

**Attachment 2**

**Nepal Agriculture and Food Security  
Country Investment Plan**

**2010**

## Abbreviations and Acronyms

ADB	Asian Development Bank
AED	Agriculture Extension Directorate
AGDP	Agriculture Gross Domestic Product
APP	Agriculture Perspective Plan
CALSC	Community Agriculture and Livestock Service Centre
CIP	Agriculture and Food Security Country Investment Plan
CYMMIT	International Research Centre for Wheat and Maize
DAG	Disadvantaged Group
Dalit	A disadvantaged group comprising 13% of Nepal's population
DLS	Department of Livestock Services
DoA	Department of Agriculture
DoC	Department of Cooperative
DoFTQC	Department of Food Technology and Quality Control
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FFS	Farmer Field School
FFW	Food for Work
GDP	Gross Domestic Product
GoN	Government of Nepal
HDI	Human Development Index
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IFAD	International Fund for Agricultural Development
IRRI	International Rice Research Institute
IOM	International Organization for Migration
INGO	International Non-Government Organisations
MDG	Millennium Development Goal
MLD	Ministry of Local Development
NAP	National Agriculture Policy 2004
NARC	Nepal Agricultural Research Council
NASDP	National Agriculture Sector Development Priority for the Medium Term (2010/11-2014/15)
NMTPF	National Medium-Term Priority Framework
NPC	National Planning Commission
NPFSN	National Programme for Food Security and Nutrition
NRs	Nepalese Rupees
OIE	World Organization of Animal Health
PPP	Public Private Partnership
SPS	Sanitary Phytosanitary measures
Terai	Plains region bordering India
TYIP	Three Year Interim Plans
UNDP	United Nations Development Programme

USAID	United States Agency for International Development
USD	United States Dollars
WB	World Bank
WFP	World Food Programme of the United Nations
WHO	World Health Organization of the United Nations
WTO	World Trade Organization

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## **I. Introduction**

This Nepal Agriculture and Food Security Country Investment Plan (CIP) is the culmination of a national process, involving consultation with stakeholders and development partners, experts, as well as an in-depth analysis of the agriculture and related sectors. The CIP follows logically from the objectives outlined for agriculture and food security in the Government of Nepal's (GoN) Three Year Interim Plan (TYIP 2010/11-2012/13) that is further articulated in the National Agriculture Sector Development Priority for the Medium- Term (NASDP 2010/11 – 2014/15). The NASDP document facilitates strategic planning and resource mobilization and identifies medium-term perspective priorities and priority areas requiring support by the GoN and its development partners. The formulation process of the NASDP has involved broad stakeholder consultation at many levels leading up to its validation. A final draft version of the NASDP was validated in the course of a two-day stakeholder workshop in early July 2010, involving 112 participants from several Government Ministries, civil society (national and international NGOs), the private sector, and Nepal's bilateral and multilateral development partners and was endorsed in September, 2010 by the GoN.

The overall goal of the CIP is to reduce poverty and household food insecurity on a sustainable basis and to strengthen the national economy. Towards this the CIP outlines ten agriculture and food security programmes identifying sub-program/components and activities that will be carried out by the GoN Ministries, in particular the Ministry of Agriculture and Cooperatives, over the next five years. The CIP has been validated through a series of stakeholder consultations and Regional and National workshops and was endorsed in September 2010.

Following the introduction, this document begins by presenting the country and agriculture sector and food security background which includes a description of (i) the general country, economic, social and agricultural situation, (ii) the status of poverty, food security and nutrition in the country, (iii) the main agriculture development and food security issues, (iv) the agriculture and food security environment, and (v) government- international partner activities related to agriculture and food security. This is followed by a description of the Country Investment Plan which includes (i) the rationale and objectives, (ii) the Country Investment Plan process and validation procedure, and (iii) a description of the Country Investment Plan Programmes and Components. The Country Investment Plan costs and financing are then discussed followed by implementation arrangements, and monitoring and evaluation procedures.

## **II. Country, Agriculture Sector and Food Security Background**

### **A. General Country, Economic, Social and Agricultural Situation**

Nepal has experienced major political changes in recent years leading to the peace treaty signed in November 2006 that ended the decade long Maoist insurgency, the end of the monarchy, and the election of a Constituent Assembly. While the political change process is still underway, Nepal desires to continue with the country's economic and social development, in particular, with the development of agriculture and the strengthening of the food security system.<sup>1</sup>

The country borders India to the east, west and south and China to the north with about three-quarters of the country nestled in the hills and mountains of the Himalayas. Nepal is a landlocked country divided into three primary ecological zones mainly running east-west: (i) the Terai or plains bordering India, (ii) the Hill Region in the middle, and (iii) the Mountain Region. There are five administrative development regions: the East, Central, West, Mid-West and, Far-West regions. Each development region is further divided into districts.

Nepal's population has a diversity of ethnic groups and languages with a caste system that can define access to resources and opportunities. The population is around 28 million people with a population growth rate of 2.25% contributing to an increase in the ratio of people to arable land. The birth rate is high at 30 per thousand with a high infant mortality (48 per thousand live births), and a life expectancy of 63 years. The country is one of the least developed in the world ranking 142 out of 177 countries in the Human Development Index (UNDP). The population is very young with 43% of the population below 14 years of age. About 45% of the population is illiterate (2001 estimate) and it is estimated that 51% of the lowest income quartile children attend school compared to 87% in the high income quartile group. However, in rural areas, about 50% of females are illiterate compared to 21% males. The Gender-related Development Index (GDI) for Nepal is 0.545 giving a ranking of 119 out of 155 countries (UN, 2010).

There is a large employment seeking migration from rural to urban areas within Nepal and to other countries as well, mainly to India. Most migrants are men between the ages of 15 to 44 leaving behind their families to cope on their own. This presents problems for the management of farms and businesses as management is traditionally undertaken by men. Remittances are a large part of total income for many poor families.

The agriculture sector dominates the economy providing about 35% of the GDP and employs more than the manufacturing, service and tourism sectors combined. Agriculture absorbs about 75% of Nepal's labour force and three-quarters of all households are employed in the sector. About two-thirds of agriculture GDP comes from the crops sub-sector with the remainder from the livestock sub-sector. Close to 16% of the country is arable land. The

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<sup>1</sup> This section is largely based on and adapted from: (i) The NPC Food Security Atlas of Nepal, (NPC 2010a), (ii) NPC (2010a), and (iii) NPC & FAO (2008).

average household owns 0.8 ha of land but the majority of households (45%) own less than 0.5 ha with a decreasing average household farm size trend over the last several decades. Most agricultural holdings can be classified as subsistence family farms (64%) with only 3.1% classified as actual commercial farming operations.

Nepal is heavily dependant on the summer monsoon rains. The northern parts of the Mid-West region receive little rain throughout the year. About 31% of the agricultural land is irrigated but not all irrigated areas have access to year-round irrigation. The use of improved seeds is low (Paddy 5.4%), and wheat (5.6%). About one-half of the farmers use fertilizer on wheat and two-thirds of farmers use fertilizer on paddy but not always the correct type and amount and availability is a problem.

Each of the three main ecological zones has its own unique resource endowments, cropping patterns and farming systems leading to differences in commodities produced, production levels, and productivity:

- The Terai, bordering India, has 23% of the total land area with 47% of the population. The land is relatively fertile and has the majority of Nepal's irrigation infrastructure producing about 55% of the nations food grain supply. The population density/ha of agricultural land is 6.6. Paddy is the main crop and the Terai produces the bulk of Nepal's wheat in the winter season and also maize and oilseeds with some jute, tobacco and tea in the Eastern part. Potato, pulses, fruits and vegetables are also grown. It is the most productive agricultural zone. Cattle and buffalo are also raised mainly for milk and draft power and some goats.
- The Hill Region (700m to 4,000m) has 42% of the total land area with 45% of the population. The population density/ha of agricultural land is 9.6. Maize is the main crop in most hill areas although paddy is the main crop in several hill districts. Most of the millet production takes place in the Western hills with barley grown as minor crops. Potato, sugarcane, oilseed, pulses, fruits and vegetables are also grown with some coffee and tea in the Eastern Districts. Cattle and buffalo are also raised mainly for milk and draft power along with sheep and goats.
- The Mountain Region (2,500m to 8,850m) has 35% of the total land area with 8% of the population. The population density/ha of agricultural land is 8.8. Maize and potato are the main crops. Millet, barley, buckwheat and various pulses and fruits (apple) and vegetables are also produced. Agricultural yields are very low with a single crop per year. Cattle and Yak are also raised mainly for milk and draft power/transportation along with sheep and goats. This region has few roads, little electrification and few health facilities.

Nepal is a member of the World Trade Organization (WTO). India is by far the largest export/import partner of Nepal and the border is essentially open between the two countries. Nepal's main agricultural exports include vegetable ghee, and pulses followed by live animals, cardamom and tea and ginger. Nepal's main agricultural imports include all major cereals, vegetables and pulses. The food trade deficit (2007) is around 35%.

## **B. Poverty, Nutritional Status and Food Security**

Poverty in Nepal is widespread with an estimated 31% of the population below the national poverty line (Nrs. 7,696/person/year or about USD 100.00/person/year) with 41% consuming less than the minimum calorie requirement (2144 kilocalories/person/day). The Human Poverty Index rates Nepal 84<sup>th</sup> out of 108 developing countries. Malnutrition rates in Nepal are among the highest in the world – it is estimated that one-half of all children under 5 years of age are stunted and 38% are underweight. An estimated 24% of all women are undernourished and in the Terai, this figure is 33%. Associated problems are poor quality drinking water, poor sanitation and hygiene, and poor health facilities all leading to a variety of disease problems and prolonged ill health. Poverty, low caloric intake, and the associated problems are most prevalent in the Hills and in the Far-West and Mid-West Development Regions of the Terai, and in the Hill and Mountain Regions of the Eastern Development Region where more than 50% of the people live in absolute poverty. About 30% of Nepal's population fall within the absolute poverty category.<sup>2</sup>

*Food Availability:* Nepal was able to produce sufficient food to feed its population and even was a net food exporter until about 1990. However, since then, production and imports have not kept pace with the increase in demand from an increasing population – production of cereals has been growing at rate of 2% per annum and below the population growth rate. In most years since 1990, Nepal has been in a food-deficit position. More than half of all Districts in Nepal are food-deficit. Food Aid, mainly through WFP programmes (often linked to a labour intensive food/cash for assets scheme), has played an important role but can not be expected to overcome the large and growing food-deficit situation. Annex 1 presents the estimated food security situation (food production/food requirements) by Development Region and ecological zone for 2008/2009. The table in Annex 1 shows that: (i) overall, Nepal was in a food deficit position in 2008/2009, (ii) that when comparing the three main ecological zones, the Hill and Mountain Regions are in a food-deficit situation whereas the Terai was in a food-surplus situation, and (iii) that the Central, Mid-West, and Far-West Development Regions were in a food-deficit position while the Eastern and West Development Regions were a food-surplus region.<sup>3</sup>

*Food Access:* Many households do not have the ability to acquire sufficient food to meet minimum consumption needs either because of financial or physical constraints. A 2008 WFP study indicates that 75 % of poor households did not have sufficient access to food, and more than 95 % of very poor households had insufficient access to food. Insufficient access mainly stems from the financial problems associated with poor households but actual physical access (poor infrastructure such as no roads and markets) are major problems especially in the Mountain Region and West and Far West Development Regions. On average, 60% of income

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<sup>2</sup> This section is largely based on and adapted from: (i) The Food Security Atlas of Nepal, (NPC, 2010a), (ii) NPC (2010a), (iii) NPC (2010b), (iv) NPC & FAO (2008), (v) Khadka (2010), (vi) Pokharel et al., (2009), and (vii) Singh and Prevatt (2010).

<sup>3</sup> The Food Security Atlas of Nepal (NPC 2010a) presents a similar but clearer depiction of the situation using several colour-coded food security related maps.

in Nepal is spent on food, however poor and very poor households spend a much larger proportion of their income on food.

*Food Utilization:* Awareness of proper food handling and storage practices and the knowledge of proper health and nutrition is very low in Nepal. Most communities do not have a health centre and the nearest is some distance away. A poor nutritional diet coupled with a high level of contaminated drinking water sources leads to many disease problems (anaemia, diarrhoea, ARI, malaria). It is estimated that 45% of rural households use a public water source which is often unprotected inviting water-borne diseases. Food safety regulations are not enforced for food products bought in the markets. Discretionary feeding practices, such as feeding males and male children before female children and before women is practiced in many households.

### **C. Main Agriculture Development and Food Security Issues and Challenges**

Agriculture development and food security in Nepal are faced with a number of issues and challenges. These major issues and challenges are presented in summary form:<sup>4</sup>

*The low and almost stagnant agricultural productivity and production amidst a growing population resulting in chronic food security problems:* The majority of the farms in Nepal are small in area and many are operated as subsistence farms. The use of quality inputs is minimal due to their supply unavailability and high cost and is reflected in the limited adoption of modern technology on most farms. Compared to the farmers in India, the Nepalese farmers have to bear much higher production costs/unit of output. Moreover, most of the farms do not have access to year-round irrigation facilities. Animal health and transboundary disease problems (through India) exist. Marketing and credit facilities are also lacking in the sector contributing to under-investment in productive farm assets. This has led to very low productivity in agriculture which contributes to the problem of low farm incomes and the problem of increased food insecurity.

*Limited agricultural commercialization and diversification:* Given that the majority of the producers in Nepal are subsistence oriented, there is a need to support agricultural commercialization where possible. Support is needed for enhancing the scale of production, post-harvest operations, processing and trade. There is a need to link farmers to markets and develop each step in the value chain for various commodities that will eventually connect with domestic, the Indian market, and with other international (niche) markets. Quality control and food safety regulations are also lacking which are needed for value chain development, especially for tapping into international (niche) markets beyond India.

*Weak support of the agricultural extension service delivery system:* The agricultural extension service delivery system is not as effective as it could and should be and does not offer the

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<sup>4</sup> This section is adapted in total from the NASDP (MoAC, 2010).

quality of service nor the level of service demanded by farmers. The present level of coverage by the extension system is about 15% of agricultural households nationwide. Over the years, several approaches such as the Integrated Rural Development Projects, Training and Visit System, Block Production Program, Tuki System and Farming System Research and Extension have been attempted. Despite their implementation, the lessons learned from these initiatives have not been institutionalized largely due to the budgetary limitations. While the INGOs are also actively providing extension services, the real need is for an effective public sector extension service (working alongside and with private sector and INGO extension efforts) to address the needs of poor and marginal groups living in the remote areas with the services made inclusive with equal treatment to all. There is also a need for further alignment of agricultural research, education and extension services with the demands and priorities of farmers.

*Enhancing the role of cooperatives:* The cooperative societies are not as effective as they could be. There is an absence of adequate training and key information and fundamental awareness of how to operate a cooperative based on sound cooperative business principles for the benefit of its membership. Cooperative managers and co-op members need basic training to address the awareness problems related to agro-production, processing and marketing business practices.

*Agro-Forestry management issues:* The forest area covers about 38 percent of the total land in the country. Land reserves were available for conversion of forests and grassland and were well managed as income generating sources in the past when Nepal's population was relatively smaller. The increase in population pressure in recent years has contributed to an increase in the encroachment of forest areas for cash income to meet family food requirements. These pressures have enhanced the degradation of arable land and forest cover contributing to an environmental problem while income generation from forest resources have been steadily declining. The challenge is to put in place sustainable land management practices that allows both conservation and household income earnings, while maintaining environmental standards.

*Land reform issues:* Land is the basic resource for agriculture development and food security. It signifies the social well-being of a person in the rural setting in Nepal. The issues and challenges of "Land Use Rights" include the problems associated with dual ownership, squatter settlements, indiscriminate use of land, and land fragmentation. While bonded labourers have been freed from the land they had once worked, they have not been given any management and skill training to operate a farm or another business on their own. The land management system also needs to be reformed. The database system on land holdings, land use, landless population and land tenure is poor. There is also the need for the formulation of new land use policies and the amendment of existing acts and regulations associated with land use rights and land management.

*Irrigation infrastructure and management:* Agriculture production and productivity can be sharply increased by year-round irrigation services through the construction/maintenance of infrastructure and better irrigation management. However, year-round irrigation services are now limited and moreover, the existing irrigation systems are becoming less reliable because of poor management and maintenance. Nepal implemented the Water Resources Strategy and the National Water Plan that encouraged farmer participation in the maintenance of public irrigation systems but the desired result has not been achieved with little impact on the envisaged increase in agricultural productivity and production. Problems also exist regarding the collection of irrigation service fees as most farmers are reluctant to pay irrigation fees because of the irregularity of the irrigation services. The challenge is to increase the irrigation infrastructure and irrigation services, provide proper irrigation management, and bring farmers on board through well managed Water Use Associations.

*Food safety and consumer protection:* Food quality and safety have not been a high priority in Nepal and awareness of food safety issues by the population is very low. Food safety and consumer protection Acts and regulations need to be updated to present world standards for the safety of domestic consumers and particularly for exploiting international export opportunities. Laboratory services need to be sufficiently developed and accredited to ensure safe food in both domestic and export markets. Capacity building is required for those operating the food safety system.

*Unsustainable natural resource management practices:* The Nepalese mountains and hill regions are prone to soil erosion and landslides while the Terai plains suffer from sedimentation and alluvial deposits which erode easily. Monsoon torrential rains often wash away top soils in the poorly managed crop production systems where sustainable farming practices need to be promoted. Similarly, in the forested areas, watersheds need to be managed more effectively. Excessive pesticides are often used by commercial farms and Integrated Pest Management (IPM) coverage of crops is still limited. There is also a need to minimize forest fire occurrences and damage. Biodiversity conservation efforts need to be enhanced as some species such as wild rice, Achhame and Lulu cattle and the medicinal herbs are on the verge of extinction.

*Institutional credit and insurance services:* There are few commercial financial institutions in the rural areas willing to give credit to farmers. Commercial credit sources charge exorbitantly high interest rates thus limiting the number of farmers who use farm credit. The challenge is to make agricultural credit available for production, processing and marketing as a part of the future programs envisaged to increase agriculture production and productivity. It is also important to reduce the risk in agriculture and livestock through the provision of agricultural insurance.

*Adaptation to climate change:* Nepal has recently been experiencing irregular rainfalls, frequent floods and droughts, cold waves, increased landslides, and increased prevalence of

pests and diseases which already have had a direct affect on food production, productivity and food security. The institutional and technical capacity of MoAC at the national and district levels needs to be increased to address climate risk management and disaster prevention / preparedness related issues from an agricultural perspective. Some adaptation to climate change initiatives have been started with support from both FAO and UNDP, however, more has to be done by the GoN in the areas of agriculture such as adapting crop varieties, seeking suitable cropping patterns, fruit tree or hedge row intercropping, identifying suitable seed systems, reducing risk through water management at the farmers' field, and in the area of livestock management practices. A focus is also required on reforestation, soil conservation and watershed management.

*Rural out-migration and the shortage of agriculture labour and management skills, feminization of agriculture:* Migration from rural to the urban areas within Nepal and abroad has adversely affected agricultural productivity and food security. Poverty and limited employment opportunities have become a push factor for out migration while even menial employment in urban areas has pulled people in from the rural areas. Furthermore, those who out-migrate for work purposes are usually the male members of farm families leaving the women to do all the farm labour as well as the farm management which many women are not accustomed to undertaking. It is estimated that 31% of the poor are female headed households, most of them engaged in agriculture. Besides feminisation of agriculture and poverty, out-migration also has resulted in a rise in real wages affecting overall competitiveness of agriculture.

*Human resource capacity development in agricultural Institutions:* The planning and implementation capacity of agricultural public institution personnel is inadequate. Capacity development programs are required throughout all the agricultural institutions in the country including those in research and extension services and in all the Departments of the Agricultural Ministry and in other Ministries that have functions related to food production and food security.

The above issues and challenges, while they are formidable, provide the main opportunities that the CIP will embrace to enhance agricultural production and productivity and increase the food security situation in Nepal. There is a demand by farm and rural households for access to new technologies, information and support services so that they can increase their incomes and their quality of life.

## **D. The Agriculture and Food Security Policy Environment**

Nepal has a long and diverse history of development activities and accordingly has a comprehensive range of policies, strategies and initiatives to promote agriculture and food security. Nepal's overall development strategies have traditionally been outlined in the form of Five Year Plans - the last of these (the tenth), ran from 2002 to 2006. Due to the major

political changes in 2006, leading to the peace treaty that ended the Maoist insurgency, the end of the monarchy and the election of a Constituent Assembly, a Three Year Interim Plan (TYIP 2007/8-09/10) was launched. A second TYIP is currently being finalized (covering 2010/11-12/13).

The objectives for the agriculture sector as expressed in the TYIP (2010/11-12/13) and addressed by the National Agriculture Sector Development Priority plan (NASDP 2011-2015), and associated Country Investment Plan are:

- To ensure food and nutrition security.
- To make agriculture sector competitive and business-oriented, with increased production and productivity.
- To reduce poverty by increasing employment and income generating opportunities in agriculture sector.
- To minimize adverse effects of environment, climate variability and climate change in the agriculture sector.
- To develop cooperatives for agriculture development.
- To develop human resources for the management of a sustainable agriculture development process.

The measurable outcome indicators for the TYIP (2010/11-2012/13) so far are framed as increases in crop and livestock production with corresponding increases in per capita food consumption. The indicators include: food crop production increase by 25%, pulse production increased by 40%, fruit production increased by 10%, potato production increased by 12%, vegetable production by 20%, milk production increased by 10%, and meat production increased by 30%. Other measurable indicators such as increase in Agricultural GDP, increased incomes of farm households, and other household food security indicators are being formulated.

Nepal's agriculture sector development is framed by the 20 year Agriculture Perspectives Plan (APP 1995-2015), with a dual focus on poverty reduction and sustainable agricultural growth, and a strong emphasis on technology inputs. The APP strategic framework is further articulated through the National Agriculture Policy (NAP, 2004), which remains to date the official policy framework for all interventions, although supplemented and amplified by a range of specific sector policies. The NAP is seen as a means to achieve the APP goals, rather than as a new strategic document, and focuses primarily on; (i) increased productivity through technology improvements, (ii) a gradual shift towards commercialization of production, and (iii) natural resource base protection and disaster risk management. Although not explicitly stated, there is a strong emphasis in the NAP towards the creation of an enabling environment through improvement of Government capacity for service delivery.

The NAP is supplemented by a number of specific sector policies and individual commodity policies, some of which are: (i) National Seed Policy 2000), (ii) National Fertilizer Policy

2002, (iii) National Irrigation Policy (2003), (iv) National Water Plan (NWP 2005), (v) Agri-business promotion policy (2006), (vi) Agriculture Bio-diversity Policy (2007), (vii) Nepal MDG Progress Report (Draft 2010) by NPC, and (viii) Nepal Master Plan for the Forest Sector (25 year plan 1989 – 2014).

Acknowledging the need to expand the level of detail of the NAP, and to update it to take into account a greatly changed social and political environment, the Government of Nepal engaged in the development and endorsement in September, 2010 of a National Agriculture Sector Development Priority plan (NASDP), covering the medium term period 2011-15. The NASDP also covers analysis of key issues and challenges confronting agriculture as articulated in the TYIP (2010/11-12/13). Development of this plan has involved a broad stakeholder consultation. The NASDP focuses on seven priority outcomes: (i) Enhanced food and nutrition security, (ii) Improved agricultural technology, (iii) Improved enabling environment, (iv) Improved market orientation and competitiveness, (v) Sustainable natural resource conservation and use, (vi) Improved infrastructure support facilities, and (vii) Adaptation to the effects of out-migration including feminization of agriculture. The NASDP also supports the achievement of the Millennium Goals and attempts to harmonize technical services related to MDG1 and MDG 7.

Recognizing that it is essential to provide a more comprehensive framework for the key objective of improved food security and nutrition, the Government has also enunciated the need to develop a comprehensive National Programme for Food Security and Nutrition (NPFSN), and has requested specific assistance of its development partners. FAO has carried out several inception missions for this purpose since 2008. The most recent mission, jointly deployed with USAID, was completed in April 2010, and recommended a series of concrete actions for launching the Programme, first and foremost the establishment of a nationally owned Programme Formulation Team. The priority objectives recommended for the NPFSN closely reflect those of the NASDP.

## **E. Government-International Partner Collaboration**

International Development Partners have and continue to support the development and implementation of Nepal's Agricultural and Food Security related policies as identified through the Five and Three Year Plans and articulated through the specific sector policies and individual commodity policies, and most recently by the NASDP. A number of International Development Partner assisted projects are ongoing or in the pipeline, geared towards accomplishing the overall Three Year Plan objectives and attaining the identified indicators.

The largest financiers in the agriculture sector, past and present, are the World Bank (WB) including the International Development Agency (IDA), Asian Development Bank (ADB), and the International Fund for Agricultural Development (IFAD). The WB/IDA on-going projects with MoAC include Avian Influenza Control Project (AICP 2007-2011) – with FAO, Irrigation and Water Resource Development Project (IWRMP 2007-2013), Social Safety Net Project (SSNP-2007-2013), Project for Agricultural commercialization and Trade (PACT – 2009-2015). ADB projects include Community Livestock Development Project - with FAO

(CDLP – 2005-2010), Community Managed Irrigated Agriculture Sector Project (CMIASP – 2006-2010), Commercial Agricultural Development Project (CADP – 2009-2011). IFAD on-going projects include Leasehold Forestry-Livestock (LFL – 2005-2010), High Value Agriculture Project in Hill and Mountain Areas (yet to become effective).

The main financiers above are joined by other partners including the European Union (EU), the Japanese International Cooperation Agency (JICA), the Swiss Agency for Development Cooperation (SDC), the United States Agency of International Development (USAID), and the Department for International Development (DFID) and the Governments of Canada, Denmark, Finland, France, Germany, Korea, Norway, and Netherlands. International Non-Government Organizations (INGOs) are also heavily involved some of which include Habitat for Humanity International, Intermediate Technology Group, Shalpa Neer (Japan), International Development Enterprise Nepal, and Danish Forestry Extension. The UN agencies include FAO, ILO, UNDP, UNICEF, UNEP, WHO and WFP. A number of sub-regional organisations are also supporting crucial inputs on food security issues and CAADP support. NARC research is supported by CIMMYT and IRRI country offices as well as other international research centres. There are many smaller organisations doing localized work as well. The institutional landscape is in itself a management issue but provides financial and technical support where national capacity is weak. Annex 2 presents a listing of on-going and recently completed agriculture sector related projects implemented by different Ministries. Annex 3 presents INGO supported on-going and recently completed projects.

### **III. The Country Investment Plan**

#### **A. Rationale, Objectives and Indicators**

The CIP provides a coherent set of priority agriculture investment programmes and sub-programmes encompassing the overall need of the country to improve the agriculture and food security situation in Nepal.<sup>5</sup> The plan is comprehensive and aligned with the TYIP (2010/11-2012/13) and the NASDP. It is a five year plan that builds on existing policies and programmes and the opportunities that exist for improving production and productivity of the agricultural sector that will in-turn facilitate the improvement of the food security situation.

Opportunities exist to position Nepal's agricultural sector as an engine of economic growth and development. There are significant opportunities to move smallholder farmers from subsistence to commercial agriculture through the support of improved technology use and value chain development. There are potential productivity gains to be made from increasing technology use and the use of productive inputs given that many households want to use these technologies but do not have sufficient access to quality seed, chemical fertilizers, and other modern crop and livestock technologies. There are opportunities and efficiencies to be gained by linking farmers to markets and improving the productivity of entire value chains. More opportunities would then exist for private sector participation in the input supply and product marketing sub-sectors and for private extension programmes. There are opportunities to increase exports to India and for new niche market exports to other countries. There are also opportunities to increase the efficiency and effectiveness of the MoAC to carry out the CIP and to further cooperation with other Government Ministries and international partners.

The overall goal of the CIP is to reduce poverty and household food insecurity on a sustainable basis and to strengthen the national economy. The CIP also has the following immediate objectives: (i) to improve the coordinated planning and investment of resources in the agriculture sector that will address overall agriculture development and food security (availability, access, and utilization), (ii) to increase external resources through Government-International partnership collaboration, and (iii) to monitor and evaluate the indicators and management of the investments made in agriculture, food security and nutrition so as to maintain an efficient and robust agricultural investment programme.

The CIP is designed to take advantage of the previously identified opportunities and builds upon the ongoing and planned development programmes, including community led programmes, in other sectors such irrigation, rural infrastructure, rural energy, forestry, health, etc., implemented by various ministries, donor agencies, NGOs and also the private sector. Laying stress on linking with these programmes to achieve synergies and drawing

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<sup>5</sup> Although the CIP focuses on agricultural development, the GoN recognizes that the problem of food and nutrition insecurity is a multi-dimensional problem that requires addressing issues relating to availability, access and utilization. This is reflected in other developmental plan documents and programmes such as the National Nutrition Action Plan that is under preparation.

upon the insights from their experience, the CIP provides a coherent set of agriculture investment programmes and sub-programs encompassing the overall need of the country to improve the agriculture and food security situation in Nepal. Many of the planned programmes under the CIP are actually scaling up of existing successful programmes in different spheres that impact agriculture, poverty and food insecurity.

The key measurable outcome indicators that would be used to track the impact and progress of the CIP would include: (i) the annual growth rate of the agricultural GDP, (ii) the increase in farm household incomes, (iii) the increase in food security as it relates to an increase in crop and livestock production and per capita food consumption and the movement of the index of food security for vulnerable households, (iv) the rate of improvement in the agricultural trade balance, and (v) the share of the national budget resources allocated to agriculture. Other measurable indicators that may be used are: (i) the increase in improved agricultural inputs (i.e., improved seeds, fertilizer), (ii) the percentage of people below the national poverty line and below the minimum calorie intake requirement, and (ii) health and nutrition related indicators (i.e., health facilities, sanitation, percentage of children under 5 years of age that show stunting). Where possible, the indicators would be disaggregated by ecological zone and Development Region and by Gender.

Many of the government led development programmes in the past have suffered from weak implementation due to resource constraints, institutional and capacity limitations within the government for undertaking effective programme planning, execution, monitoring and evaluation. Recognizing this, the CIP lays stresses on investment for institutional capacity building within the government as a necessary complementary activity for successful realisation of outcomes of the core programmes for agricultural development in Nepal. Alongside, it recognizes the need for community led participation in the planning, implementation, and monitoring and evaluation process. By community, the CIP means to include local leadership, the civil society and also the media.

## **B. Country Investment Plan Process and Validation**

The National Agriculture Sector Development Priority plan (NASDP), covering the medium term period 2011-15 expands the level of detail of the NAP and further articulates the objectives as set out in the TYIP (2010/11-12/13). The document facilitates strategic planning and resource mobilization and identifies medium-term perspective priorities and priority areas requiring support of the GoN and its development partners. The development of the NASDP has involved a broad stakeholder consultation at many levels leading up to its validation.

Four major steps were involved in the development of the NASDP: (i) Situation Analysis – review of policies and strategies, review of accomplishments in the past and analysis of the current situation, (ii) Prioritization of Issues – reconciliation of priorities aligned with areas under the three year interim plans (current and forthcoming) and identification of priority issues for a medium-term five year plan, (iii) Preparation of Draft NASDP – discussion of issues, opportunities and priorities in meetings and workshops under the guidance of the Inter-Ministerial Taskforce, identification of priority areas from the current issues analysis and

selection of priorities to be addressed in the medium-term, and (iv) Validation – peer review and validation workshop.

A final draft version of the NASDP was validated in the course of a two-day stakeholder workshop in early July 2010, involving 112 participants from several Government Ministries, civil society (national and international NGOs), the private sector, and Nepal's bilateral and multilateral development partners. The overall objective of the workshop was to build a consensus on the cluster outcomes, expected outputs and possible areas of interventions identified by the NASDP. The validation process concluded in sharpening of the focus and the strengthening of the NASDP and an increased awareness of the Government of Nepal's overall priorities and program initiatives in agriculture and food security.

The country investment plan (CIP) follows from the NASDP and the objectives as set out in the TYIP (2010/11-12/13). CIP forming process was initiated with brainstorming session followed by priority ranking exercises, which was organized by MoAC to assess the challenges and to identify the possible intervention areas to meet those challenges. About 40 participants from government sector, development partners, civil societies and private sector participated. Based on the discussions followed, MoAC broadly identified ten thematic areas of intervention. Several consultations within the MoAC were conducted to identify the Programme and Sub-Programme Areas and write up summary statements of each Programme area. The four Departments of the Ministry of Agriculture and Cooperatives: (i) the Department of Agriculture, (ii) the Department of Livestock Services, (iii) the Department of Food Technology and Quality Control, and (iv) the Department of Cooperatives and the Nepal Agricultural Research Council were involved. There was then a series of Inter-Ministerial and International Agency consultations (Ministry of Local Development (MLD), Ministry of Health and Population, MWCSW, WFP, and International Organization for Migration (IOM)). The MoAC then had a day long workshop to identify the CIP funding costs and financing. The preliminary CIP was then presented at MoAC workshops in each of the five Development Regions for feedback (the MoAC workshops were unrelated to the GAFSP but the opportunity was taken to make a first presentation on the subject).

The CIP along with the full GAFSP proposal, has undergone a validation process during the month of September, 2010 at a series of national and regional meetings/workshops with the attendance of the representatives from the five MoAC Departments and of Inter-Ministerial and International Agency, and civil society.

### **C. Country Investment Plan Programmes and Components**

The Nepal Agriculture and Food Security Country Investment Plan is based on the national agriculture sector priorities as identified in the NASDP (National Agriculture Sector Development Priorities for the Medium-Term (2010/11 – 2014/15)). Investment planning in this context should be viewed as an on-going process changing to meet changing needs and circumstances as experience dictates over time. The current Country Investment Plan should be looked upon as a preliminary investment plan that requires further refinement but that has captured the overall thrust of where the country wants to take agriculture in the future. The

investment plan outlines ten comprehensive major programs which include: (i) Enhancing agriculture production and productivity, (ii) Supply of quality agricultural inputs and services, (iii) Developing and strengthening agriculture and marketing infrastructure, (iv) Increasing agriculture competitiveness and commercialization, (v) Agriculture research and development, (vi) Promotion and conservation of Agriculture bio-diversity, (vii) Food safety and consumer protection, (viii) Inclusive agricultural development, (ix) Human resource development in the agriculture and food sector, and (x) Strengthening policy research, planning and monitoring and evaluation.

There are four aspects to the CIP programmes. First, they aim to improve agricultural production and productivity through a combination of appropriate technologies that can result in environmentally sustainable agricultural practices. For this it stresses the need for research to develop appropriate technologies that would also help conserve bio-diversity for long-term sustainability of agriculture. Alongside, it seeks to ease input supply constraints, which is essential to ensure that technology adoption is not hindered. Second, they aim to improve farm incomes and enhance the livelihood of rural people, particularly disenfranchised groups, through appropriate interventions and by linking them to markets and strengthening agricultural value chains and marketing infrastructure. Third, they recognize the need for ensuring food safety both for enhancing value addition in agriculture and also for consumer protection. Finally, they appropriately stress on investing in human resource development of all stakeholders for ensuring sustainable outcomes, and also improving the government's own institutional capacity to ensure better project planning, management and delivery.

## **Programme 1: Enhancing Agriculture Production and Productivity**

### **Rationale and Overall Objective**

Crop production is the main activity of the agriculture farming systems in Nepal providing 2/3 of AGDP and is the main contributor to the livelihoods of rural people. Livestock rearing (including aquaculture and fishing) is an integral part of the agriculture farming systems in Nepal providing 1/3 of AGDP and is a substantial contributor to the livelihoods of rural people. About 3/4 of Nepal's households are involved in agriculture and derive a large part of their livelihood from crop/livestock based agriculture. However, the level of crop production and average yield of major agricultural products and livestock meat and milk productivity are quite low in comparison with the developing world and most of the South Asian Countries. Low crop and livestock productivity has been regarded as one of the major issues and challenges articulated in the Agricultural perspective Plan (1995-2015), National Agricultural Policy 2061, Three Year Interim Plans (TYIP), and the NASDP. Domestic production has not kept pace with increased demand mainly in the urban areas leading to an increased dependence on imports. The agriculture sector in general is affected by a very low level of investment and most farms are characterized as subsistence farms with holdings of 0.5 ha or less. Crop productivity problems stem from the lack of quality seed, lack of climate resilient technologies, chemical fertilizers, and assured irrigation facilities. Low productivity of meat and milk production stems from the rearing of predominantly indigenous livestock population that has not been subject to breed improvement, a high level of unchecked diseases among livestock, and a poor to non-existent animal health service coverage resulting in high morbidity and mortality rates. Other contributing factors for low productivity and production in both crop and livestock include an inadequate marketing infrastructure, a poor information system, migration of economically active people from rural areas, lack of crop/livestock insurance, poor input and product distribution mechanisms and facilities, and a poor extension service provider system. Opportunities exist for enhancing the investment in production and productivity of both the crop and livestock sector which would have the immediate effect of increasing employment and increasing the household income of rural people and overall, increasing the food security situation of the nation.

### **Objective**

The overall objective of Programme 1 is to increase the livelihoods of rural people and increase the food security and nutritional status of both rural and urban people through an increase in investment in crop and livestock (including aquaculture and fishing) which would lead to sustainable agriculture productivity and production increases.

## **Components**

The government has been implementing several programmes in the past to develop, disseminate and use appropriate technologies that can help improve both crop and livestock productivity. They address diverse issues such as seed / breed variety improvements, soil and water resources management, pest and diseases control, and also in the domain of agricultural marketing. This programme seeks to scale up some of the existing programmes, drawing upon the insights from them. Besides, this programme will also explore the possibility of linking up with some of the existing public works programmes being implemented by various ministries, especially those relating to water and natural resources management, to complement the efforts here. There are two broad sub-components to this programme (a) Crop<sup>6</sup> Development Programme, and (b) Livestock Development Programme, which are detailed below.

### **Sub Programme 1.1 Crop Sector Development Programme**

#### **Component/Activities**

##### ***1) Promotion of improved varieties***

- Awareness programs and capacity building
- Linking farmers with resource centers

##### ***2) Soil Nutrient and water management***

- FYM/compost, green manure, cover crops, cattle shed improvement, and optimum use of chemical fertilizers will be the focus areas for soil improvement, Integrated Plant Nutrient Management System (IPNMS)
- Small irrigation scheme construction and rehabilitation, shallow tube wells and deep tube wells installation, and on-farm water management
- Scale up resource conservation technologies

##### ***3) Crop pest and disease control/management***

- Control/management of disease pest outbreaks, Integrated Pest/Disease Management, Good Agriculture Practice, and safe use of pesticides

##### ***4) Post harvest loss reduction***

- Promotion of improved technologies in post harvest handling and management of cereals, vegetables and fruits including transportation

##### ***5) Utilization of communal wetlands for fish production***

- Establishing and/or strengthening resource centers (public and private sector) for quality fingerlings supply; disease management, and post harvest management including packing and packaging

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<sup>6</sup> Crop includes cereals (paddy, wheat, maize, millet, barley), pulses, fruits (citrus), vegetable and vegetable seeds and fisheries

## **6) Promotion of local/traditional crops and niche products**

- Promotion of local and traditional crops and niche products through the production and product diversification for food and nutrition security at local level and linking to the market with involvement of cooperative and private sectors.

### **Target Beneficiaries/Areas**

Production of cereals (along with seed production) like rice and wheat will be targeted in the Terai and the valleys while in the mid-hills the focus will be on maize. However, maize production program/activities targeting the feed industries will also be implemented in the Terai and the valleys. High ways/road corridors and peri-urban areas will be targeted for fresh vegetable production. Vegetable seeds will be focused on the hinterlands on the mid and high hills which have comparative advantage over other crops. Mango and litchi fruits will be focused on the Terai and valleys, citrus in the mid-hills and apple production in the high hills. The targeted beneficiaries will be farmers, cooperatives, and private sector farms. Kamaiyas (free bonded labors), Tharus, and Majhies will be the target beneficiaries for the promotion of aquaculture in communal wetlands, ghols, swamps, and ponds.

### **Expected Results/Outputs/Outcomes**

The food crop production system of the country will be significantly improved and food availability increased in a sustainable manner. Agro-industries will obtain domestically produced raw materials which will help to reduce the cost of production. Household income will be substantially increased.

### **Implementation Arrangements**

The Ministry of Agriculture and Cooperatives (MoAC) will be the coordination agency for all stakeholders for food production and distribution. The Department of Agriculture (DoA) and its wings at the central and local level will be responsible for implementation of the activities of this program in collaboration with NGOs/CBOs, farmers' organizations and local bodies (District Development Committee and Village Development Committee).

## **Sub Programme 1.2 Livestock Development Programme**

### **Components/ Activities**

#### **1) Enhancing production of milk**

- Performance recording and evaluation of dairy cattle and buffaloes
- Preparation for adoption of GAP/GHP/GVP
- Herd health management in dairy farms
- Supply of quality semen and liquid nitrogen
- Promotion of forage based production systems; on household owned land and on communal land; annual and perennial forage/ fodder species
- Dairy production and management farmer training
- Expansion of community managed livestock insurance
- Strengthening of farmers cooperatives through milk value chain development

## **2) *Enhancing production of meat***

- Establishment of community managed goat resource centers for increased supply of quality breeding animals
- Social mobilization of community through NGO partnership.
- Packaging of appropriate breeding and feeding regimes; suitable breeds, prevent inbreeding, selection of productive animals, introduction of suitable forage/ fodder species,
- Support to breeder farmers for the supply of quality piglets and commercial pig fattening
- Disease diagnosis, prevention and control of infectious diseases and parasites
- Buffalo calf fattening for improved supply of quality meat

## **3) *Marketing support services***

- Establishing milk chilling facilities in dairy production hubs.
- Support and establish small-scale processing facilities of the cooperative and private sector.
- Diversification of milk products and improvement in processing technology for value addition.
- Establish goat collection centers near the production areas near road heads, strengthen district level or regional level live animal markets in terms of basic infrastructure such as water supply, toilets, loading/unloading ramp, and shelter for traders/ farmers.

## **4) *Promotion of niche products like yak cheese, Mountain goat (Chyangra) pashmina and dry meat***

- Improvement in food safety and hygiene; awareness.
- Support the establishment/ replenishment of processing facilities.
- Capability building for the entrepreneurs and service providers.
- Value chain development for the niche products.

## **Target Beneficiaries and Areas**

Activities would be targeted across different agro-ecological zones and livestock production systems with a specific focus on food deficit areas and potential commercial production areas e.g., Yak cheese, Mountain goats' (Chyangra) pashmina production in high mountains regions.

## **Expected Results/ Outputs**

- Increase milk production and productivity from cattle and buffaloes.
- Increase meat production from buffalo, goat, pig and poultry.
- The prevention and control of infectious and economically important livestock and poultry diseases.
- Expanded artificial insemination service coverage and established community managed animal breeding centers.
- Promote locally produced niche products such as yak cheese, pashmina and dry meat.
- Increased income from increased milk and meat production.

**Intervention Arrangements:**

The Department of Livestock Services under MoAC will be the lead agency. Partnership and collaboration with industry associations (Nepal Dairy Association, Nepal Poultry Association, Nepal, and Feed Industry Association), entrepreneurs associations (Meat Entrepreneurs Association), Non-government sectors (NGOs, CBOs, civil society) and local bodies or local government such as Village Development Council, District Development Council, Municipalities) will be ensured. Clear directives and guidelines are outlined in National Agriculture Policy, Agribusiness Promotion Policy, Agri-biodiversity Policy and periodic plan of the Government of Nepal.

**Programme 1 Indicative Total Budget US\$ 572.14 million.**

## **Programme 2: Supply of Quality Agriculture Inputs and Services**

### **Rationale and Overall Objective**

The availability, affordability, and timeliness of quality agricultural inputs when supported by private and public agricultural extension services is paramount to increasing agriculture production and productivity. However, the chronic non-availability of quality agricultural inputs is another reason cited for low production and productivity in both the crop and livestock (including aquaculture and fisheries) farming systems in Nepal. The non-availability and poor quality of inputs and services is a serious issue especially in the Hill and Mountain regions of the country where the private sector is less likely to operate. Most crop and livestock inputs are imported mainly from India with little regulation and often do not meet required quality standards, are expensive relative to the returns that they give, and key inputs such as quality seed and fertilizer are not always available for the specific time period that they must be used. Most crop and livestock farmers are aware of the importance and value of good quality inputs in crop and livestock production and use them when available and when affordable. The opportunity exists to strengthen the crop and livestock input system through proper regulation and setting of standards for import and domestic inputs, by upgrading local resource centers that can provide both inputs and extension advise, by enabling the private sector to take a greater part in agriculture input supply, and by better coordination and management among input resource centers, the private sector, and the government.

### **Objective**

The overall objective of Programme 2 is to increase the production and productivity of Nepalese crop and livestock farming systems through increasing the availability of quality and affordable agricultural inputs on a timely basis through regulatory reform, upgrading of resources centers, greater private sector participation, and improved coordination and management of the agricultural input supply sector.

### **Components**

There are two broad sub-components to this programme (a) Crop Development Programme, and (b) Livestock Development Programme, which are detailed below.

#### **Sub Programme 2.1 Crop Development Programme**

##### **Component/Activities**

##### ***1) Increasing the supply of seeds/saplins through development of resource centers***

- Strengthening of Government Agriculture Farm and laboratories (including tissue culture lab) for seed production, testing and certification.
- Develop mechanism for assessing seed/ sapling requirements at national level.
- Development of resource centers (cereal and vegetable seeds, seed potato and potato seed, saplings, fisheries) at the community level.
- Implementation of seed multiplication program for different agriculture commodities at community level.

- Establishment of a seed bank at the community level.
- Develop a network of community resource centers that are connected with private seed entrepreneurs.

## **2) *Ensuring supply of farm tools/machineries/equipments***

- Enhancing production capacities of agriculture machinery factories.
- Promotion of the private sector in the supply chain of agriculture tools/ machineries/ equipments.
- Development and strengthening of resource centers for production and maintenance of tools, equipment and machinery.
- Facilitate the revision of existing legal barriers (such as reduction of custom barriers) for import of agriculture tools/machineries/equipments.
- Promoting local technologies through identification, collection and modification through research.

## **3) *Ensuring production of organic manure and regular supply of both organic and inorganic fertilizers***

- Establishment and strengthening of organic fertilizer uses
- Transportation support for inorganic and organic fertilizers for remote districts which are vulnerable from food security perspectives.
- Buffer stock management for seasonal requirement of chemical fertilizers.
- Effective monitoring and evaluation for import, price regulation and distribution as well as restriction for substandard/unknown quality of chemical/organic fertilizers in country.

## **4) *Ensuring credit for agriculture***

- Support for the provision of micro credit for small farmers.
- Support for the provision of insurance for the agriculture sector.
- Develop policies to attract group and cooperative fund and their mobilization in agriculture sector.
- Promote provision for group lending through cooperatives and farmer associations.

## **5) *Strengthening agriculture service delivery***

- Strengthening of agriculture service centre through
  - Physical infrastructure development.
  - Redefining the command area, human resource requirement.
  - Capacity enhancement of human resource working in agriculture service centre.
- Establishment of community agriculture service centre on demand and cost sharing basis.
- Strengthening of farmers' groups and cooperatives through
  - Formation and mobilization of group.
  - Capacity enhancement of farmers groups and cooperatives.
  - Networking of farmers groups and cooperatives.
- Strengthening of private service providers, public private partnerships and NGOs.
- Ensure extension service provision for different categories of farmers with social inclusion.

## **6) *Strengthening of agricultural farms, Resource Centers and laboratories***

- Physical infrastructure development/improvement for farms and laboratories.
- Utilization of farms' infrastructures, machineries and human resource to maximum capacity.

### **Target Beneficiaries/Areas**

The program will be implemented in all districts of Nepal to all farm households.

### **Expected Results/Outputs/Outcomes**

#### **Expected results/outputs**

- Supply of quality seeds/saplings increased.
- Supply and availability of farm tools and machineries enhanced.
- Farmers' capacity enhanced to produce quality seeds/saplings at community level.
- The supply of organic and inorganic fertilizer will be enhanced and production of organic fertilizer will be promoted in Nepal.
- Government agricultural farms capacity increased.
- The extension service delivery for different categories of farmers and stakeholders will be improved.
- Public private partnerships enhanced for agriculture input supply and service delivery

#### **Expected outcomes/impact**

- Increase in farmer income.
- Enhanced national food security.

### **Implementation Arrangements**

#### **Executing agency:**

- Ministry of Agriculture and Cooperatives

#### **Implementing agency:**

- Department of Agriculture
- Concerned Directorates and Farms under Department of Agriculture The strengthening of service delivery will be implemented through public and public private partnership with involvement of concerned sectors and NGOs and INGOs.

### **Sub Programme 2.2 Livestock Development Programme**

#### **Components/ Activities**

##### **1) *Strengthening Resource Centers/ Farms/ Laboratories for the supply of production inputs***

- Strengthening capacity of vaccine production laboratory, quality control laboratory, acquisition of efficient technology on vaccine production.

- Expand forage resource centers to improve access to quality forage seed/ sapling and vegetative propagation materials.
- Strengthen farmers' cooperatives on forage seed production to adopt quality seed production practices, post harvest operations, quality testing and certification mechanism.
- Quality standards for chicks, seed, feed, vaccines developed revised and updated for effective implementation.

## **2) *Regulate import of vaccine, medicine and feed supplements***

- Regulate supply of quality semen (imported as well as in country production)
- Regulate import of vaccines, veterinary medicines and feed ingredients/ supplements.
- Strengthen DLS capacity and mandate for regulation of animal feed and veterinary drugs.

## **3) *Strengthening Service Delivery***

- Capacity building of extension personnel and private service providers through training, exposure/ study visits; continuing education.
- Equip livestock service centers with logistics/ equipments and increase frequency of mobile service (veterinary clinical / AI service, forage sapling distribution), infertility and treatment camps in remote areas.
- Establishment of community managed service centers and develop a mechanism linking them to the production farmers.
- Mobilization of private technicians to establish veterinary practices.
- Collaboration and partnership with local government and NGOs/ CBOs.

## **Target Beneficiaries/ Areas**

Access to quality inputs and services will be targeted to farming households across all regions and geographical regions in the country with the poor and disadvantaged groups specifically targeted.

## **Expected Results / Outputs/ Outcomes**

- Forage resource centers expanded and farmers' cooperatives producing forage seed follow quality regulation (germination percentage, purity percentage, truthful level of seed etc. besides packaging, leveling).
- Import of vaccines, biological, medicines, chicks, feed ingredients and feed supplements regulated based on technical standards/ protocols.
- Community managed livestock service centers established, human resources trained and mobilized for service delivery.
- Private practitioners receive training for updating and upgrading their knowledge and skills
- Livestock services centers equipped and strengthened for improved service delivery
- Timely availability of production inputs of acceptable quality in required quantity ensured
- DLS capability and mandate for regulation of veterinary medicine and animal feed strengthened and institutionalized.

## **Implementation Arrangements**

The Department of Livestock Services under MoAC will have the lead role in coordinating and managing the various institutions involved in the production and management of various livestock inputs such as vaccines, semen, liquid nitrogen, forage seed and planting materials, and breeding/ fattening animals. Given that there is an expanded role by the private sector, strong collaboration and cooperation will be fostered among the private sector agencies including industry associations, entrepreneur associations, and farmers' cooperatives and organizations.

**Programme 2. Indicative Total Program Budget US\$ 305.14**

## **Programme 3: Developing and Strengthening Agriculture and Marketing Infrastructure**

### **Rationale and Overall Objective**

The current investment in infrastructure that supports agriculture production, processing and marketing along the various value chains in Nepal is inadequate. Past efforts in development have mainly focused on the production side creating surpluses that at times could not be efficiently moved on to other markets within the country or exported. Most local community market places lack basic facilities such as electricity, animal enclosures, proper water and sanitation facilities with little awareness and attention paid to food safety and hygiene measures. Larger regional town and city markets share similar infrastructure problems. Meat and milk processing need investments in infrastructure to modernize and comply with food safety and hygiene standards. Proper cool storage facilities are seldom used. The road and communication infrastructure is poor and in some areas, non-existent. Marketing networks are poor with high transportation and transaction costs to move crop and livestock products to market regionally or across the country. Market places are not managed properly, regulations are not always enforced, and there is little incentive by the private sector to invest in processing and market related infrastructure. Opportunities exist to support investment in production, processing and marketing infrastructure through proper regulation, capacity building, and the development of basic infrastructure and facilities through public-private partnership arrangements that can increase food quality and safety and vastly decrease transactions costs.

### **Objective**

The overall objective of Programme 3 is to support investment in production, processing and marketing infrastructure along various agriculture value chains at the local and regional levels that will effectively move quality agricultural products from producer to domestic consumer and to export in an efficient and timely manner.

### **Components**

There are two broad sub-components to this programme (a) Crop Development Programme, and (b) Livestock Development Programme, which are detailed below. Both of them not only involve in the development and maintenance of agricultural market infrastructure but also to strengthen market networks. Here there is scope to link up with some of the existing public works programmes, such as road construction, to achieve synergies and a greater impact on ground.

### **Sub Programme 3.1 Crop Development Programme**

#### **Components / Activities**

##### ***1) Component 1: Agricultural Infrastructural development strengthening***

- Construction and maintenance of link/feeder roads from the production pockets to the markets.

- Rural electrification for agri-businesses.

## **2) *Processing and marketing infrastructure/ facilities development and strengthening***

- Establishment and strengthening of market centers, collection centers, cool storage
- Equip processing and market centers with necessary equipment and machineries (processing machines, refrigerators, weighing machines, computers, printers, fax, photocopy machines).
- Establishment and strengthening of processing centers/industry.
- Support processing and market centers with appropriate vehicles (refrigeration vans, trucks, pick-ups/jeeps, loaders etc).

## **3) *Institutional strengthening and networking***

- Marketing management.
- Establishment and strengthening of market information system and market networks.

### **Target Beneficiaries/Areas**

The program will be implemented in all districts of Nepal. All value chain actors from the producer farmers to the ultimate consumers will be benefited

### **Expected Results/Outputs/Outcomes**

- Existing infrastructural conditions of the agricultural market will be improved.
- Quantity and quality of input supply and services from the agricultural farms will be increased and improved.
- Volume of trade (internal and external) of quality agricultural products will be increased.

### **Implementation Arrangements**

The Department of Agriculture under the Ministry of Agriculture and Cooperatives will implement the program in coordination with the Department of Local Development and Rural Roads, the Nepal Electricity Authority, the Ministry of Local Development, concerned District Development Committees and with NGOs and INGOs.

## **Sub Programme 3.2 Livestock Development Programme**

### **Components/ Activities**

#### **1) *Strengthening market infrastructure/facilities and marketing management***

- Prepare master plan for each market center
- Develop basic facilities like drinking water, toilets, animal loading and unloading ramp, shelters.
- Marketing management.
- Establish collection centers near production pockets and road head.
- Establishment and strengthen of market information systems and market networks.

## **2) *Support to establish animal slaughterhouse and meat processing industries***

- Study on establishment of slaughterhouses/ slaughter sheds in different locations.
- Collaborate with private entrepreneurs and local government for construction of slaughter facilities under public private partnership arrangements.
- Promote private entrepreneurs to establish meat processing facilities.
- Public awareness campaign on food safety and hygiene, frozen meat and different meat products.
- Product diversification and value addition of meat and meat products

## **3) *Support to establish milk collection, chilling and processing facilities/ industries***

- Carryout survey to identify locations for the establishment of milk collection, chilling and processing facilities.
- Support dairy cooperatives and private entrepreneurs to establish chilling centers, and processing facilities.
- Product diversification and value addition of milk and milk products.
- Public awareness campaign on food safety and hygiene, packaged milk and milk products.

## **4) *Capability building of stakeholders (public service providers, cooperatives and private sector)***

- Collaboration and develop linkages and institutional mechanisms.
- Training and exposure visit/ study visits.
- Strengthen Advisory services.

### **Target Beneficiaries/ Areas**

Livestock market operators, dairy cooperatives, milk and meat entrepreneurs/ processors, and livestock farmers are major target beneficiaries. However, the proposed intervention is limited to particular area in the country (which area?).

### **Expected Results/ Outputs**

- Master plan for major livestock markets developed.
- Existing live animal markets equipped with basic facilities.
- Capacity of the stakeholders in managing livestock markets improved.
- Slaughterhouses/ slaughter sheds established and made operational in metropolitan and sub-metropolitan cities.
- Milk collection centers, chilling centers and milk processing industries established.
- Public awareness campaign launched and acceptance of frozen meat, inspected meat increased.
- Awareness and importance of food safety and hygiene measures along the value chain is established.

### **Implementation Arrangements**

The Department of Livestock Services and the Directorate of Livestock Market Promotion will assume a facilitators' role while much of the implementation of the development and strengthening of livestock markets and meat and milk processing infrastructure will be under a public-private partnership arrangement. Local bodies will be involved in developing animal slaughter facilities, registration of meat entrepreneurs, implementation of the Animal Slaughterhouse and Meat Inspection Act and Regulations. Dairy production and processing will be handled through the DDC.

**Programme 3 Indicative Total Budget US\$ 343.29 million**

## **Programme 4: Increasing Agriculture Competitiveness and Commercialization**

### **Rationale and Overall Objective**

Transforming subsistence agriculture into a more commercially oriented agriculture throughout the country is a stated goal of the government. This transformation would allow current subsistence farm households to be involved more fully in the market economy in terms of selling surplus agricultural produce which would increase their incomes and livelihood alternatives and in turn, these households would purchase more agricultural and non-agricultural goods and services and further contribute to the national economy. The increased surplus would be made available for the domestic market and for export and increase the food security situation.

### **Objective**

The overall objective of Programme 4 is to support the transformation of subsistence agriculture to a more commercially oriented agriculture that will bring subsistence farm households into the market economy, increase their incomes and livelihood opportunities, and provide surplus products for the domestic and export markets.

### **Components**

There are two broad sub-components to this programme (a) Crop Development Programme, and (b) Livestock Development Programme, which are detailed below.

### **Sub Programme 1.1 Crop Development Programme**

#### **Components / Activities**

#### ***1) Improving Factor Conditions to increase productivity and efficiency***

- Promotion of industry-based raw material production for processing industries.
- Support and facilitate for the establishment and operation of private agricultural farms/firms and industries/factories.
- Promotion of good agricultural practices.
- Promotion of high value commodities with high comparative advantage.

#### ***2) Promotion of efficient technology and dissemination***

- Develop a mechanism for coordination and linkage between research and extension.
- Technology dissemination by promoting public-private partnerships.
- Promotion of good agricultural services and organic agriculture.

#### ***3) Improving policy and programs***

- Regular improvement in macroeconomic policies and programs.
- Improve policy formulation, planning and policy/program monitoring and evaluation.
- Strengthen data base system.

#### ***4) Support to institutions and industries (production to marketing)***

- Support to institutions both at government and private sector in technology generation and dissemination, product development, finance, transport and related infrastructure development, domestic marketing and international trade.
- Value chain analysis and development.
- Strengthening certification system.
- Laboratory accreditation.
- Linkage and coordination among district, regional and international markets.
- Strengthening insurance system and other risk minimizing activities.
- Availing credit facilities to agri-business enterprises.

### **Target Beneficiaries/Areas**

The program will be implemented in all districts of Nepal. Commercial farmers/entrepreneurs from across the country will benefit from this intervention.

### **Expected Results/Outputs/Outcomes**

- Subsistence agriculture will be transformed to a more commercial based agricultural industry
- Increased efficiencies in production, processing and marketing.
- Decreased cost of production.
- Producers become more competitive.
- Improved marketing system.
- Reduced transaction/marketing costs.
- Capacity of all stakeholders along the value chain enhanced.
- Farmers and other value chain actors become more competitive.
- Volume of trade will be increased (domestic and export).
- Institutions strengthened at all levels of the value chain.

### **Implementation Arrangements**

The Department of Agriculture under the Ministry of Agriculture and Cooperatives will implement the program in coordination with Ministry of Commerce and Supplies, Nepal Agricultural Research Council and other relevant organizations.

### **Sub Programme 4.2 Livestock Development Programme**

#### **Activities**

- In-depth study for the identification of priority commodities/ sub-sectors from comparative and competitive advantage perspectives and seek national consensus.
- Value chain study of the livestock products having trade significance and expansion of 'one village one product' concept .
- Improving access to quality breeding materials and technical services.
- Dissemination of research findings on cost minimization technologies, loss reduction, value addition and quality promotion.
- Setting national standards and adaptation of international standards to meet in-country and international quality requirements.
- Establishment and strengthening of laboratories for accreditation.

- Strengthening of regulatory functions related to trade and business promotion.
- Capability building of the stakeholder's commercial production, processing, value addition and trade.

### **Target Beneficiaries/ Areas**

Commercial farmers/ entrepreneurs from across the country will benefit from this intervention.

### **Expected Results/Outputs/Outcomes**

- Priority commodities/ sub-sectors from comparative and competitive advantage identified and national consensus reached.
- Value chain studies carried out and commercial producers' access to quality inputs and services increased.
- Laboratory capability strengthened and accredited.
- Quality standards complying national and international standards developed and quality regulation mechanism established and strengthened.
- Research findings on cost minimization technologies, loss reduction, value addition and quality promotion disseminated.
- Capability of the public and private sector to manage commercial livestock inventions (research, development, marketing, trade) enhanced.

### **Implementation Arrangements**

The Department of Livestock under the Ministry of Agriculture and Cooperatives will take the lead role. Industry associations, Federation of Chamber of Commerce and Industries / Agro-enterprise Center could play important roles for increased collaboration and coordination among public sector agencies and private sector. Farmers' cooperatives are other important actors of the value chain. A joint steering committee comprising of government and private sector will facilitate implementation.

**Programme 4 Indicative Total Budget: US\$ 152.57**

## **Programme 5: Agricultural Research and Development**

### **Rationale and Overall Objective**

Low productivity has been identified as a major issue and challenge across all farming systems in Nepal. There is a significant yield/productivity gap between research station on-farm applied and adaptive research findings and farm level productivity. Low agriculture productivity in Nepal in part stems from a gap in the generation of applied and adaptive technologies but also from the inability to rapidly transfer proven technologies to farmers. The overall growth in agriculture remained low over the previous three decades but efforts are required to double agriculture growth to keep pace with consumption patterns. Opportunities exist to generate productivity enhancing technologies from applied and adaptive research that can achieve the required level of agriculture growth. Similarly, opportunities exist for the scaling-up of currently available and proven technologies to close the existing yield/productivity gap. The Nepal Agricultural Research Council (NARC) is committed to this undertaking through a revitalization of the research program that takes into consideration the requirements of the other Programmes of the Country Investment Plan. The NARC is also committed to the interment in modernizing laboratories and research facilities, enhancing the capacity of scientists and technicians, and improving linkages with public and private extension and outreach programs.

### **Objective**

The overall objectives of the agricultural research programme are:

- Through applied and adaptive research, develop new sustainable agricultural technologies in crops, horticulture, livestock and fisheries with particular emphasis on developing sustainable technologies to assist with modernizing and transforming subsistence agriculture into commercial agriculture.
- Contribute to the up-scaling of existing technologies that will enhance sustainable productivity and production in all agro-ecological domains in both subsistence and commercial farming systems.
- Contribute to natural resource management and utilization through the generation and up-scaling of technologies for conservation of the environment and biodiversity.
- Develop and scale-up appropriate post harvest technologies for product diversification, value addition and quality assurance across the value chain.
- Advise the Government of Nepal in the formulation of agricultural policies, plans and programs pertaining to technology generation and adoption.

### **Components/Activities:**

#### ***1) Agriculture research and technology generation program***

- Major food crop research
- Cash crop (high value low volume) research
- Horticultural crop research
- Livestock and poultry research
- Research on prevention and control of livestock diseases

- Fish and fisheries research
- Research on multi-sector cross cutting disciplines
- Program on climate change adaptations
- Outreach research
- Strengthening agricultural research management
- Research – training / education – extension linkages
- Deemed University – four national institutes

## 2) *Strengthening research stations*

- Provision of agricultural research station basic facilities
- Land development and renovation of irrigation and drainage facility
- Increasing the supply of farm machinery and equipment
- Renovation of basic agricultural facilities (threshing floor, drying yard, animal shed, fish ponds, seed store, green house, net house).
- Procurement of vehicle for outreach research activities
- Office building, laboratory building, training hall and Staff Quarter renovation
- Procurement of computer and internet access for researchers
- Upgrading laboratories, workshops and metrological station facilities
- Strengthening agro metrological station capabilities in collaboration with department of hydrology and metrology
- Upgrading laboratory facilities (soil, plant protection, seed, animal nutrient) in RARS
- Upgrading central laboratories (soil, pathology, seed, biotechnology, food technology, animal health, water management) in disciplinary divisions
- Establishment of a prototype fabrication workshop and agricultural machinery testing facility

## **Target Beneficiaries/Areas**

The program covers all agro-ecological zones and demographic/ethnographic sections of the country. The program focuses on providing interventions based on the location specific production potential of each commodity in relation to the prioritization of the commodity to meet food security goals and commercialization based on competitiveness and comparative advantage.

## **Expected Results/Outputs/Outcomes**

- Improved/hybrid crop, cash crop varieties developed and recommended for adoption over the various ecological zones.
- Improved/hybrid vegetable varieties developed and recommended.
- Management practices for cultivation, disease/pest/ treatment and control, organic farming, and post harvest measures developed and recommended.
- Improved breed of livestock and poultry with production technology packages recommended.
- Result oriented functional linkages among research, education and extension established.
- Technologies for agricultural product diversification and marketing recommended.

- Deemed University functions and awards higher academic qualifications based on in-country agricultural research through National Research Institutes of NARC.

### **Implementation Arrangements**

The Nepal Agricultural Research Council will take the lead role to implement research programs through its disciplinary Divisions and Commodity programs. Research extension interface activities will be carried out extensively to achieve wider adoption through multiplication trials, outreach research on farmer fields and piloting and up-scaling of the appropriate technology. Training programs will be implemented for subject matter specialists from the government, INGOs and the private sector through NARC's National Institutes of Agricultural sciences, Animal Sciences, Fisheries and Horticultural Sciences. In addition about one-fifth of the research will be implemented through NARC,s partner organizations through a competitive grant system.

**Programme 5 Indicative Total Budget US\$ 152.57 million**

## **Programme 6: Promotion and Conservation of Agriculture Biodiversity**

### **Rationale and Overall Objective**

Nepal is rich in agriculture biodiversity given its varied agro-ecological zones. There are a number of land races and endemic plant species/ fish species and livestock breeds which have high nutrition and medicinal value and are being currently used as food and medicines and marketed commercially. They are also used by households for cultural and religious purposes. However, the replacement of valuable land races and indigenous varieties and breeds has taken place to a large extent by the extensive use of hybrid varieties and exotic breeds which are posing continuous threats to the extinction of indigenous varieties and breeds. Maintaining land races are important as they adapt easily to local conditions and have proven to be more resistant to the local climatic conditions. The use of traditional tillage practices, the use of local medicinal plants for animal treatment as well as for pest control in crops could improve productivity and needs to be explored. Indigenous livestock breeds which are more resistant to many animal diseases and are more adapted to the harsh local conditions compared exotic imported breed can also be a source of productivity growth. Promotion of indigenous breeds and plant varieties are not only important for livelihoods at present but also can contribute in the future for the development of new varieties and breeds – especially for developing climate change resilient varieties and breeds. At the same time, new crop management practices and the haphazard use of pesticides and chemical fertilizers are also causing environmental problems.

### **Objective**

The overall objective is the promotion and conservation of agricultural biodiversity within Nepal's diverse agro-ecological zones through awareness as well as activities that promote the sustainable use of indigenous plant and animal species within the current farming systems.

### **Components/Activities:**

#### ***1) A. Agriculture and Livestock Extension Program***

- Promote the production of indigenous species/varieties.
- Identification of stress tolerant indigenous varieties.
- Establish Intellectual Property Rights (including Farmers' Rights) for indigenous crops.
- Promotion of organic indigenous crop production.
- Promote the development and use of indigenous crops and livestock within value chains.
- Utilization of indigenous pasture species and breeds and their conservation in situ and ex situ.
- Promotion of indigenous knowledge and technology in agriculture.
- Awareness raising for conservation and utilization of biodiversity and environmental protection.
- Promote judicious use of agricultural inputs such as agriculture chemicals, drugs, hormones, and pesticides that have a harmful effect on indigenous plant and animal species thereby conserving bio-diversity.

- Capacity building of extension personnel in planning and implementation of biodiversity conservation and utilization, and
- Collaboration among stakeholders for launching biodiversity conservation and utilization programs such as eco-farm parks, gene banks, and agro-tourism.

## **2) *Agro-biodiversity Research Program***

- Utilization of indigenous plant varieties and breeds and their conservation in situ and ex situ.
- Crop improvement through plant breeding, gene transfer and biotechnology utilizing indigenous plant species.
- Verify scientifically and promote indigenous knowledge and technology.
- Promote through research eco-zone specific crop, livestock farming and aquatic diversity
- Scaling-up of environmental education and conservation agricultural biodiversity programs
- Research on precision technology for soil improvement to increase the efficiency of fertilizer and other inputs.
- Research on organic farming practices.

### **Target Beneficiaries/Areas**

The program will be implemented in selected areas of all agro-ecological zones of Nepal. The proven technologies will be scaled-up in similar zones/areas. Farmers will be the ultimate beneficiaries of the program as will those involved in the value chains.

### **Expected Results/Outputs/Outcomes**

The natural resources especially land races/species/varieties will be conserved and managed by implementing the program. As a result, the farmers will be aware of conservation and management practices of natural resources and will also benefit economically. Intellectual Property Rights and Farmers' Rights on indigenous crops would be established. The program will create employment for producing, packing and packaging, transporting and exporting along the value chain and as many of the jobs will be in the rural areas, this will help to reduce rural migration.

### **Implementation Arrangements**

The Ministry of Agriculture and Cooperatives (MoAC) will be the executing agency and the Nepal Agriculture Research Council (NARC), Department of Agriculture (DoA) and Department of Livestock Services (DLS) will be the implementing agency. NGOs/CBOs will be used for social mobilization, conservation and management program implementation and , farmers' rights awareness programs.

**Programme 6 Indicative Total Budget: US\$ 38.14 million**

## **Programme 7: Food Safety and Consumer Protection**

### **Rational and Overall Objective**

The current investment in food safety and consumer protection by both the public and private sectors is very low in Nepal and food safety not been a high priority. There is also little awareness of food safety and consumer protection issues by the public. Food safety and consumer protection acts and regulations need to be amended and raised to present world standards for the safety of domestic consumers. Existing acts and regulations are not always enforced. The technical capacity of those engaged in food safety and consumer protection issues in both the public and private sectors is very low. Ensuring food safety and consumer protection is a shared responsibility between public and private sectors and involves all operations along the food chain from primary production to consumption. The importance of government involvement in the food safety area is to protect the health of the consumer by ensuring that standards for food safety and quality are met. Government programmes need to be implemented to support small and medium food businesses to improve their systems and knowledge of GAP, GHP, and HACCP-based approaches. Programs need to be put in place to identify pesticide, hormones and antibiotic residues. Key elements of an official food control programme that need to be implemented in Nepal include: (i) Food law, regulations and standards, (ii) Food control risk assessment management systems, (iii) Inspection services, (iv) Laboratory services: food monitoring and epidemiological data, and (v) Information, education, communication and training. Food control systems need to cover all foods produced, processed and marketed within the country, including imported foods and food products for export if international export market opportunities are to be exploited.

### **Objective**

The overall objective of Programme 7 is to improve Nepal's food safety and consumer protection system in both the public and private sectors in terms of awareness and the upgrading of the technical capacity to implement and supervise the food and quality control inspection and other systems that are required.

### **Components/ Activities**

- Food quality regulation: Priority will be given to develop food quality control policy, updating food law and regulation, developing or updating the quality standards.
- Strengthening organizational structure of Food Quality Regulation System: Priority will be given to strengthen the existing Department of Food Technology and Quality Control (DFTQC) and expand its structure at regional and district level. This activity also includes strengthening and upgrading food, plant and veterinary laboratories and to make them accredited for their specific responsibilities i.e. with respect to food, plant product and livestock products and related inputs.
- Upgrading food, crop, and livestock and livestock product inspection, quarantine, epidemiological information, inspection monitoring, surveillance and monitoring based on risk analysis
- Strengthening the capacity of national agencies for enabling them to harmonize and standardize national standards with international standards set by Codex, OIE and

IPPC; strengthen and harmonize the certification mechanism including promotion of GAP, GVP, GMP and HACCP in food value chain.

- Consumer Awareness and Education: Information, education, advice to consumers across the "production point to table" in terms of food quality, safety and risk associated with it. Additionally health risk associated with quality and poor nutrition.

### **Target Beneficiaries**

This program will be implemented nationwide in all the concerned organizations related to food safety and quality. Beneficiaries of this program include consumers, farmers, entrepreneurs, trade partners, workers in industries, hotel and restaurants, tourists, government and private sector institutions.

### **Expected results / outputs/ outcome**

- Nation will have updated food quality control policy, regulations and standards,
- Food, crop, livestock products quality control authority and efficiency of institutions will be strengthened.
- Institution and system will be strengthened and be efficient
- Products quality standards and their regulation systems will be in place and harmonized with international standards
- Enhancement of quality products, increased market volume, import substitutions and trade promotion takes places
- Knowledge and capacity of stakeholders will be improved, health risk associated with food will be reduced, nutritional and health status of population will be improved.

### **Implementation arrangements**

Executive agencies: Ministry of Agriculture and Co-operatives

Implementing agencies: Department of Food Technology and Quality Control, Department of Livestock Services, Department of Agriculture with the participation of private sectors (farmers' organizations, industries and consumers), NGO and INGOs

MOAC will coordinate with Ministry of Health and Population, Ministry of Commerce and Supplies, Ministry of Industries, Home Ministry and international agencies.

**Programme 7 Indicative Budget: US\$ 76.28 million**

## **Programme 8: Inclusive Agricultural Development**

### **Rationale and Overall Objective**

Discrimination in terms of gender, caste and ethnicity, and location has disenfranchised many in agriculture from participating and benefiting from government agricultural programmes and from obtaining the necessary information and modern agricultural inputs/services to increase their productivity and production which gives rise to persistent rural poverty. This is one of the reasons for slow progress in agricultural development in the country as these disenfranchised groups represent a large number who work throughout the agriculture sector. Furthermore, these disenfranchised people do not take part in decision making at any level and usually do not take part in local government or in civil service employment. Most women take part in agricultural labour activities working alongside men doing labour tasks but their role in decision making is often minimal as compared to their male counterparts. The number of women, low caste, and ethnic group members that become agriculture officers, extension workers or are employed in different development institutions is very low and in some instances, the number is negligible. Agricultural activities are carried out by ethnic minorities, Dalit and the indigenous population on very small farms (usually < 0.5 ha), but they have limited and most often have no access to modern technology and have limited purchasing power. Geographic discrimination also arises due to remoteness and inaccessibility in certain locations, especially in the high-hill and mountain regions. Inclusion of these disenfranchised stakeholders by having them participate in agricultural programs that create awareness of their opportunities and make available the necessary inputs and management skills to increase their agricultural productivity would go a long way in the development of Nepalese agriculture and to increase food security. This requires paying special attention to easing constraints to achieving inclusion of the greatest number of these disenfranchised groups.

### **Objective**

The main objective of this programme is to achieve greater inclusion of the various disenfranchised groups working within the agriculture sector in terms of their participation in public and private sector programmes for increasing agricultural production and productivity and also to enable them to take advantage of available opportunities in the market economy.

### **Components/ Activities**

The major components of this programme will include, but will not be limited to, the following broad activity areas:

- 1) *Geographic inclusion.* Priority will be accorded to participatory agricultural research (tools and technology) and development activities suitable for hills, high-hills and remote areas.
- 2) *Gender inclusion.* Larger participation of women will be sought through skill development training, participatory research and participatory development related activities.

- 3) *Social inclusion*. Participation of indigenous and ethnic communities will be made mandatory while planning development activities, skill development training, participatory research and development related activities.
- 4) *Inclusion of poor farmers*. Pro-poor economic activities envisioned in the National Agricultural Policy (2004) including (i) opportunities for gaining access to land, (ii) distribution of improved seeds and saplings, (iii) making available facilities to install small irrigation systems, (iv) increasing food availability in food deficit areas, and (v) developing food safety nets for farmers having less than 0.5 ha of land.
- 5) *Mainstreaming programs/activities*. Women, the poor and disadvantaged groups, and ethnic minorities will be specifically targeted for on-going and special programmes.

The strategies to accomplish the above would involve:

- Participatory research in conjunction with NARC to develop location specific technologies and methods to disseminate them to the disenfranchised marginal and small farmers.
- Gender mainstreaming in technology generation, testing and dissemination.
- Enhancement of skills in value addition of agricultural products, especially for minorities and women.
- Maintaining geographical inclusion of technology generation of people residing in remote areas.
- Enhancing skill and knowledge efficiency in rural communities.
- Mainstreaming disadvantaged groups, dalits, ethnic minorities in agricultural research.

#### **Target Beneficiaries and Areas:**

The target areas are the existing 25 food deficit districts and beneficiaries will be the rural youth, food insecure women headed households, DAGs, Dalit, Janjatis, and indigenous groups of people.

#### **4. Expected Results/Outputs /Outcomes**

By the end of the fifth year of program implementation:

- Participation of women, ethnic/indigenous people and disadvantaged communities in participatory research, development and dissemination of improved technologies.
- Appropriate technologies will be developed for specific geographic locations, especially for the inaccessible areas.
- Farming and value addition related skills of women, ethnic/indigenous people and disadvantaged communities will be enhanced.
- Economic status of small farmers in 20 program districts will be enhanced.
- A system of inclusive development in all of the development programmes will be established.
- Out-migration of rural youths reduced.

## **Implementation Arrangements**

Executive Agency: Ministry of Agriculture and Co-operatives Implementing Agency:  
Department of Agriculture with the participation of NGOs and INGOs

**Programme 8 Indicative Total Budget: US\$ 133.5 million**

## **Programme 9: Human Resource Development in the Agriculture and Food Sector**

### **Rational and Overall Objective**

A high level of human resource capacity is required to research, plan, implement, and monitor and evaluate government programs if the desired programme results are to be attained. This has to be coupled with a sufficiently high human resource capacity level of both farmers and entrepreneurs/business people along the value chain in the agriculture sector in order for them to efficiently and effectively produce and market agricultural products. When compared with other developing countries' norms, the human resource capacity within the MoAC, (the agricultural extension service in particular), and at the production level and throughout the value chain is very low and needs to be increased both in quality and quantity. Certain specific technical competencies relating to new technology and emerging issues including climate change, trans-boundary animal diseases and pests and ITC need to be immediately enhanced. Increasing and maintaining human resource capacity (both technical and management skills) requires specific and targeted human resource development programmes.

### **Objective**

- To increase the human resource capacity of farmers, farmers' groups/organizations/ co-operatives in production and marketing activities.
- To increase the human resource capacity of the MoAC, in particular, the extension service, and
- To strengthen agricultural education and training institutions to produce the required technical and management skills required in the agricultural sector.

### **Components / Activities**

#### ***1) Capacity building at the agriculture production local***

- Capacity enhancement of farmers on technology, Good Agriculture Practices (GAP), Good Veterinary Practices (GVP), Good Manufacturing Practices (GMP), social mobilization, marketing, business skills etc through training, exposure etc
- Capacity building of local service provider/NGOs working on the agriculture sector

#### ***2) Human Resource Development of MoCA including NARC and the Extension Service***

- Strengthening the facilities of agriculture/ livestock/ cooperative training centers
- Curriculum development and revision
- Training to JT/JTAs, Technicians and Laboratory personnel
- Degree Training (BSc, BVSc, B. Tech. MSc, PhD)
- Exposure visits

#### ***3) Strengthening capacity of small scale agro-processors and traders***

- Technical training and trade requirement

### **Target beneficiaries and areas**

Farmers and agro-processors: Participants in these programs will be taken from all ecological regions of the nation especially from project districts. At least 50 % of the beneficiaries will be women and DAG. Small-scale agro- processors from the project districts will be involved in this project and upgrade their business. Farmers' groups and organization and NGOs will be selected from those areas where current public service delivery is not adequate. Staff from of the Ministry of Agriculture and Co-operative, Department of Agriculture, Department of Livestock Services, Department of Cooperatives, and Department of Food Technology and Quality Control will be trained on their respective fields.

### **Expected results/outputs**

- Revised and updated training curriculums for universities and institutes involved with the teaching and training of agricultural subjects that reflect the current needs within the agricultural sector.
- Farmers and farmers' groups/ organizations and agricultural businesses trained and using up-to-date technical and management practices in production and marketing.
- Competencies of research (NARC) and agriculture training center staff at a sufficient to carry out their mandates.
- Improved capacity of MoAC professional and technical staff to undertake their duties in relation to the needs and requirements of the Nepal Country Investment Program.

### **Implementation Arrangements**

MoAC will be executing the overall programme while the concerned departments will be involved in development of specific capacity building of the farmers, entrepreneurs and local service providers with the participation of NGOs, and INGOs.

**Programme 9 Indicative Total Budget: US\$ 95.36 million**

## **Programme 10: Strengthening Policy Research, Planning and Monitoring and Evaluation**

### **Rationale and Overall Objective**

There are 18 Acts and 9 Regulations enacted and 10 policies implemented to promote, facilitate and regulate the agriculture sector in Nepal. Many of these Acts, regulations and policies need review, updating and amending. Furthermore, new Acts and regulations are required in the areas of animal feed, veterinary medicines and pesticides, service regulations, and crop and livestock insurance. As a member of WTO and OIE, the Government of Nepal has signed on to various international treaties and has obligations to implement various programs, among them Sanitary/Phytosanitary (SPS) measures. Executing these Acts and treaties requires the timely enforcement of laws, regulations, the setting up of standards as well as product traceability systems. These programs require a large amount of information and data, and analysis underpinned by a substantial effort on Ministry staff capacity building. However, there is currently a large gap in policy research, information gathering, and analysis of agricultural policies and programs that are needed to identify potential policies and interventions on a social, economic and comparative advantage basis. Policy Research, Planning and M&E activities of the Ministry of Agriculture and Co-operatives also need to be streamlined for coordinating agriculture sub-sector programmes not only within government departments but also with and among NGOs and INGOs. The current monitoring and evaluation system (M&E) based on periodic reporting requires improvement. State-of-the-art data management systems at the department/ ministry levels are required to make M&E output more result oriented and more useful for improving Programme implementation

### **Objective**

The overall objective of Programme 10 is to strengthen agriculture sector policy research, planning, and the M&E system to enable the efficient execution and monitoring and evaluation of all Acts, regulations, and international treaties and agriculture programs. The specific objectives are to:

- Monitor the status of the enforcement of Agriculture Sector Acts and Regulations and Policies.
- Contribute to policy analysis and the M&E of commercialization programs and export promotion programs to assess food and nutrition security in the country.
- Ensure that agriculture policies and programmes capture the majority of target beneficiaries of government programs that promote poverty reduction and food security.
- Coordinate, monitor and evaluate all government, NGO, INGO and private sector programs on agriculture and agriculture research and development.
- Assist GoN in meeting its national and international obligations/requirements of agriculture production, trade and quality assurance.

## **Components/Activities**

The major role will be to coordinate at the national level for effective implementation of the sub-sector programs and expand regional and international linkages for advancing agricultural research and development in the county. Some of the important activities proposed include:

- Policy research and analysis of national, regional and international issues pertaining to Nepal agriculture and food security.
- Development and execution of M&E systems of Research and Development ( Poverty Monitoring Analysis System) by sub-sectors (NARC, DLS, DoA, DFTQC, DoC, Boards of special commodities).
- Promotional investment (by sub-sectors) for enabling small producers to national product network.
- Monitoring of quality assurance of inputs, agriculture services and market access by demographic and geographical areas.
- Promotional investment in partnership for enforcement of existing legislations and regulations.
- Support project progress review workshops.
- Introduction of performance based auditing system.
- Publications.
- Technology adoption studies.
- Independent evaluation studies on research and development impacts.

## **Target Beneficiaries/Areas**

The primary beneficiaries of the program will be MoAC, Nepal Agricultural Research Council, DLS, DoA, DoCD, and DFTQC. The indirect beneficiaries will be all farmers involved in agricultural production and all those involved throughout the various commodity value chains.

## **Expected Results/ Outputs/Outcomes**

- Agricultural sub-sector programs streamlined to ensure food and nutrition security as defined by national priorities
- New acts drafted and approved by parliament
- Concerned stakeholders made aware and prepared for enforcement of existing legislation and regulations
- The development and operation of an effective M&E system will be in operation for timely correction of implementation process.
- The programme will prepare the foundation for quality assurance of agricultural produce/products as per international standards for the promotion of agricultural trade.

## **Implementation arrangements**

The MoAC will be the lead institution and will play the pivotal role for national coordination and implementation of the programme. Relevant Ministries specifically for Local Development, Forestry, Finance Water resources and rural roads will be networked through

MoAC. Ministry department (DLS, DoA, DoCD, and DFTQC) and research (NARC)) will be the key implementers in coordination of the MoAC for mobilizing non-government/private sector stakeholders. Data for the M&E system will be generated from local level administrative offices and ,compiled at district offices and processed at the respective department level and consolidated at the Ministry monitoring and evaluation purposes.

**Programme 10 Indicative Total Budget: US\$ 38.14 million**

#### IV. Country Investment Plan Costs and Financing

Total programme costs over the five year 2011-2015 period are estimated at US\$ 1,907 million. The cost by component is given in Table 1.

**Table 1. Nepal Agriculture and Food Security Country Investment Plan  
Cost and Financing Gaps 2011-2015 (US\$ million)**

	Investment Plan Programmes	Current Investment	Total Investment Required	Financing Gap
1.	Enhancing Production and Productivity	266.14	572.14	306.0
2.	Supply of Agricultural Inputs and Services	141.94	305.14	163.2
3.	Developing and Strengthening Agricultural and Marketing Infrastructure	159.69	343.29	183.6
4.	Increasing Agriculture Competitiveness and Commercialization	70.97	152.57	81.6
5.	Agricultural Research and Development	70.97	152.57	81.60
6.	Agriculture Biodiversity Conservation	17.74	38.14	20.4
7.	Food Safety and Consumer Protection	35.48	76.28	40.8
8.	Inclusive Agricultural Development	62.10	133.5	71.40
9.	Human Resource Development	44.36	95.36	51.00
10.	Strengthening Policy Research, Planning and Monitoring & Evaluation System	17.74	38.14	20.4
	Total	887.14	1,907.14	1,020.00

#### V. Implementation Arrangements and Monitoring and Evaluation

The implementation of the overall Programme will reside with the Ministry of Agriculture and Cooperatives (MoAC), its four Departments (i) Department of Agriculture (which includes extension activities), (ii) Department of Livestock Services, (iii) Department of Food Technology and Quality Control, and (iv) the Department of Cooperatives and the Nepal Agricultural Research Council and its affiliated research departments.

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**Annex 1: Estimated Food Security Situation by Development Region and Ecological Zone (2008/2009)**

<b>Ecological Zone</b>	<b>Net Edible Production (mt)</b>	<b>Requirement (mt)</b>	<b>Balance (mt)</b>
<b><u>Eastern Region</u></b>			
Mountain	112,576	83,821	28,755
Hills	435,142	370,601	64,541
Terai	810,076	709,845	100,231
<b>Sub Total</b>	<b>1,357,794</b>	<b>1,164,267</b>	<b>193,527</b>
<b><u>Central Region</u></b>			
Mountain	112,321	120,727	-8,406
Hills	510,460	896,964	-38,6504
Terai	887,438	874,908	12,531
<b>Sub Total</b>	<b>1,510,219</b>	<b>1,892,599</b>	<b>-382,379</b>
<b><u>Western Region</u></b>			
Mountain	2,178	5,848	-3,670
Hills	762,084	630,208	131,876
Terai	503,903	394,801	109,103
<b>Sub Total</b>	<b>1,268,165</b>	<b>1,030,857</b>	<b>237,309</b>
<b><u>Mid-Western</u></b>			
Mountain	31,647	67,783	-36,136
Hills	294,189	344,058	-49,869
Terai	331,535	277,899	53,636
<b>Sub Total</b>	<b>657,371</b>	<b>689,740</b>	<b>-32,369</b>
<b><u>Far-Western</u></b>			
Mountain	37,788	87,522	-49,734
Hills	78,880	184,535	-105,655
Terai	250,183	243,796	6,387
<b>Sub Total</b>	<b>366,851</b>	<b>515,853</b>	<b>-149,002</b>
<b><u>Nepal</u></b>			
Mountain	296,510	365,701	-69,191
Hills	2,080,755	2,426,366	-345,611
Terai	2,783,135	2,501,249	281,888
<b>Country Total</b>	<b>5,160,400</b>	<b>5,293,316</b>	<b>-132,914</b>

Source: MoAC as presented in Khadka (2010).

## Annex 2: Ongoing and Recently Completed Agriculture Sector Related Projects Implemented by Different Ministries

S. N.	Project / Program	Duration	Major Activities	Amount of Assistance	Development Partners / Institutions
	<b>Ministry of Agriculture and Cooperatives</b>				
1	Olive Production and Processing Program	August 2004 - December 2009	<ul style="list-style-type: none"> <li>▪ Commercial farming, processing and promotion of Olive</li> </ul>	US\$ 1,042,419	FAO
2	Promotion of Quality Cocoon Production and Processing Project	December 2006 - November 2011	<ul style="list-style-type: none"> <li>▪ Promoting quality cocoon production and processing</li> </ul>	Japanese ¥ 120,000,000	JICA
3	Standards and Trade Development Facility	March 2008 - February 2010	<ul style="list-style-type: none"> <li>▪ Preparation of training materials and user guidelines/manuals covering food security, animal and plant health and agricultural trade</li> <li>▪ Organization of various training programme for more than 600 government officials on the SPS measures</li> </ul>	US\$ 347,900	WTO
4	Strengthening Capacities for Disaster Preparedness and Climate Risk Management in the Agricultural Sector	April 2008 - March 2010	<ul style="list-style-type: none"> <li>▪ Strengthening technical and institutional capacity of the Department of Agriculture</li> <li>▪ Strengthening basic services system for DRM in pilot districts</li> </ul>	US\$ 470,000	FAO
5	Dairy Cattle Improvement	April 2008 – November 2009	<ul style="list-style-type: none"> <li>▪ Strengthening existing laboratories facilities</li> <li>▪ Establishment of pilot performance recording scheme with modern analytical methods</li> </ul>	US\$ 360,000	FAO
6	Complimentary Assistance to the Collaboration Program in Pro-poor Policy Formulation, Dialogue and Implementation at the Country Level	December 2008 - November 2010	To conduct training and workshops for pro-poor policy formulation, dialogue and implementation at the national level	US\$ 438,000	FAO
7	Community Livestock Development Project (CLDP)	2005 - 2010	<ul style="list-style-type: none"> <li>▪ Reducing poverty amongst poor rural people through gender and socially inclusive development and to improve the levels of food security, nutrition, incomes, and employment for 164,000 families through increased productivity of the livestock sub-sector</li> </ul>	20.00	ADB / FAO
8	Leasehold Forestry – Livestock (LFL)	2005 – 2013	<ul style="list-style-type: none"> <li>▪ Reducing poverty in the area by allocating leasehold forestry plots to poor families to enable them to increase income from forest products and livestock</li> </ul>	12.8	IFAD
9	Community Managed Irrigated Agriculture Sector	2006 - 2010	<ul style="list-style-type: none"> <li>▪ Improved access to Irrigation</li> </ul>	20.00	ADB
10	Improving the Livelihoods of Poor Farmers and Disadvantaged Groups in EDR	2007 - 2010	<ul style="list-style-type: none"> <li>▪ Poverty reduction</li> </ul>	1.0	ADB/JFPR
11	Hill Maize Research Project (HMRP) Phase III	2007 - 2010	<ul style="list-style-type: none"> <li>▪ Increase productivity and sustainability of maize-based production technologies for improved food security and livelihoods of farm families</li> </ul>	1.03	SDC
12	Sustainable Soil Management Programme (SSMP) Phase III	2007 - 2010	<ul style="list-style-type: none"> <li>▪ Productive and sustainable management of soil to have improved food security and increased income of woman and man farmers in bari-dominated farming systems of Nepal's mid-hills</li> </ul>	4.57	SDC

S. N.	Project / Program	Duration	Major Activities	Amount of Assistance	Development Partners / Institutions
	<b>Ministry of Agriculture and Cooperatives</b>				
13	Avian Influenza Control Project (AICP)	2007 – 2011	<ul style="list-style-type: none"> <li>Minimizing the threat posed by highly pathogenic avian influenza (HPAI) to humans in Nepal by controlling such infections among birds, especially domestic poultry, and preparing for, controlling, and responding to possible human infections, especially an influenza epidemic and related emergencies.</li> </ul>	18.2	IDA / FAO
14	Irrigation and Water Resource Development Project (IWRMP)	2007 - 2013	<ul style="list-style-type: none"> <li>Improving irrigated agriculture productivity and management of selected irrigation schemes, and enhance institutional capacity for integrated water resources management.</li> </ul>	60.00	IDA
15	Social Safety Net Project (SSNP)	2007 - 2013	<ul style="list-style-type: none"> <li>Ensure access to food and basic needs in short term</li> </ul>	3.0	IDA
16	Commercial Agriculture Development Project (CADP)	2007 - 2013	<ul style="list-style-type: none"> <li>Commercialization of agriculture</li> </ul>	18.00	ADB
17	IPM Phase II	2008 - 2013	<ul style="list-style-type: none"> <li>Pest management</li> </ul>	4.03	NORAD / FAO
18	Emergency Flood Damage Rehabilitation Project	2009 - 2011	<ul style="list-style-type: none"> <li>Flood damage rehabilitation</li> </ul>	25.60	ADB
19	Project for Agricultural Commercialization and Trade (PACT)	2009 - 2015	<ul style="list-style-type: none"> <li>Agriculture and rural business development; support for sanitary and phyto-sanitary facilities and food quality management; and project management, monitoring and evaluation</li> </ul>	10.50	World Bank
20	High Value Agriculture Project in Hill and Mountain Areas	2009 -	<ul style="list-style-type: none"> <li>To integrate into the local rural economy through initiatives that develops small businesses and increase trade by building the capacity of rural institutions.</li> </ul>	Total: 18.9 IFAD loan: 7.6	Yet to be effective
21	High Mountain Agri-Business and Livelihood Improvement (HIMALI) Project				PPTA
22	Crop Diversification and Commercialization Project (CDCP)				PPTA
	<b>Ministry of Environment</b>				
1	High Altitude Technological Research Project in Nepal	April 1990 - December 2012	<ul style="list-style-type: none"> <li>Research and Evaluation</li> </ul>	US\$ 220,000	Italian National Research Council
2	Strengthening Capacity for Managing Climate Change and Environment	January 2009 -	To strengthen country's capacity for environment and climate change management	US\$ 500,000	ADB

S. N.	Project / Program	Duration	Major Activities	Amount of Assistance	Development Partners / Institutions
<b>Ministry of Forests and Soil Conservation</b>					
1	Western Terai Landscape Development Project	August 2005 - July 2012	<ul style="list-style-type: none"> <li>▪ Support in the preparation of national policy on Western Terai landscape, integrated landscape management, sustainable management and conservation of bio-diversity, etc.</li> </ul>	US\$ 10,494,838	SNV / UNDP GEF
2	Conservation and Sustainable Use of Wetland in Nepal	March 2007 - February 2012	<ul style="list-style-type: none"> <li>▪ To support in enhancing capacity, and legal and policy framework for the development of ecosystem by conserving and sustainably using wetland</li> </ul>	US\$ 4,061,969	UNDP
3	Terai Arc Landscape Program	2007 - 2011	<ul style="list-style-type: none"> <li>▪ Sustainable forest management</li> </ul>	US\$ 5,824,000	WWF / USAID Finland / DFID
4	Sacred Himalaya Arc Landscape Program	2007 - 2011	<ul style="list-style-type: none"> <li>▪ Sustainable forest management</li> </ul>	US\$ 3,445,000	WWF / USAID Finland / DFID
5	Northern Hills Conservation Project	2007 - 2011	<ul style="list-style-type: none"> <li>▪ Sustainable forest management</li> </ul>	US\$ 731,000	WWF / USAID Finland / DFID
6	A Grant Assistance for Research Center Project of National Trust for Nature Conservation	December 2007 -	<ul style="list-style-type: none"> <li>▪ To construct Research Center and Headquarter Office of National Trust for Nature conservation</li> </ul>	RMB Yuan 35,000,000	China
7	National Action Plan on CBD on Protected Area	November 2008 - October 2010	<ul style="list-style-type: none"> <li>▪ Capacity building training for protected area staff and community</li> </ul>	US\$ 150,000	GEF
8	Biological Management, Rhinoceros, Grass Land and Public Engagement	April 2009 - March 2010	<ul style="list-style-type: none"> <li>▪ Rhinoceros monitoring and public awareness</li> </ul>	GBP 36,462	ZSL
9	Bagmati Action Plan	April 2009 - December 2010	<ul style="list-style-type: none"> <li>▪ Prepare Bagmati action plan and public awareness</li> </ul>	US\$ 100,000	UN Habitat
<b>Ministry of Local Development</b>					
1	Decentralized Rural Infrastructure and Livelihood Project (DRILP) –Operation and Advisory Technical Assistance	November 2006 - December 2009	<ul style="list-style-type: none"> <li>▪ Coordination of the strategic action plan of the project</li> </ul>	US\$ 100,000	ADB
2	Rural Poverty Alleviation Program in Selected Rural Areas of Nepal	2008 - 2010	<ul style="list-style-type: none"> <li>• Empowerment of target group through social mobilization</li> <li>• Rural infrastructure development and income generation programs for the upliftment of target group's income</li> <li>• Strengthening of local service and local bodies</li> </ul>	Euro 1,700,000	Germany
3	Urban Development through Local Efforts (UDLE)	2008 - 2010	<ul style="list-style-type: none"> <li>▪ Urban poverty reduction and social inclusion</li> <li>▪ Urban governance and planning</li> <li>▪ Technical assistance for financial management of Municipalities and Town Development Fund</li> <li>▪ Preservation and development of archeology</li> <li>▪ Capacity development of Municipalities</li> </ul>	Euro 1,600,000	Germany
4	Support for the Local Governance and Community Development Programme	April 2009 - December 2011	<ul style="list-style-type: none"> <li>▪ Enhance the capacity of central government and national non-government institutions to provide appropriate support to local government</li> <li>▪ Develop financial management procedures and processes</li> <li>▪ Strengthen the capacity of DDC/LDF etc.</li> </ul>	US\$ 1,130,000	UNDP
5	Support for the Local Governance and Community Development Programme	April 2009 - December 2011	<ul style="list-style-type: none"> <li>▪ To provide support to the ongoing local Governance and Community Development Program under the Ministry of Local Development</li> </ul>	US\$ 25,820,000	UNCDF / UNV / UNICEF / UNFPA

### Annex 3: INGO Supported Ongoing and Recently Completed Projects with the Ministry of Agriculture and Cooperatives

S. N.	Projects/Programmes	Duration	Amount of Assistance (NRs in million/Annum)	Development Partners / Institutions	INGOs
1	Nepal Nutrition Intervention Project : Sarlahi	2003 - 2010	42,931	USA	John Hopkins University
2	Poverty Eradication (32 Districts)	2004-2009	372,554	UK	Action Aid Nepal
3	Food Security, Water, Sanitation and Nutritional Assistance				
4	Poverty Alleviation via Housing and Micro-Finance (Jhapa, Morang, Mahottari, Kailali, Kaski, Surkhet, Dhanusha, Kabhre, Lamjung, Bara and Ilam districts)	2005 - 2010	16,730	USA	Habitat for Humanity International
5	Mainstreaming people with disabilities into disaster management (Kathmandu, Kanchanpur, Dang, Baglung, Gorkha, Palpa, Nawalparasi, Sarlahi and Morang districts)	2005 - 2011	77,070 (for three projects)	France	Handicap International
6	Improving Livelihood Security of Socially Excluded Communities in Nepal, Integrated Approaches to Improving the Urban Environment in Asia, Main streaming Livelihood-Centered Approaches to Disaster Management (Doti, Kailali, Surkhet, Banke, Rupandehi, Nawalparasi and Chitwan districts)	2006 - 2010	92,690 (for three projects)	UK	Intermediate Technology Development Group
7	Access to Opportunities and strengthen Local Capacities in Integrated Sustainable Waste Management in Small and Medium Municipalities of Nepal (Gorakha, Achham, Kalikot, Chitwan, Tanahun, Surkhet and Banke districts)				
8	Sustainable Agriculture with market for Advancing Livelihoods of Conflict Affected Poor people (Doti, Kailali and Achham districts)				
9	Terai Arc Landscape Program, Himalayan Landscape Program and Northern Mountains Conservation (36 Districts)	2006 - 2011	10,000	USA	World Wildlife Fund
10	Community Based Multi Hazard Risk Reduction Program (Kabhre, Udayapur, Sindhuli, Lalitpur, Kathmandu and Bhaktapur districts)	2007 - 2009	16,473	Denmark	Danish Red Cross Society
11	Disaster Preparedness and Sustainable Livelihood Development Project (Chitwan district)	2007 - 2009	3,617	Japan	Shalpa Neer

<b>S. N.</b>	<b>Projects/Programmes</b>	<b>Duration</b>	<b>Amount of Assistance (NRs in million/Annum)</b>	<b>Development Partners / Institutions</b>	<b>INGOs</b>
12	Poverty Reduction through the organization of Farmers (Saptari, Siraha and Dhanusha districts)	2007 – 2010	6,377	USA	International Development Enterprise, Nepal
13	Increasing Access of Poor Nepali Communities to Biogas Technology to Strengthen Livelihoods and Enhance Environment Management (Dailekh, Surkhet, Salyan, Gorakha, Sindhupalchok and Dolakha)	2007 - 2010	1,114	USA	Winrock International
14	Karnali Support Programme (Water and sanitation, long-term food security and capacity building) (Mugu and Humla districts)	2007 - 2012	3,478	Denmark	Mission East
15	Community Based Management of Acute Malnutrition Project (Surkhet, Dailekh, Mugu, Kalikot, Jumla, Dolpa, Humla, Jajarkot and Bardiya districts)	2008 - 2009	115,231	Ireland	Concerned Worldwide
16	Rights Based Safe Migration and Disaster Risk Reduction Program : 15 Districts	2008 - 2010	7,668	Denmark	Dan Church Aid
17	Forestry Extension Service in Central Terai (Dhanusha, Mahottari and Sarlahi districts)	2008 - 2010	6,408	Denmark	Danish Forestry Extension
18	Fostering Health and Livelihoods of Conflict Affected People in Nepal (11 districts)	2009 - 2012	2,824	UK	The Britain Nepal Medical Trust

Source: Statement of Technical and Other Assistance, FY 2009/10, Ministry of Finance, Government of Nepal.