age classes is disproportionate. As a result of afforestation of lands cut in the course of a nun moth disaster in 1920-1925 and of other evolution factors there is an abnormally large area of stands approaching the cutting age. On the contrary, the ratio of young forests (below 60 years) is lower. Particularly, the area of age class 1 (that means of regenerated stands) is lower than normal. The unbalanced age structure will influence production capacities of forests in the decennia to come.

Continuing prolongation of rotation period is a marked factor influencing forest ageing. In 2000 average rotation in all forests of the CR was 115.8 years.

The increasing growing stock in forest stands is an important criterion of forest status in the CR. While in 1930 it amounted to 307 mil. m³ in the territory of the present CR, in 1980 it was 536 mil. m³, in 1990 564 mil. m³ and in 2000 it was even 630.3 mil. m³. Parallel with changes in the method of standing volume measurement, change in stand age structure and high standard of silvicultural treatments an increase in growing stocks in forest stands is apparently influenced by other factors generally affecting growth processes of European forests whose causes have not been elucidated unequivocally yet.

The resultant indicator of present production capacities of forests documenting a wood quantity that accretes per annum in existing forest stands

is total current increment (TCI), and a measure of sustainable cut is total average increment (TAI). These two indicators show a long-term positive increase. TCI increased from 9.2 mil. m³ in 1920 to 20.0 mil. m³ in 2001. In the same period, TAI increased from 9.0 mil. m³ to 16.8 mil. m³.

Harvesting is related to development of production capacities. Currently, cuts are about 14 mil. m³; expressed per capita and per hectare of forest land this value exceeds the European average.

Exploitation of domestic wood resources through the processing and consumption of wood products is extremely low. More than a half of wood output is exported as raw timber or as intermediate products – sawn timber and pulp (expressed as raw material equivalent). The level of production, and particularly of the consumption of woodwork products with higher value added is low and cannot be compared with other economically advanced countries of Europe. The situation in the production and consumption of paper and cardboard is alarming. With massive participation of foreign capital development of modern capacities of woodworking and paper industries has been focused on woodwork and paper-industry intermediate products with high proportion of raw material and low proportion of value added. Products are mostly exported to the investor's country and/or to be re-exported to third countries.

The health status of forests in the CR is not good. It is influenced by impacts of heavy air pollution stress (changes in soil chemistry and direct impacts), decreased stability of forest stands, and for the most part by high stocks of some game species and their inappropriate sex ratio and age structure.

A decrease in ecological stability of forest stands leads to a high volume of salvage fellings. (However, they have tended to decrease considerably since the early nineties). Tree defoliation has also gradually decreased, and after a substantial reduction of SO₂ emissions (except the areas with extremely high acid depositions) the threat of new area disintegration of forest stands is lower. But the effects of other factors (drought, NO_x, O₃) that can cause great damage outside the usual air-pollution areas have increased.

Damage caused by game in forest stands by browsing, peeling and nibbling is still among the most serious harmful factors. To cope with them implies to solve the most urgent problems of sector economic policy and adopted concept of game management.

Economic activities in forests of the particular owner categories and economic activities of other business entities in the forest sector bring relatively good economic results at present. They derive from quite a high level of raw timber prices that in spite of more or less marked yearly fluctuations approach the level achieved in European wood market, and from lower production costs than in EU countries. It is to assume from the expected different development of benefits and costs in the forest sector that profitability of economic activities in a majority of forest businesses will decrease in the nearest future.

Currently, the state supports economic activities in those non-state forests where it is necessary to contribute to development of publicly beneficial activities of forest owners and to finance the state's commitments laid down by Forest Act. The total level of support is fixed within a state budget item approved every year. Support to the forest sector from the State Environmental Fund has been low until now.





The principle of permanence or sustainability has been presented in the forest sector of the territory what is now the Czech Republic by various forest rules and instructions since Middle Ages and by working plans for 200 years. Recently, a duty to pursue sustainable management in all forests without exception was laid down by Act No. 289/1995. "The purpose of the Act is to define conditions for the conservation, tending and regeneration of forest as national wealth, an irreplaceable environmental component, for fulfilment of all its functions and for support of sustainable management in it."

In Act No. 114/1992 on Nature Conservation the forest is listed among important landscape elements along with peat bogs, watercourses, ponds, lakes and flood plains. The framework of nature and landscape conservation sets down a duty to pursue ecologically sound forest management. It is to assume that the term "ecologically sound forest management" is identical with the term "sustainable forest management".

The state's concern is sustained and balanced use of forest as a renewable natural resource, and use of publicly beneficial functions in public interest. To realize this concern is a priority task of the state administration of forests.

The central state administration of forests is divided. Central authority of state administration of forests is Ministry of Agriculture, in national parks Ministry of the Environment is a central authority of state administration of forests. Ministry of the Environment has been charged with state supervision in the forest sector.

The provision of § 46 of Act No. 289/1995 establishing a support to management in forests in form of payments has been an important step to support the introduction and successful realization of sustainable management in forests.

It is obvious that the introduction of sustainable management may increase operating costs of silvicultural treatments without being compensated by advantages of such management system.

In the case of state forests it is to require under current economic circumstances that the whole financial burden of sustainable management introduction will be carried to a large extent by the organization entitled to manage lands and forest stands in the state ownership. There are differences in the level of anthropic load and the ensuing rate of deflection from a possibility of sustainable management introduction in various natural forest areas. Therefore, re-distribution of internal resources of state forests seems necessary within the whole CR if its independence of the state budget is to be maintained. In relation to the principle of self-financing and general application of sustainable management principle maintenance of the uniformity and integrity of state forest property administration can be considered as a priority.

In the case of non-state types of ownership it is desirable to introduce a subsidy title of support to sustainable management. It is necessary in regions, where dependence on the level of anthropic load and subsequent rate of deflection from a possibility of sustainable management introduction the forest property cannot objectively produce sufficient resources for the implementation of sustainable management.

Based on the evaluation of current economic and ecological conditions in the CR forest sector the main programme measures to provide for sustainable management of forests can be summarized as follows:

To support sustained development of all functions conditioned by the forest existence it is advisable to:

- maintain the present area of forests by persistent observation of the current legal regulations for protection of lands designed to fulfil forest functions.
- support consolidation of forest lands by purchase, sale, exchange, donation and reallocations,
- enlarge the area of forests by afforestation of non-forest lands, particularly uncultivated fallow agricultural lands (economic support to afforestation of non-forest lands, simplification of relevant rules, and suitable tree species composition of newly established stands),
- support hitherto trends of reduction in environmental pollution, especially air pollution, and to mitigate negative impacts of pollution by available silvicultural measures,
- reduce the impact of acid depositions on the quality of forest soils and forest stands by biological melioration and interventions,
- adjust game stocks, their age structure and sex ratio to the level allowing successful regeneration and further development of forest stands.

To apply silvicultural treatments based on the knowledge of the nature and characteristics of forest ecosystems and on purposeful near-natural management it is advisable to:

- create legislative, silvicultural and economic preconditions for natural regeneration of genetically suitable forest stands in the conditions where it is effective from biological and economic aspects,
- conserve and increase biodiversity by the management of gene resources of forest tree species taxa,
- achieve gradual conversion of the present species composition of forests using available tools of forest policy in favour of tree species that are characterized by higher tolerance to harmful factors, ameliorating effects on the soil and that provide high wood-producing and non-wood-producing functional effects,
- recommend forest owners that they should support the growth of successive forest stands under shelterwood of regenerated stands and reduce the use of clear-cutting system where it underlies sustainable management of forests.

The preconditions for sustainable forest management are as follows:

- to evaluate the system of professional education of forest workers and their social conditions and to take measures aimed at achievement of a higher level,
- to re-define the position, role and authority of the state administration of forests in a new administrative system of regions, to specify the relation between the state administration of forests and state supervision,
- to specify the position of regional plans of forest development from the aspect of their relation to working plans,
- to set down the rights and duties of forest managers when they are chosen and paid by the forest owner or when the cost of their work is paid by the state,
- to focus subsidizing policy and support from the State Environmental Fund preferentially on realization of the principles of sustainable forest management,
- to include the use of alternative methods of forest management in structured forests in Decree No. 84/1996 on Forest Management Planning issued by Ministry of Agriculture,
- to motivate the owners of forests including forests in state ownership to pursue sustained and long-term enhancement of forest property with regard to public interest in development of beneficial functions of forests.

The law (Act No. 289/1995) defines forest functions as benefits conditioned by the existence of forest. These functions are wood producing and non-wood producing. According to dominant functions there are categories of protection, special purpose and commercial forests.

Recent conceptual materials for the forest sector accentuate a requirement for multifunctional management of forests involving function-integrated and function-differentiated management of forests. It also indicates a desirable trend of future amendment of the system of functional categorization of forests.

Management methods in the past did not often take into account how the accentuated wood-producing function, and cheap and environmentally not compatible technologies, would influence the potential of forest functions as a whole. A large part of forested area in the CR is far from being in natural state, and ecological stability of forests has been disturbed. As a consequence, the capacity of forests to satisfy the public need of some functions to a desirable extent is reduced, particularly if social demand for some functions has considerably increased.

The objectives of the forest sector are to realize multifunctional management of forests while the functional potential of forests is preserved and gradually increased, and its rational and balanced use is consistent with long-term public interests.

Forests with near-natural management have a definite potential to fulfill functions without additional energy inputs in the given natural conditions. It allows a free exploitation of effects produced by the actual functional potential up to its natural level.

An important task is to know the natural potential of particular functions so that it could be used as an objective criterion for evaluation of the actual state and for further management intents.

Specific functional effects of forest stands are regularly different from effects corresponding to the natural functional potential. They can be higher than the effects compatible with the natural functional potential (usually in the wood-producing function that is intensified by additional inputs) or lower (usually at the expense of another enhanced function or as a result of damage to the forest ecosystem).

Future categorization of forests should be based on a category with function-integrated forest management as a standard of management enabling to preserve the functional potential at a suitable ratio of functions.

If there arises a need to fulfill any function above its actual level consistent with function-integrated management and in this connection it is necessary to spend additional energy inputs or restrict management in forests above the framework of the standard, such a forest will be included in the respective category of function-differentiated management of forests. The subject in whose interest they have been incurred will pay any additional cost, restrictions and damage.

If the functional potential of forest functions is decreased as a result of one-sided accentuation of any forest function, without having been taken a decision

on function-differentiated management, e.g. keeping of higher game stocks than the stocks not causing excessive damage or use of environmentally incompatible technologies or otherwise, such damage will be paid by its originator.

If the owner's restrictions result from the natural character of property (e.g. in protection forests), no compensation for damage caused by these restrictions can be claimed.

A separate and extremely difficult task is to define methods of (financial) valuation of forest functions. The valuation of functional effects of forest stands is difficult because except the wood-producing function the other functions (with negligible exceptions) are not objects of market exchange and the application of usual pricing methods is not possible. The values of some functions can hardly be expressed numerically (e.g. sanitary, climatic, aesthetic ones), and there arises a risk of their undervaluation.

Current methods of valuation that are to be defined have not been accepted on a national scale and embodied in the law system yet. Economic valuation of forest functions is essential to understand the importance of forest as a basic environmental component. It is also important for expression of the significance of forest sector in national economy and social value of forest property, to determine the benefit from measures taken to support particular functions, to quantify damage caused by disturbance of the functional potential of forest, and to lay down related sanctions.

Forest science has tried to create an applicable system of economic evaluation of functional effects of forest for a long time. The suggestions should be evaluated by experts in their context, finalized and the results should be submitted to legislature. It is possible to use socio-economic or environmental-existence approaches. Socio-economic approaches are based on demand for specific function and environmental-existence approaches on the forest capacity to produce functional effects without actual social demand.

Programme measures to support development of multifunctional management are identical with measures aimed at sustainable management, especially if the natural character of forest ecosystems increases, including support to the species, age and spatial diversity of forests. They involve:

- finalization of a system of evaluations of forest functions on the basis of expert opinions on proposed methodologies and by a legal definition of the sphere of their use,
- quantification of the potential of particular functions in specific conditions of forests of different types,
- definition of a system of criteria and indicators of multifunctional (function-integrated and function-differentiated) management of forests,
- realization of a recommended optimized system of multifunctional management of forests,
- proposal of a new system of forest categorization on the basis of a study comprising the analysis of economic impacts and suggestions of potential compensations.



Sufficient biological diversity of forest ecosystems is a fundamental precondition for forest stability (resilience and resistance) with regard to the present and expected antropogenic changes in natural conditions including anticipated climatic changes. Protection of ecosystems and natural biotopes "in situ" and preservation and renewal of viable populations of species in their natural environment seem to be the basic requirement for biodiversity conservation.

The basic negative intervention in forest ecosystems biodiversity and the main cause of contemporary low biodiversity and instability of forest stands is a change in the species, genetic, age and spatial composition of forests. Specifically replacement of autochthonous species, age and spatially differentiated forest ecosystems by monocultures of forest tree species that were not always suitable genetically and to the given site represents a serious problem.

Locally extremely high game stocks and their adverse structure of both geographically autochthonous species (red and roe deer) and species introduced for hunting purposes (mouflon and fallow deer) are an important factor contributing to a decrease in the species diversity of forest ecosystems. A complex of air-pollution environmental factors connected with an increase in air-pollution stress in the second half of the 20th century had negative impacts on intra-specific variability of important sub-populations of Norway spruce. Air-pollution stress as one of the main and decisive causes of forest soil acidification can also be a limiting factor for the efforts to renew the near-natural species composition of forest stands.

In these circumstances an amendment of Act No. 114/1992 and respective implementing rules that will exactly lay down the definition and regionalization of geographically allochthonous species considering the importance of some introduced tree species seems urgent.

A priority task associated with biodiversity is to conserve and to reproduce the gene pool of forest tree species with special emphasis on effective conservation of endangered gene resources. Simultaneously, efforts should be aimed at conservation of the present biodiversity of forest ecosystems representative or rare in the region of Central Europe. Another task is to achieve a spatial increase in biodiversity of forest ecosystems managed by man with respect to segments of the Territorial System of Ecological Stability (TSES).

Available information on autochthonous or otherwise important populations of forest species and on their mutually genetically different sub-populations is not sufficient. It is not clear how much they are endangered. Programmes for their conservation have not been specified yet. Rare forest ecosystems – and a large part of natural or near-natural forest ecosystems representative of the CR territory – have traditionally been protected within the network of specially protected areas (SPA). The existing systems of gene-pool reserves (GPR) of forest tree species under near-natural management can be considered as a part of conservation of the biodiversity of representative forest ecosystems.

Spatial conservation of biodiversity is implemented within supra-regional, regional and local TSES that involve SPA and GPR of forest tree species. This spatial conservation will gradually be complemented by the NATURA 2000 system.

Biological diversity and limits of forest ecosystems in the conditions of air-pollution stress and expected global climate changes have not been clarified in a satisfactory way yet.

Programme measures to support biodiversity:

- inventory and genetic verification of autochthonous stands of forest tree species including identification of endangered important sub-populations, including inventory, genetic verification and revision of forest stands certified for seed collection, also of those tree species for which no gene-pool reserves are declared and whose stands are not certified for seed collection,
- revision of gene-pool reserves for the main forest tree species focused on the origin of forest tree species, harmonization of gene-pool reserves with EU methodology,
- elaboration and implementation of programmes for conservation and reproduction of the gene pool of forest tree species with special regard to endangered gene resources,
- termination of the revision of representatives of forest ecosystems protected in SPA,
- updating of lists of protected animal and plant species in implementing decree No. 82/1997 to amended Act No. 114/1992, with respect to biotopes protection,
- proposal of an amendment of Act No. 114/1992 and respective implementing decrees that will specify the definition and regionalization of geographically allochthonous species in relation to biological, economic and ecological importance of some introduced species,
- incorporation of territorial protection of key localities from the aspect of biodiversity conservation into land-use planning at all levels,
- in urgent and substantiated cases declaration of forest stands outside national parks, national nature reserves and nature reserves at key localities from the aspect of biodiversity conservation as special-purpose forests necessary for conservation of biological diversity pursuant to § 8 par. 2f of Act No. 289/1995, incorporation of these changes into working plans and realization of appropriate management while the owner's claims for indemnification must be respected,
- application of recommended framework principles of management to groups of forest types differentiated according to the present and anticipated changes in site conditions of the actual state of forest stands and according to social requirements for fulfilment of functions; in addition, in TSES segments the species composition should be complemented by all naturally occurring forest tree species including rare and pioneer species,
- availability of subsidy titles to cover the costs forest owners have to incur in connection with measures aimed at an increase in biodiversity of managed forest stands,
- calculation of critical loads and territory categorization with respect to the present and potential acidification of forest soils for the purposes of ameliorating interventions,
- establishment of a representative network of permanent research plots to monitor natural succession,
- inclusion of leaving some trees (standing, particularly den trees and exceptionally the fallen ones) as biotopes of birds, mammals, plants and micro-organisms in current methods of forest management.



Wood production is still an important mission of the forest sector. Wood as a product of forest sector is increasingly important for social development and its role in the life of modern society continually and considerably increases. Wood is a raw material of versatile use for the production of a broad and large range of products and commodities. Its main advantage is that under sustainable management its sources are practically inexhaustible and renewable. Sustained wood production is an extremely important benefit of forestry for the environment.

Revenues from realized wood are an important source of income, and in many cases the only one, from which the forest owner funds development of other functions provided by the forest in cultural landscape. Without these resources the owner could not ensure the reproduction of a rate of return on forest property nor non-wood-producing beneficial effects required by the public.

Social relationships between wood production and processing expressed by employment are of importance. Maintenance of the rural population employment can be considered as a priority from the aspect of conservation of the landscape character.

Ecological aspects of wood production are not unimportant either. Replacement of wood products by products made of plastics is usually harmful both from micro- and macroeconomic aspects, and it brings long-term adverse ecological impacts. Besides a lower consumption of energy during the process of production the positive influence on the process of global climate changes through CO₂ bond in tree biomass is a reason for wood use.

Present high production capacities of forests in the CR are a result of the influence of many factors: first of all, an increase in forested area and in growing stocks is to be mentioned.

But their maintenance is threatened by the impacts of important factors and circumstances that will be discussed in greater detail in a part dealing with forest protection.

A reduction of the ratio and area of commercial forests also restrict the production potential of forest sector. Currently, 25.3% of the area of all CR forests lies in large specially protected areas. It is one of the highest values in Europe.

Good economic results of the forest sector are achieved thanks to a high proportion of softwood in market-realized supplies. The proportion is constantly about 90% of total production volume. In home and foreign wood market there has been a high and stable demand for softwood for many years, mainly for spruce saw logs and pulpwood. It is reflected in price trends of raw timber and finally in producers' economic results.

The policy of species diversification, implemented and economically supported in the forest sector, will be reflected in forest production on a medium-term scale because the proportions of stabilization and improvement tree species in timber supplies will increase with growth progress in forests established at the present time. Forest economic theory and practice do not have a realistic outlook of the future species composition of raw timber production and of its economic consequences for the time being.

The CR ranks among important European wood producers by the intensity of wood production, currently amounting to 1.37 m³ per capita and 5.39 m³ per ha of forestland per annum.

Roundwood and pulpwood have been dominant assortments of raw timber production in the CR for a long time. As the proportion of roundwood assortments in timber supplies is high, the assortment structure of the CR is similar to that of EU countries.

The proportion of roundwood assortments in CR timber supplies exceeds 50% in the long run. Although the outlook of future production possibilities is somewhat unclear, it is to expect on a medium- and long-term scale that the forest sector will be able to supply on average 6 – 7 mil. m³ of roundwood every year to sawmills and partly for veneer production and similar processing.

Development of pulpwood supplies is markedly different from that of supplies of larger-diameter roundwood. The proportion of wood for cellulose production in total supplies has been increasing. While in the fifties yearly supplies amounted to 1.5 mil. m³ of pulpwood, currently it is 4 – 5 mil. m³.

An extremely high ratio of exports is partly a result of the low consumption of raw timber in the CR.

The ratio of exports of this raw material in domestic timber output is markedly higher than in a majority of countries with high timber output. A total of 3.011 mil. m³ of raw timber were exported from the CR in 2001, i.e. more than 20% of the total production.

Imports of raw timber to the CR are traditionally low. In spite of high wood resources, through high imports the countries with high timber output maintain not only a high level of exports of wood intermediate products but also of wood products with high value added.

The level of per-capita production and consumption of a large portion of wood products is low, both in absolute and relative terms.

Sawn timber output is relatively high. By the sawn timber output amounts to 3.4 mil. m³, i.e. 0.33 m³ per capita, the CR ranks among the most important producers after Finland (2.21 m³), Sweden (1.71 m³), Austria (1.08 m³) and Norway (0.58 m³), that means the countries with high imports of saw logs.

The existing capacity of sawmills in the CR enables to process 8 – 8.5 mil. m³ of saw logs per annum. Processing of 6.2 mil. m³ of saw logs is equivalent to the present sawn timber output of 3.4 mil. m³, while 40% of this volume are exported. The consumption of this wood intermediate product in the CR is relatively low, and a consequence is extremely high exports.

As the offer of pulpwood is high, there exist continuous problems in the segment of wood processing to cellulose and paper. In 1998 a total of 569 000 tons of pulp were produced in the CR, i.e. 55 kg per capita (204 kg in Austria, 2 209 kg in Finland, 1 191 kg in Sweden). The paper industry also exports intermediate products – pulp and cellulose while a major portion of domestic consumption of paper and cardboard is covered by imports.

Production and consumption of other products of the woodworking industry (plywood, fiberboard and particleboard) do not match the possibilities and needs of the CR.

An urgent problem in this segment is to increase the level of production, consumption and export of higher value-added commodities of woodworking and paper industries. To cope with this problem is also an elementary precondition of the forest sector development.

As the living standard of the CR population will increase, people will increasingly be interested in products made of wood. This interest will be stimulated by a trend of consumption oriented on products of natural origin,

not harmful to the environment. The economic rationale of higher interest in wood will be a perceivable and increasing deficit of non-renewable raw materials and energy sources on a global scale. Therefore the problems of wood production and use are a part of EU forest strategy. In a resolution of the 14th December 1998 approved by the EU Council important points of this common strategy also comprise support to the use of wood and other forest products from forests under sustainable management as products not posing an environmental threat in agreement with free market rules.

Participants to the 3rd Ministerial Conference on Forest Conservation at Lisbon (1998) also declared their commitment to promote sustainable forest management by practical support to the harmless use of wood and other forest products as ecological and renewable materials. A commitment was declared to support actively production, sale and consumption of wood as a means to improve economical management of forests, and to apply new marketing ways for this purpose and to support the elaboration of comparative studies of wood use in this connection.

Programme measures aimed at wood production and use:

- implementation of principles of sustainable forest management that will ensure sustained and safe wood-producing and non-wood-producing effects and re-definition of forest legal rules from the aspect of their influence on achievement of this objective,
- thorough and consistent review of suggestions to exempt other forests from the category of commercial forests and to include them in categories where the wood-producing function is restricted,
- research on optimization and exploitation of potential production capacities of forests,
- re-evaluation of a system of motivation support to the interest of owners of permanently unused agricultural lands in their afforestation from the aspect of simplification of their transfer to the forest land resource, requirements for afforestation projects, tax relief, etc.,
- support to construction and modernization of capacities for effective finalization of wood processing, and accentuation of this problem in the Concept of Industrial Policy of the CR and its subprogrammes,
- elaboration of a state programme Raw Material Policy in the sphere of renewable sources, aimed at wood and some agricultural crops,
- recommendation and support to suggestions concerning the use of disposable capital of domestic larger forest businesses to build modern woodworking operations,
- co-ordination and support to the co-operation of forest and woodworking associations on popularizing the use of wood and wood products,
- support to internationally recognized systems of wood certification whose costs do not exceed the acceptable level, that do not create any discriminatory barriers to free enterprise and that respect strict forest legal rules in the CR whose observation guarantees sustainable management of forest,
- re-evaluation of supplies of lower quality wood and wood waste to cope with energy problems of the CR,
- evaluation of preconditions and possibilities of increasing wood production by establishment of plantations of fast-growing tree species on agricultural lands and at sites reclaimed after coal mining, supported within the State Programme for Energy Savings and Use of Renewable Energy Sources.





Currently, forests in specially protected areas (here-in-after SPAs) take up 25.3% of total forested area in the CR. Out of this, forests in national parks (NP) account for 4.2%, forests in protected landscape areas (PLA) for 19.8%, and forests in small specially protected areas 1.3%.

A network of forest SPA in the CR territory is relatively dense in comparison with adjacent countries. But to make a comparison with adjacent countries is somewhat difficult due to a different concept of SPA categorization, related differences in the extent of restriction of economic activities, and mainly to differences in natural conditions of particular countries.

As the mapping process is under way, the target area size of the NATURA 2000 system and its distribution according to ownership relations could not be specified, nor its target size with respect to the requirement of EU directive on conservation of natural sites, wild animals and wild plants.

Act No. 114/1992 defines the categories of SPA and lays down the procedure of their declaration and subsequent administration. Planning of SPA management and potential contributions to the purpose-oriented management of lands are established in general principles.

Management of forests in SPA is a part of special management plans. These management plans specify general conditions for the conservation of particular areas set down by the respective legal rules. It is necessary to clearly define the object of conservation and target of conservation. Approved plans of SPA management are background materials for working plans. When management plans are implemented into working plans, they should be harmonized with provisions of Act No. 289/1995. Particularly the aspect of their contents and liability is important, provided that the protection conditions of SPA do not allow it, the problem is solved by an exception in accordance with Act No. 114/1992 on Nature and Landscape Conservation.

SPAs in the CR are situated on lands of all types of owners – state, municipal and private ones. State-owned lands in SPA are administered by state enterprises pursuing economic activities (LČR, s. p., VLS, s. p.) on the one hand, and on the other hand by allowance organizations or organizations financed from the state budget (4 administrative authorities of NP). Methods of management in the categories of SPA are obligatory for organizations of all owner groups.

With regard to their purpose-oriented mission the management of forests in SPA is mostly an unprofitable economic activity, bringing higher or lower additional costs to owners that ensue from obligatory restrictions imposed by law (Act No. 289/1995 and especially Act No. 114/1992). The owner's compensation claim is declared legally if the loss is incurred due to protection conditions of SPA, but it is not specified anyhow. Costs of special silvicultural treatments associated with SPA management are usually compensated satisfactorily, on the contrary the compensation when cuttings are restricted or fully excluded is not defined, i.e. a system of financial compensations for permanent loss of production. A system of drawing resources from the State Environmental Fund is administratively complicated and lengthy particularly in the case of buyouts of lands in SPAs.

Programme measures to support management of forests in specially protected areas:

- to propose the optimization of a network of forest small specially protected areas including quantification of economic consequences,
- to propose future optimization of PLA structure in accordance with the State Programme of Nature and Landscape Conservation, including quantification of economic consequences,
- to elaborate the programme for implementation of NATURA 2000 system, including quantification of economic consequences,
- to continually evaluate the preparations of NATURA 2000 system, and to find a consensus with the affected owners of property,
- to amend Act No. 114/1992 aiming at its harmonization with Directives No. 79/408/EEC and No. 92/43/EEC of the Council,
- to define and stabilize a system of planning measures in all categories of SPA and in localities of NATURA 2000 system on a uniform legislative and methodical level (preferably an implementing decree to Act No. 114/1992),
- to finalize standardized management plans for all SPA that have been declared,
- to define and introduce a system of compensations for the loss of production incurred by the owner in SPA or in a locality of NATURA 2000 system due to partial restriction or complete and permanent exclusion of cuttings (in the case of SPA left to spontaneous development); to elaborate an analogous system for additional costs incurred by implementation of measures in SPA and localities of NATURA 2000 system if the approved methodical procedures of management have been observed (preferably in form of an implementing decree to Act No. 114/1992),
- to specify the resources from which loss compensations and costs of implementation of measures in SPA and localities of NATURA 2000 system will be financed, including the ways of their drawing,
- to define parameters for evaluation of the natural character of forest stands in SPA,
- to define so called "strict reserves" (those reserves that were left to spontaneous development by the title of their declaration) in a respective legal rule including methodical definition of conditions for leaving stands to spontaneous development,
- to stabilize the permanent national reference network of monitored natural forests left to spontaneous development, on the basis of the present research network,
- to unify the methodology of data collection and processing in a reference network (long-term complex research and simpler monitoring), including implementation into European methodology,
- to establish National Data Bank of Natural Forests in the CR and its interconnection with European data bank.

□





The first disintegration of continuous forest coverage and forest fragmentation occurred in this country as a result of human colonization in the Middle Ages. Fragmented tenure of forests originated and stabilized at that time while larger forest complexes were left where agricultural production was not possible. Landscape in the territory of today's Czech Republic was imparted an appearance that is nowadays called the typical landscape character. Along with changed species composition the present forest fragmentation, particularly in lowlands and uplands, is one of the causes of reduced ecological stability, and it can be so also in future.

The species diversity of forests was significantly influenced in favor of coniferous species by grazing in forests and successive litter gathering, locally by preferential cutting of broadleaved (e.g. in the environs of glassworks). When in the second half of the 18th century the forest sector received a concept of production of high-quality building timber to be implemented, the species composition of forests was considerably changed. Efforts to achieve the highest proceeds possible led to the final change in forest species composition.

In the last decades forests have dominantly been influenced by air pollutants and their depositions, in future they will be affected by potential impacts of global climatic change. If the present health status of forests is evaluated, forest damage should be understood as a resultant of all old and present influences that have participated in the cumulated stress. Undoubtedly, long-time impacts of anthropic activities can be considered in general as a reason for the present state of forests.

Among antropogenic pollutants acid-forming compounds SO_2 and NO_x dominate in the air. The time series indicates a decrease in monitored indicators of SO_2 pollutant concentrations in the last decade (except in 1996). Generally, average values have been lower than the critical concentration of $20 \mu\text{g.m}^{-3}$ since 1994. But this value is still exceeded by maximum average annual concentrations of SO_2 e.g. in the Krušné hory Mts.

The distribution of total annual sulphur and nitrogen deposition in the open in 1999 documented that 28% of the CR territory had a deposition load higher than the critical dose $10 \text{ kg S ha}^{-1}\text{.year}^{-1}$. A deposition load higher than the critical dose $15 \text{ kg S ha}^{-1}\text{.year}^{-1}$ was on 10% of the CR territory. Evaluating NO_x pollution on the limit value $30 \mu\text{g.m}^{-3}$ basis, we found a slight increase in 1994 to 1997. It could be localized to large towns (Prague, Plzeň, České Budějovice, Brno, Ostrava, Zlín, Uherské Hradiště) and to some parts of the Krušné hory Mts. and Podkrušnohorská basin, and to line sources (highways). Trends of NO_x pollutants showed the peak in 1990, 25.7 mill. tons and they have decreased since then.

Even though the trends of reduction in pollution impacts have been positive, forest vulnerability is still high, particularly in the areas that were exposed to the long-term pollution stress.

Pollutants directly influence assimilatory organs, and their summation deposition in the soil affects tree roots. Finally, it can result in disorders of nutrition, water regime and energy production, which has a feedback to forest tree species vitality and resistance to phytophagous agents that accelerate decline and/or are a cause of tree mortality.

The present state of climate is a result of long-term geo-historical development, and since the 18th century it has reflected the impacts of anthropic economic activities that accelerate the natural change in CO_2 content in the air.

Concentrations of other radioactive gases, especially of methane and nitrogen oxide, have also increased; the problem of ozone is serious. In the conditions of temperate zone the described development of climate changes can have many negative impacts on forests. It can influence soil processes and tree physiology, and along with air pollution or in co-operation with other stressors it can evoke considerable weakening of tree species resistance, leading to a reduction in the ecological stability of forest stands and whole forest ecosystems.

The present system of hooved game management is a chronic problem of forest protection. In the last 50 years game management characterized by extremely high stocks of game has caused great losses to the forest sector, mainly by browsing of tree bark and nibbling of seedlings from natural regeneration. Forest stands seriously damaged by bark browsing and subsequent rots have lower ecological stability.

From the aspect of impacts on forest ecosystems as a significant or even limiting factor appears to be the influence of anomalous temperature and precipitation fluctuations that substantially affect moisture conditions and origination of the predisposition and/or debilitation of tree species to attacks by various phytophagous agents.

Continuing fragmentation of forest systems due to the construction of transportation network of roads and highways also contributes to considerable disturbance of the state of forests. It is to note that in the forest sector there have frequently survived environmentally incompatible technologies, hardly acceptable use of heavy-duty mechanization, and excessive density of internal traffic infrastructure.

The present concept of forest protection applies principles of an integrated concept, so called integrated forest protection. To control harmful effects and factors sufficiently effective, environmentally sound and economically reasonable methods are used while the required effect is achieved by a combination of several methods. The term "threshold of economic noxiousness", on the basis of which the efficiency of protective measures against harmful agents is assessed, has not been quantified in greater detail yet.





An increase in the stability of forest ecosystems can be considered as an elementary, long-term challenge how to cope with the main tasks of forest protection. Satisfactory and sustained results not requiring any larger external interventions will be achieved by targeted, mostly biological melioration of the majority of forest sites. Gradual diversification of tree species composition is the basic way of achieving this goal. Among other factors, a limiting factor of this conversion is extremely high stocks of herbivorous hoofed game and their adverse structure and/or their current management.

These **programme measures** should be taken in the segment of forest protection against harmful factors:

- to adopt and implement the Concept of Game Management Policy in the CR, exclusively on the basis of an ecosystem approach as the background for further potential development of sustainable management in forests,
- to elaborate and codify a new methodology for calculation of damage caused by air pollutants in forest stands,
- to accentuate legal responsibility of industrial, transportation and energy firms for the endangerment of forest stands with air pollutants, water and soil contaminants, and to define their liability to participate in payments of damage caused by a decrease in the output of forest property of all owner categories, in accordance with envisaged rules of EC; to set down a system of compensations to forest owners for damage caused by air pollution,
- to prepare a decree of the Ministry of Agriculture laying down zones and degrees of damage; to modify a model of evaluation of stand longevity and/or defoliation of tree layer to a multi-criterion model, combined with evaluation of the soil load at least,
- to carry out a thorough analysis and to make a subsequent prediction of present and potential hazards in forest protection, and to update the outlook in five-year periodicity with respect to the dynamics of monitored phenomena,
- to carry out a complex analysis of stressor impacts in order to explain causes, mechanisms and consequences in the particular cases of their extreme manifestations causing disasters,
- to formulate principles and to propose procedures how to apply the principles of integrated forest protection to specific decisions on the efficiency of application of defensive interventions and sanitary measures, and especially to set down the threshold of economic noxiousness and environmental impact,
- to create a uniform database of monitoring and research programmes investigating the health status of forest stands,
- to extend the observation and assessment of international programme ICP Forests (monitoring of the health condition of forest stands on permanent monitoring plots in a network 16 x 16 km in size) at level II to other tree species (pine, oak, beech) and to air-pollution areas,
- to formulate principles and subsequently to implement regionalization of forest according to its potential and in relation to endangerment by the complex effect of direct influence of air pollutants, depositions and climate,
- to intensify the education of the population accentuating the impacts of mostly antropogenic stressors,
- to solve the problems of damage caused to forests and their owners by construction and operation of electricity distribution lines and other line structures.



It is assumed that realization of priorities and programme measures of NFP will be projected into the specific forest policy of regions within concepts of regional development. Inclusion of a regional dimension in concepts means to specify conceptual plans in the conditions of regions and to complement envisaged measures with other measures responding to specific regional aspects. As a part of realization of the Strategy of Regional Development of CR it is recommended to elaborate Regional Programmes of the Forest Sector Development in regions.

It is recommended that regional authorities of the state administration of forests will be charged with guidance of the elaboration of Regional Programmes under methodical and physical collaboration with Ministry of Agriculture and Ministry of the Environment, within the time limits set by the regional government.

For instance the rational use of agricultural lands that have been out of use for a long time through their afforestation has a marked regional dimension. It is a priority especially in regions with largest area of fallow lands, particularly if the region has low forest coverage.

It is expected that regional aspects will consistently be incorporated into the activity of the state enterprise Forests of the Czech Republic (Lesy České republiky, s. p.). First, it will be the specification of methods of systematic co-operation of the state enterprise and its units with the representatives of Regions, and last but not least the consideration of a possibility of gradual adaptation of the enterprise's internal organizational structure to the regional administrative organization. Closer linkages between the state enterprise's economics and the economics of regions (especially in the case of so called sharing taxes that are to become a source of regional budgets in future) will be evaluated. It will be done without excluding a competence of the state enterprise to dislocate the use of produced resources to areas with highest costs of forest management. Regional conceptual plans to improve the health status of forests will be accentuated in areas heavily afflicted by the noxious industrial air pollution (the town of Ústí n. L. Region and adjacent areas).

The compensation for damage caused by air pollution will be laid down after an envisaged EC regulation of environmental liability has been adopted, with respect to the prevention and rectification of environmental damage.

Increasing frequentation of forests is a regionally specific problem. Lack of regulation of forest use for recreation poses many risks at localities with higher concentration of visitors. Forest frequentation is an important issue of forest policy in tourism and recreation attractive regions, and the purpose-oriented support to a recreational function is urgent in forests of all owner categories.

The care of forest owners to increase the proportion of ameliorating and stabilization tree species will be supported as a priority in the framework of national uniform rules for the grant of supports. Differentiation of supports will be evaluated according to the level of significance of forest biodiversity enhancement in the region concerned.

Similarly like on a national scale, within Regions there exist disproportion between the production potential of forests and effective woodworking capacities. Information on such disproportions and their potential reduction will benefit economic development of regions while regional concepts will evaluate the conditions and efficiency of implementation of respective measures.

In the process of creating job opportunities the employment policy of a region should not omit chances offered by regional resources of raw timber and associated capacities of the forest sector and processing industry.

As timber has not been a sufficiently used material in the building industry, it is assumed that based on regional traditions of architecture specific designs of buildings when timber is used as a valuable construction and aesthetically precious material will be promoted in regions. Within the regional economic systems, in the course of their specification, it is recommended to examine possibilities how to favour economically those forest owners (including companies engaged in management of forests in state ownership) that will aim their activities at ecologically sound activities. A new division of competencies is also implemented in the segment of the state administration of forests by the reform of public service and in relation to the realized changes in the territorial and administrative organization of the state. The division of competencies applies to ministries (Ministry of Agriculture, Ministry of the Environment), regions and appointed municipalities. A part of the competencies of ministries will pass to regions, a majority of competencies of the hitherto district authorities of the state administration of forests (SAF) will be taken over by appointed municipalities. If there are 205 so called "appointed municipalities" and if the staff of the state administration of forests is not to increase markedly, it will be necessary to differentiate the numbers of SAF workers carefully. Cumulating the execution of SAF with other specialized functions in the environment segment should be a solution in areas with lower forest coverage.

A possibility and urgency of the organizational structure of the Czech Environmental Inspection adaptation to the new territorial and administrative organization of the state will be evaluated. It is assumed that regional authorities will be charged to co-ordinate the co-operation of the state administration of forests and inspectorates of the Czech Environmental Inspection on a regional scale and to minimize duplicities that could occur in their activities.



NATIONAL FOREST PROGRAMME

SUMMARY

The basic principle from which the National Forest Programme proceeds is the management of forests in a sustainable manner whilst limiting the administrative interference of the state to the unavoidable minimum under the circumstances of the motivating operation of state forestry policy for the support of public interests and whilst increasing the responsibility of forest owners for their property.

The National Forest Programme is an interdepartmental programme respecting not only the needs for the branch development of forest management, but also emphasizing the place of forests in the environment, their non-production functions, the importance of the forest as a renewable source of ecologically advantageous timber raw material and the significance of the use and processing of wood for the economy of the country.

The National Forest Programme has been conceived for the period 2003-2006. In addition to the basic information about the current state of forests and forest management in the Czech Republic, it contains chapters with themes focussing on these problem areas:

- Managing forests according to the principals of sustainable management,
- Development of the productive and non-productive function of the forest,
- Maintenance and enhancement of the biological diversity of forest ecosystems,
- Ensuring the production and use of raw timber,
- Managing forests in specially protected areas,
- The protection of forest ecosystems against harm factors,
- The implementation of the National Forest Programme in the regions.

In the individual chapters, after a brief analysis of the current state and a description of the persisting problems, there is always a specification of the measures required to improve the current situation. From the aspect of the tools available to forestry and ecological policy, these measures can be summed up in the following overview:

IN THE **ECONOMIC AREA** THE FOLLOWING WILL BE DEALT WITH:

- Addition of tools to the grant system of forest management
 - which motivate forest owners to the continuous and long-term improvement of forest assets with regard given to public interest in the development of the beneficial functions of the forest,
 - which support continuous sustainable forest management in cases where forest assets cannot demonstrably create sufficient requisite resources,
 - ensuring the financial rights of forest owners for compensation of the consequences of restrictions which Act No. 289/1995 Coll. (the Forest Act) and Act No. 114/1992 Coll., (the Nature and Countryside Protection Act), including newly drafted and passed amendments, impose on them,
 - ensuring measures associated with increasing biodiversity,
 - significantly increasing support for forestation of fallow agricultural land,
 - supporting functionally integrated and functionally differentiated forest management,
 - supporting the use of felling waste for fertilization,
 - supporting the application of natural regeneration of genetically suitable stands.
- Detailing of the quantification for the economic consequences of optimizing the network of small-area specially protected areas, national parks and protected countryside areas and the creation of the NATURA 2000 system. For the NATURA 2000 system, including proposal for dealing with any compensation of harm to owners.
- The processing of the draft for support of the non-production functions of forests as part of the preparation of programme documents for gaining support from EU structural funds.
- Stressing the legal responsibility of all subjects for threatening forest stands with harmful substances polluting the air, water and soil; this to be in compliance with the prepared legislation of the EU; final solution to system for compensation of damages to forest owners caused by emissions.
- Participation of State Environmental Fund in support of sustainable forest management.

THE PRIORITIES IN THE AREA OF **LEGISLATION** ARE CONSIDERED TO BE:

- The initiation of preparation for draft amendments of Act No. 289/1995 Coll. and its implementing regulations with regard to the resolution of the following problems:
 - Specifying the status of regional plans of forest development from the aspect of their relation to the forestry economic plan,
 - More efficient support for the consolidation of forest lands,
 - Designating professional qualifications for employees in forest management, including state forest administration,
 - Making concrete the rights, duties and responsibilities of specialist forest managers, including cases where the costs of their activities are paid for by the state,
 - Declaring forest stands in key areas from the aspect of biodiversity to be forests of special designation necessary for conserving biological diversity (whilst respecting the requirements of owners for compensation for harm),
 - Examining suggestions for removing forests from the category of commercial forests with regard to the increasing environmental and economic significance of wood.
- Processing a draft for the amendment of the Nature and Landscape Protection Act (Act No. 114/1992 Coll.) and the relevant implementing notices which more precisely defines and zones the geographically non-native species whilst taking into account their significance.
- Amending Act No. 114/1992 Coll. and the relevant notices from the aspect of achieving conformity with the legislation of the EU, unifying legislation for planning of care in all categories of specially protected areas and on the territories incorporated into the system NATURA 2000.
- Finally resolve the issue of so-called "strict reservations" in the relevant legal regulations, including designating conditions allowing the spontaneous development of stands and responsibility for threats to the existence of a forest as a result of not carrying out protective measures against the operation of harm factors.
- To accept and implement the Concept of Hunting Policy of the Czech Republic, which will resolve the issue of reducing the damage caused by game



as the basic starting point for the development of permanently sustainable forest management.

- To amend and simplify regulations according to which the forestation of fallow agricultural land is implemented.
- To prepare a draft for augmenting the Concept of Industrial Policy of the Czech Republic and its sub-programmes in support of the building and modernization of the capacity for the effective finalization of the production of timber processing.
- To initiate the preparation of a state programme of Raw Material Policy in the field of renewable resources which deals with timber and certain agricultural products.
- To ensure the application of priorities and programme measures of the National Forest Programme in the Regional Programmes of Forest Management Development.
- To process a draft for the new system of forests categorization.
- To prepare and gradually apply alternative methods for the economic arrangement of a forest in forests with a significantly differentiated stand structure.
- To deal with the issue of damage caused to forests and their owners by the implementation and operation of power lines and other linear constructions.

THESE PROBLEM AREAS HAVE BEEN DEFINED IN THE **FIELD OF RESEARCH:**

- Resolution of the system of criteria and indicators of the multifunctional (functionally integrated and functionally differentiated) management of forests.
- Completing processing of system for the evaluation of forest functions on the basis of adversarial evaluation of proposed methodologies.
- Creation of recommended optimized system of multifunctional forest management.
- Processing of quantification of potential of the individual functions in the concrete conditions of various types of forests.
- Research verification of genetic structure of autochthonous and other significant sub-populations of forest timber.
- Processing of draft for optimization of network of small-area specially protected areas and perspective optimization of forestry protected countryside areas in compliance with the State Programme for Protection of Nature and the Landscape.
- Establishment of National Databank of Natural Forests in the Czech Republic, its linking to the European databank, and the processing of parameterization for the evaluation of the naturalness of forest stands in specially protected areas.
- Carrying out an analysis of potential dangers in the protection of forests, impacts of stressors and the designation of a so-called threshold of economic harmfulness of damage to a forest and the environment caused by the most significant pests.

THE FOLLOWING ARE PRIORITY **ORGANIZATIONAL MEASURES:**

- Carrying out a survey and genetic verification of autochthonous forest stands and stands intended for seed collection and selected trees.
- Updating the current lists of protected species of animals and plants in the implementing notice for the updated Act No. 114/1992 Coll., with regard given to the protection of biotopes.
- Carrying out a calculation of the critical burden and zoning of territories from the aspect of current and potential acidification of forest soils.
- Supporting proposals for the use of free capital resources of the larger forestry assets for the building of modern wood-processing capacity.
- Coordinating and supporting the cooperation of forestry and wood processing interest organizations when popularizing the use of wood and products made of it.
- Supporting internationally acknowledged and economically acceptable procedures for the certification of timber which do not create discriminatory barriers to free trade and which respect the demanding legal standards of the Czech Republic, adherence to which guarantees the permanently sustainable management of forests.
- The intensification of education work with the public with emphasis on information about the procedures of sustainable forest management under the conditions of the powerful impact of anthropogenic factors on the state of forests.

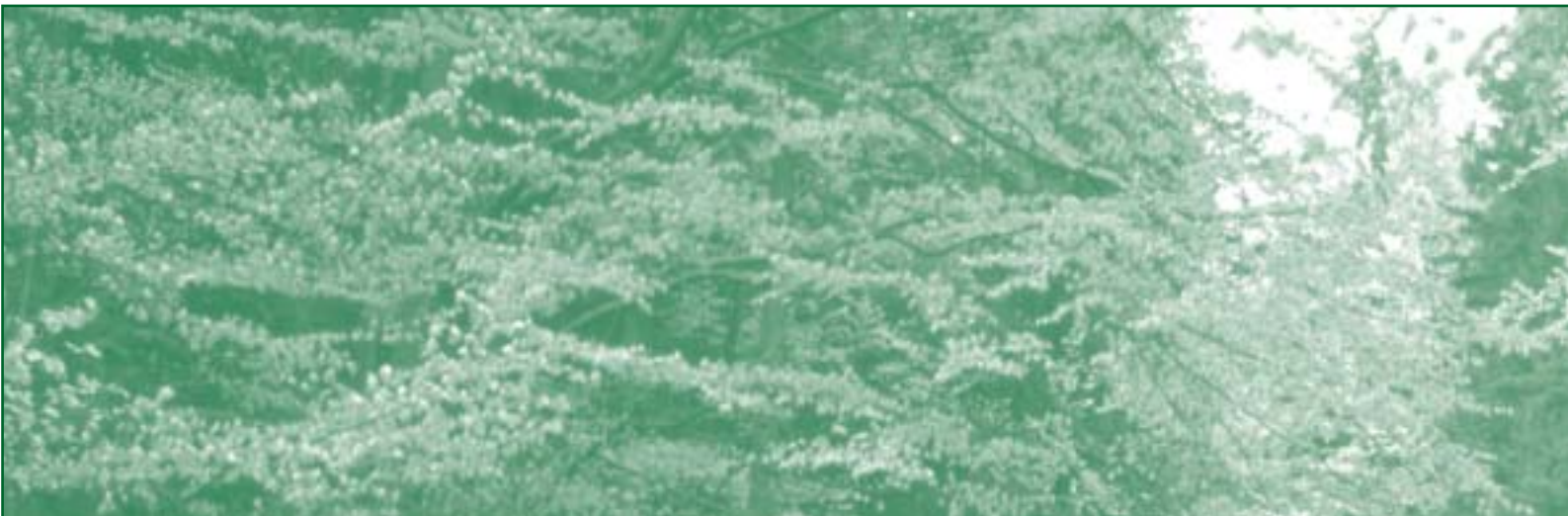




A LIST OF BACKGROUND DOCUMENTS AND LEGAL REGULATIONS

- 1st Ministerial Conference on the Protection of Forests in Europe, Strasbourg 1990
- 2nd Ministerial Conference on the Protection of Forests in Europe, Helsinki 1993
- 3rd Ministerial Conference on the Protection of Forests in Europe, Lisbon 1998
- United Nations Conference on Environment and Development – UNCED, Rio de Janeiro 1992
- United Nations Framework Convention on Climate Change (Rio de Janeiro 1992) and Kyoto Protocol, Kyoto 1997
- Decision of United Nations Economic and Social Council No. 1995/226 on establishment of Intergovernmental Panel on Forests (IPF) and successive documents of IPF
- Resolution of the European Council of the 14th December 1998 on “Forest Strategy for European Union”
- Guidelines of State Forest Policy adopted by the CR Government, approved by Resolution No. 249/1994 of the CR Government
- A concept of sector policy of the Ministry of Agriculture for the period before CR accession to European Union (B. Concept of Forest Policy), approved by Resolution No. 49/2000 of the CR Government
- State Programme of Nature and Landscape Conservation (1999)
- State Environmental Policy of the CR, approved by Resolution No. 38/2001 of the CR Government
- Concept of Industrial Policy of the CR (2001)
- State Programme for Savings of Energy and Renewable Energy Sources
- Report on the State of Forests and Forest Sector of the Czech Republic. The state as on the 31st December 2001
- Act No. 289/1995 on Forests and Amendments to Some Acts (Forest Act)
- Act No. 114/1992 on Nature and Landscape Conservation
- Act No. 40/1964, Civil Code, with its latest amendments
- Decree No. 82/1996 of the Ministry of Agriculture, on genetic classification, forest regeneration, afforestation and on keeping records on the manipulation of forest tree species seeds and plants
- Decree No. 83/1996 of the Ministry of Agriculture, on regional plans of forest development and on delimitation of management complexes
- Decree No. 84/1996 of the Ministry of Agriculture, on forest management planning
- Decree No. 77/1996 of the Ministry of Agriculture, on the essentials of an application for withdrawal or restriction and on details about protection of lands designed to fulfill forest functions
- Decree No. 395/1992 of the Ministry of Environment, implementing some provisions of Act No. 114/1992 of the Czech National Council, on Nature and Landscape Conservation
- Decree No. 82/1997 of the Ministry of Environment, implementing some provisions of Act No. 16/1997 on the conditions of importation and exportation of endangered species of wild animals and wild plants and other measures for the protection of these species and on amendments of Act No. 114/1992 of the Czech National Council on Nature and Landscape Conservation with its latest amendments
- Regulation No. 193/2000 of the CR Government, announcing the forest inventory in 2001 – 2004
- Resolution No. 532/2000 of the CR Government
- Rules for the use of the State Environmental Fund
- Rules for the grant of subsidies to forest owners
- Directive on the Conservation of Wild Birds, so called Birds Directive (79/409/EEC)
- Directive on the Conservation of Natural Habitats and Wild Fauna and Flora, so called Habitats Directive (92/43/EEC)





NATIONAL FOREST PROGRAMME

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