

Attachment 1

National Agriculture Sector Development Priority (NASDP) for the Medium-Term (2010/11 - 2014/15)

Government of Nepal

Ministry of Agriculture and Cooperatives

**Kathmandu, Nepal
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Abbreviations and Acronyms

ABTRACO	Agri-Business and Trade Promotion Multi-Purpose Cooperative
ADB	Asian Development Bank
ADB/N	Agriculture Development Bank/Nepal
ADPC	Asian Disaster Preparedness Centre
AEC	Agro-Enterprise Centre
APP	Agriculture Perspective Plan (1995/96 – 2014/15)
ARR	Assistant Resident Representative
BTI	Butwal Technical Institute
CBS	Central Bureau of Statistics
CCO	Canadian Cooperation Office
CIDA	Canadian International Development Assistance
CIMMYT	International Maize and Wheat Improvement Centre
CLDP	Community Livestock Development Project
CSIDB	Cottage and Small Industry Development Board
DANIDA	Danish International Development Agency
DCSI	Department of Cottage and Small Industry
DDC	District Development Committee
DDG	Deputy Director General
DEPROSC	Development Project Service Centre
DFID	Department for International Development
DFTQC	Department of Food Technology and Quality Control
DLS	Department of Livestock Services
DoA	Department of Agriculture
DoC	Department of Cooperatives
DoF	Department of Forest
DoI	Department of Irrigation
DoLIDAR	Department of Local Infrastructure Development and Agricultural Road
DoLRM	Department of Land Reform and Management
DoSCWM	Department of Soil Conservation and Watershed Management
DPs	Development Partners
ESCAP	Economic and Social Commission for Asia and the Pacific
EU	European Union
EUFF	European Union Food Facility
FAO	Food and Agriculture Organization of the United Nations
FAOR	FAO Representative
FINNIDA	Finnish International Development Agency
FNCCI	Federation of Nepalese Chambers of Commerce and Industry
GoN	Government of Nepal
GOs	Government Organizations
GTZ	German Technical Assistance
HIMALI	High Mountain Agribusiness and Livelihood Improvement Project
HKI	Helen Keller International
I/NGOs	International/Non-Government Organizations
ICC	International Chamber of Commerce
ICIMOD	International Centre for Integrated Mountain Development
IFAD	International Fund for Agricultural Development

IIDS	Institute for International Development Studies, Kathmandu
ILO	International Labour Organization
IMF	International Monetary Fund
IOM	International Office of Migration
IPGR	International Plant Genetic Resources Institute
IRRI	International Rice Research Institute
IUCN	International Union for Conservation of Nature
JICA	Japan International Cooperation Agency
JT/JTA	Junior Technician/Junior Technical Assistant
KOICA	Korean International Cooperation Agency
LFLP	Leasehold Forest and Livestock Programme
MDGs	Millennium Development Goals
MFIs	Micro Finance Institutions
MLD	Ministry of Local Development
MoAC	Ministry of Agriculture and Cooperatives
MoCS	Ministry of Commerce and Supplies
MoEd	Ministry of Education
MoEn	Ministry of Energy
MoEnv	Ministry of Environment
MoF	Ministry of Finance
MoFA	Ministry of Foreign Affairs
MoFSC	Ministry of Forest and Soil Conservation
MoHA	Ministry of Home Affairs
MoInd	Ministry of Industry
MoIrr	Ministry of Irrigation
MoLJ	Ministry of Law and Justice
MoLRM	Ministry of Land Reform and Management
MoLTM	Ministry of Labour and Transport Management
MoPPW	Ministry of Physical Planning and Works
MoWCSW	Ministry of Women, Children and Social Welfare
NARC	Nepal Agriculture Research Council
NASDP	National Agriculture Sector Development Priority
NEFSCUN	Nepal Federation of Saving and Credit Cooperative Unions Limited
NFC	Nepal Food Corporation
NIPMP	National Integrated Pest Management Programme
NLCDC	National Lake Conservation Development Committee
NMTPF	National Medium Term Priority Framework
NORAD	Norwegian Agency for Development Cooperation
NPC	National Planning Commission
NRB	Nepal Rastra Bank
NRI-UK	Natural Research Institute – United Kingdom
NTIS	Nepal Trade Integration Strategy 2010
NTNC	National Trust for Nature Conservation
OCHA	Office for the Coordination of Humanitarian Affairs
PACT	Project for Agriculture Commercialization and Trade
PPD	Plant Protection Directorate
PRISM	Project for Raising Income of Small and Medium Farmers
PRS	Poverty Reduction Strategy

RAP	FAO's Regional Office for Asia and the Pacific
REDP	Rural Energy Development Programme
RMDC	Rural Micro-finance Development Centre
SDC	Swiss Agency for Development Cooperation
SNV	Netherlands Development Organization
SSMP	Sustainable Soil management Programme
TYIP	Three-Year Interim Plan (2007/08 – 2009/10)
TYP	Three-Year Plan (2010/11 – 2012/13)
UNCDF	United Nations Capital Development Fund
UNCHR	United Nations Commission on Human Rights
UNCHR	United Nations Commission on Human Rights
UNCRD	United Nations Centre for Regional Development
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNIFEM	United Nations Development Fund for Women
USAID	United States Agency for International Development
VDC	Village Development Committee
WB	World Bank
WECS	Water and Energy Commission Secretariat
WWF	World Wildlife Fund

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Executive Summary

Context: Characterized with a poor Human Development Index (HDI), Nepal's status is low among the South Asian countries. It is ranked 144th among 182 countries in the world (UNDP, 2009). The GDP per capita income of the country is USD 473.- According to the Nepal Living Standards Survey (NLSS-II), 2008 around 31 percent Nepalese live below poverty line. This is a decline from 42 percent recorded in the past. This change could have been influenced by the remittance obtained from the out-migrants, as they contributed to increased wage rate, urbanization and the development of skills and capacities, to some extent.

As majority of the Nepalese people live in rural areas and around 74 percent are dependent on agriculture as their occupation, the dependency of the economy on agricultural sector is much more. Currently, the Government accrues 32 percent GDP from the farming sector. Therefore, any effort made for agriculture sector development not only helps for economic growth but also contributes to poverty reduction. Realizing this, Nepal has been emphasizing broad based economic growth with social inclusion and poverty reduction.

In its attempt to improve planning and implementation capacity for food and nutrition security, the MoAC developed this National Agriculture Sector Development Priority (NASDP) document in close collaboration with other related agencies of the Government. The technical assistance for its preparation was provided by Food and Agriculture Organization of the United Nations (FAO). The NASDP has attempted to identify the Government's priorities in relation to agriculture sector development and food security, where other national and international development partners could also provide their support for capital and technical assistance. The NASDP as framework, MoAC would be able to implement coordinated activities. It will serve as strategic planning and resource mobilization tool for the identification of projects and programmes by recognizing each stakeholder's comparative advantage. As NASDP helps to identify collective opportunities, it is expected to trigger joint commitments from the development partners. It would ultimately enhance investment of more resources for the agriculture sector aiming at food and nutrition security.

Method of formulation and coverage of NASDP: The formulation of NASDP involved 12 thematic studies¹ carried out by FAO. It also covered consultations with key stakeholders and review of overriding plan and policy documents. The formulation process was guided by an Inter-Ministerial Task Force, established under the chairmanship of Joint Secretary (Planning), MoAC and represented by different line agencies working in relation to agriculture and food security. A FAO's Technical Team provided assistance to the Taskforce in formulating the NASDP. Major steps involved in formulation were: situation analysis; prioritization; preparation of a draft NASDP and validation.

The NASDP does not involve exhaustive content representing all priority areas but the selected ones in view of their immediate concerns, resource mobilization potential and absorptive capacity of implementing agencies. Therefore, some subject areas not reflected in the NASDP now may possibly emerge as contemporary priority during the implementation of the NASDP as well. To accommodate these, the NASDP should be treated as a living document with occasional updates.

Prevailing agriculture and food security situation: Despite continued attempts to increase production and productivity, the per-capita food availability has eroded over the years due to almost stagnant production against the annually increasing population pressure. The per-capita holding size of agricultural land is less than 0.8 ha, which can produce only about six months' food for a family in the

¹ The subject areas covered were: Agricultural Extension Support System; Agricultural Mechanization; Climate Change and Agriculture Production System; Dairy Development; Food Security and Nutrition; Hides and Skins Processing; Integration of Gender in Agriculture; Labour Migration and Agriculture; Land Use Policy and Planning; Livestock Raising in High Altitude Areas; Market-led Meat Production and Processing and Pricing Policies for Agricultural Inputs and Outputs.

low production environment. The poor families can hardly protect themselves against occasional shocks occurred through droughts, floods and prolonged illness.

The country is making attempts to transfer subsistence scale agriculture into a vibrant business sector for greater economic growth. However, the process of transformation is very slow. The level of investment is low in augmenting greater return through development of basic infrastructures, supply of quality inputs and competitive market environment. However, the country has enormous potential for development, as it is blessed with favourable agro-biodiversities where a wide range of crops (cereals, pulses, oilseed crops, fruits, vegetables and other cash crops) can be produced at different locations. The farmers can benefit from animal husbandry as an integral part of the Nepalese farming system. Many farmers raise cattle, buffalo, goat, pig and poultry for generations. The scope for aquaculture development is also growing in the recent years due to increasing demand for healthy food.

Priorities and progress of the periodic plans: Against a target of 5.5 percent economic growth, the TYIP recorded closer achievement of 5.3 percent in the first year (2007/2008). The achievement was even more in agriculture sector (4.7 percent) than it was targeted (3.6 percent). These growth rates revealed highest record in a period of seven years, as this year could enjoy favourable weather condition. However, the trend could not continue further due to low poor rainfall, limited access to quality inputs and extension services, occasional bandhs, occasional power cuts and growing insecurities. Though the Government hoped improved security situation and political stability during the design of plan, the action environment turned up just opposite thus affecting the operational environment of the agriculture sector in the economy.

The MDGs Progress Report, 2005 suggested formulation of supportive policies and programmes to overcome institutional gaps in the implementation of MDG targets. The national targets were fixed through Needs Assessment for MDGs with estimation of resource requirements in 2006. It suggested enhancement of the delivery of services above the “business-as-usual” situation and advocated allocation of more investments for MDG target-focused initiatives from both national and international development partners. To eradicate extreme poverty and hunger (related to MDG-1), it emphasized improved productivity, market linkage development, rural employment promotion, improved food distribution arrangement and targeted food assistance.

Despite several socio-political difficulties, Nepal is still closer to the achievement of most of the MDG targets except for employment, mitigation of climate change effects and the control of HIV/AIDS. The MDGs Progress Report, 2010 claimed reduction of poverty rate by 6 percent with subsequent reduction in the chronic food insecurity situation. It also reported decline in underemployment and unemployment. A positive trend was observed towards gender equality in the school enrolments. It also noted improvements in the allocation of resources in the favour of marginalized groups. Further, it acknowledged inclusion of an agenda of adaptation to climate change effects, as improvement in the attention towards environmental concerns. The Report noted favourable policy environment in achieving most of the MDG targets, as the development objectives of the country are largely guided by the focus on poverty reduction, inclusion and social justice. Realizing the importance of these thrusts, the Government has decided to align its forthcoming TYIP with the MDG targets. Similarly, the concept paper of the forthcoming TYIP has emphasized employment generation, poverty reduction, food security and adaptation to climate change effects as major priority areas.

Current challenges of agriculture development and food security: Several issues and challenges surround agriculture development and food security situation in Nepal. Some of the major issues confronting overall performance are: increasing food insecurity due to low and almost stagnant agricultural productivity and production amidst the annually growing population; little control over post handling losses; declining attention towards utilization of traditional crops; low control of food protein losses caused by poor animal health and diseases; limited attention towards food quality for consumer protection; limited research activities; complications of distributing food in the remote areas; limited

attempts to commercialization of agriculture; poor extension services delivery capacities; limited effort for planning and implementation of the interventions under the APP spirit; low public sector investment in agriculture; limited institutional credit facilities; depleting natural resource conditions affecting agriculture; limited capacity for adaptation to climate change effects; excessive out-migration creating shortage of agricultural labour; low application of mechanized power and tools in substituting manual labour; limited implementation of land reform measures; lack of irrigation facilities; insufficient support price policies for agricultural inputs and outputs and poor information management system.

Future directions: The agricultural development emphasis is changing over the years. From simple production, the emphasis is on optimization of the productive land use and labour efficiency including enhanced market competitiveness. It is believed that such orientation not only contributes to enhance production but also to make the agriculture sector more lucrative and comparable to other sectors of development. Accordingly, business orientation of the farmers with promotion of value chain activities has been considered essential at all levels (i.e. extending from supply of inputs to the production, processing and marketing). In this regard, utilization of comparative advantage of the key stakeholders has been underlined.

Experience has taught that the food and nutrition security cannot be solved only with increased quantity and quality of food production but equally important for people to have access to these is their distribution efficiency. In view of this, there is a need to improve distribution capacity in the remote areas. Therefore, the effort of ensuring food and nutrition security in Nepal requires "enhancing production" in one hand and "preventing hunger" with improved distribution system on the other. For the success of such two-track approach, focus should be laid on "enhancing production and productivity" as well as "addressing the emergency food needs of the vulnerable population" in the food deficit areas.

Four priority areas emphasized by the 20-Year Agriculture Perspective Plan (APP) were: expansion of irrigation services; application of sufficient fertilizers, adoption of modern technologies and tools; and development of marketable road connections. Suggestions were made for demand-led commercialization of agricultural activities with the promotion of lead commodities in the hills and mountains. A coordinated production and marketing relationship was foreseen with promotion of alternate power uses for production, processing and marketing of crops (high value crops), livestock and forestry. These strategies were aimed at the reduction of poverty and food insecurity.

The TYIP (2007/08 – 2009/10) pursued modernization and commercialization of the agriculture sector in line with the emphasis led by APP and National Agriculture Policy (2004). It underlined broad-based, gender-inclusive and sustainable growth of agriculture with Increased production and productivity. It highlighted concerns for food sovereignty; transformation of subsistence agriculture into commercial agriculture; increased employment opportunities and sustainable management and use of natural resources.

Support of the development partners: Nepal has been receiving generous support of international development partners. Their support intends to bring resources closer to the implementation of programmes for the target beneficiaries with efficient use by fostering strong governance. They have supported stakeholders' capacity building effort for sustained impact of the investments. Further, support is extended for policy reforms and institutional capacity building. They emphasize increased production and diversification of opportunities. They accord priority to the mobilization of local communities in planning and implementation of activities affecting their lives.

NASDP: This NASDP is proposed in view of the Government's key priority areas for the medium-term (2010/11 – 2014/15), by reconciling them with the possibility of attracting support of different development partners working in Nepal. The priorities are derived from the analysis of current situation and the thrusts reflected by the overriding policies and plans (such as APP, TYIP, PRS and MDGs). It realizes the fact that the low productivity and production of agriculture in Nepal have not only increased

the risk of food insecurity in the country but also accelerated unsustainable use of natural resources. Taking these aspects into consideration, the NASDP has emphasized broad based agricultural development and food security. Delivery of demand-led services, while promoting participation of the private sector in the areas of their comparative advantages, has been underlined. Priority has also been assigned on the ways of diversifying agriculture and enhancing productivity.

Altogether, eight priority outcomes are proposed. Under these priorities, 29 subsequent outputs are expected as per their relevance as follows:

PRIORITY 1: ENHANCING FOOD AND NUTRITION SECURITY AND SAFETY

- 1.1 Productivity and production increased*
- 1.2 Access of farmers to improved quality extension, research and related support services*
- 1.3 Increased rural finance coverage*
- 1.4 Animal health improved for enhancing production and productivity of protein supplement to food*
- 1.5 Access of sufficient and safer food for the poor and vulnerable groups ensured*
- 1.6 Strengthen food supply management / distribution system*
- 1.7 Emergency preparedness, response and recovery support strengthened to minimize the extent of vulnerabilities*

PRIORITY 2: ENHANCING APPLICATION OF “GETTING-BETTER” TECHNOLOGIES AND TOOLS

- 2.1 Increased adoption of improved / efficient technologies for enhancing agriculture production and processing*
- 2.2 Reduced drudgery in the agricultural value chain operations*

PRIORITY 3: PROMOTING ENABLING ENVIRONMENT

- 3.1 Supportive policies, acts, rules and regulations developed with complementary functional linkages*
- 3.2 Enhanced institutional capacity in the delivery of demand-friendly agricultural services*
- 3.3 Increase investment in agriculture*

PRIORITY 4: PROMOTING MARKET- ORIENTATION AND COMPETITIVENESS

- 4.1 Production diversified with market orientation from agri-business perspective*
- 4.2 Prices made supportive for both inputs and outputs*
- 4.3 Institutional support services for marketing of inputs and outputs enhanced*
- 4.4 Cross boarder import and export promoted through control of trans-boundary diseases and barriers to trade*

PRIORITY 5: SUSTAINING NATURAL RESOURCE CONSERVATION AND UTILIZATION

- 5.1 Conservation and utilization of bio-diversities sustained*
- 5.2 Watershed services revived for sustainable use*
- 5.3 Land management practices improved for sustainable use in a conflict-free environment*
- 5.4 Sustainable management of forest resources for income generation and food security*
- 5.5 Climate change risks adapted with enhanced counteracting capacities of the local communities*

PRIORITY 6: DEVELOPING INFRASTRUCTURE SUPPORT FACILITIES

- 6.1 Irrigation infrastructures expanded with enhanced water management efficiency*
- 6.2 Rural roads constructed and maintained for enhanced access to the major market centres*
- 6.3 Rural energy promoted for the production and processing value chain operations*

6.4 *Rural infrastructures for processing, quality test of products and marketing facilities improved*

PRIORITY 7: ENHANCING INTEGRATION OF GENDER IN AGRICULTURE

7.1 *Integration of gender improved in productive spheres of the agricultural development activities*

7.2 *Women empowered for equal development opportunities*

PRIORITY 8: MANAGING THE EFFECTS OF MIGRATION OF AGRICULTURAL LABOUR

8.1 *Migration minimized with promotion of more employment opportunities at the local level*

8.2 *Agricultural occupation made more lucrative for the attraction of youths*

Conclusion: Frequent shift of priorities, subsequent to the change of Governments, was one of the complexities in the past. Such situation had occurred in the absence of a consolidated priority framework document. With the design of this NASDP, it is hoped that such subjective prejudices will be minimized, as the NASDP offers an agenda for the medium-term. It would also encourage cooperating partners to support in the commonly agreed upon priority areas. In this way, it may attract more investments in agriculture corresponding to the food security, poverty alleviation, inclusive growth, promotion of agri-business and sustainable natural resource management objectives.

I. INTRODUCTION

Nepal has been attempting to strengthen its national capacity for agriculture and rural development and thereby ensure food and nutrition security. It requires compatible planning and implementation of programmes based on commonly agreed upon priorities between the Government and International Development Partners (DPs). The country aims at broad based inclusive growth. This National Agriculture Sector Development Priority (NASDP) has been prepared to facilitate this process.

This formulation of NASDP is based on the analysis of key issues and challenges confronting agriculture. It relates to the priorities reflected in the current Interim Plan (2007/08 – 2009/10) and contexts highlighted in the approach paper for the forthcoming Interim Plan (2010/11 – 2012/13).

This NASDP has been developed by the Ministry of Agriculture and Cooperatives (MoAC) in close collaboration with other related agencies of the Government. The technical assistance for its preparation has been provided by Food and Agriculture Organization of the United Nations (FAO).

The NASDP accommodates the Government's medium-term priorities related to the agriculture sector and food security, where the DPs could provide their capital and technical assistance. With the formulation of NASDP, The MoAC expects to implement coordinated activities contributing to food and nutrition security. It hopes to make optimal use of resources for medium-term development.

With NASDP, the DPs can identify where their support fits best in terms of meeting Nepal's commitment *vis-à-vis* the Millennium Development Goals (MDGs) especially, the Goal No. 1 "*Eradicate Extreme Poverty and Hunger*" and Goal No. 7 "*ensure environmental sustainability*". It also helps to the design the UN's Common Country Programming Process including United Nations Development Assistance Framework (UNDAF). Further, it contributes to the achievement of Nepal's commitment towards the World Food Summit (WFS) Plan of Action and Paris Declaration on Aid Effectiveness.

The NASDP will serve as strategic planning and resource mobilization tool. It aims to contribute to the following:

- (i) Setting up priorities for medium-term perspective;
- (ii) Identification of priority areas requiring capital and technical assistance support of the DPs;
- (iii) Identification of DPs likely to support the selected priorities.

With NASDP, the DPs can position themselves for collaboration between the Government, UN Agencies, International/Non-Governmental Organizations (I/NGOs) and the private sector. It helps to make best use of scarce resources with coordination of the priorities.

While recognizing each other's comparative advantage, all stakeholders (national and international) can complement to the achievement of national objectives. With the priority areas identified, they can make their collaborations purposefully focused. It helps to reduce loss of efficiencies occurred through the fragmented planning and implementation of field programmes. As the NASDP helps to point out collective opportunities, it can subsequently trigger joint commitments. This situation can then lead to increased investment of more resources for agriculture and food security.

1.1 Objectives

Major objective of NASDP is to facilitate planning and implementation of prioritized activities in coordination with the Government and interested DPs. Related to this major objective, the specific objectives are as follows:

- To make the interventions reflective of agriculture development and food security needs;
- To make the strategic policies and priorities selective;
- To mobilize resources for inclusive development;
- To become selective (priority wise) in obtaining support of the UN Agencies, bilateral and multi-lateral DPs;
- To make the development agenda country needs driven (in line with the current and forthcoming TYIPs: and
- To promote complementarities by recognizing respective comparative advantage / mandate of the DPs.

The NASDP contributes to visualize possible intervention areas in a medium-term perspective. It helps the Government and DPs to see monitor the plans have been able to respond to the national needs after they are implemented.

1.2 Methodology Followed

The formulation of NASDP is based on both primary level consultations and review of secondary materials. To supplement the information analysis needs, 12 thematic studies were carried out. These studies covered following subject areas as identified during the MoAC/FAO Scoping Workshop organized in August 2009.

- 1 Agricultural Extension Support System
- 2 Agricultural Mechanization

- 3 Climate Change and Agriculture Production System
- 4 Dairy Development
- 5 Food Security and Nutrition
- 6 Hides and Skin
- 7 Integration of Gender in Agriculture
- 8 Labour Migration and Agriculture
- 9 Land Use Policy and Planning
- 10 Livestock in High Altitude Areas
- 11 Market-led Meat Production and Processing
- 12 Pricing Policies for Agricultural Inputs and Outputs

The formulation of NASDP was thoroughly guided by an Inter-Ministerial Task Force, established under the chairmanship of Joint Secretary (Planning) at MoAC. This Task Force was formed with representation of different line agencies related to agriculture **(See Annex I for the list of task force members)**. A Technical Team of FAO supported the formulation process **(See Annex II for the list of FAO Technical Team members)**.

Field Programme Development Workshop was held at Pokhara to validate the problems and objectives tree analysis results and thereby select the possible priorities for the NASDP. This workshop was attended by the FAO staff members and invitees from the MoAC and MoFSC.

1.3 Steps Involved in the Formulation

Four steps followed for formulation were situation analysis; prioritization, preparation of draft NASDP and validation of its content. :

Situation Analysis: The Scoping Workshop held in August 2009 covered discussion on the core issues related to agriculture including the needs and priorities of the livestock, fisheries and forestry sub-sectors. Participants to the Workshop were drawn from Government, NGOs, research institutions and the DPs (bilateral and multilateral). The workshop was useful in assessing prevailing situation and emerging needs together with the identification of possible areas of improvements, which formed a basis to determine priorities for the medium-term.

The situation analysis assessed achievements of the agriculture sector including the ongoing interventions. Attempt was also made to the level of sufficiency existing policies in facilitating desired improvements.

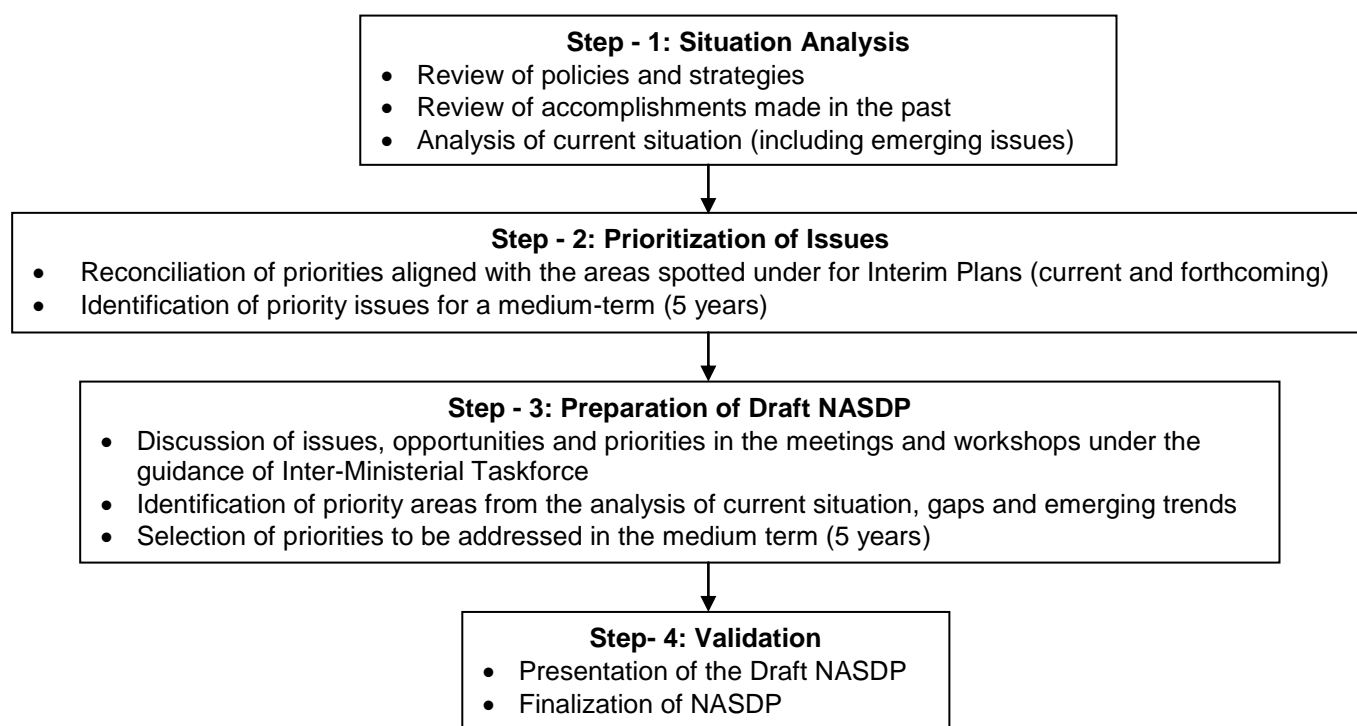
Prioritization: Core issues were analyzed against the potential opportunities. Lessons were drawn from the implementation experience of past and current plans. The focus areas of APP and TYIPs (current and forthcoming) were considered to determine the priorities as per their relevance

Considering the fact that too many priorities may almost mean 'no priority', attempts were made to sort the list reasonably shorter to a manageable extent (in view of the contemplated timeframe and absorptive capacity of related institutions)..While selecting one activity over another, an approach of whether “X” is more important than “Y” was applied.

Preparation of the draft NASDP: The preparation of NASDP involved analysis of past and ongoing intervention strategies. Discussions were held with the Inter-Ministerial Task Force members. Meetings and workshops were organized in selecting the priority outcomes, expected outputs and the intervention areas.

Validation: The NASDP draft was circulated for comments from the related stakeholders. This was followed by the organization of validation workshop from July 1 – 2, 2010. Figure 1 below summarizes the major steps followed:

Figure 1: Steps Followed for the Formulation of NASDP



1.4 NASDP in Relation to Other Development Framework

The NASDP is not exhaustive of all priority areas. These priorities take into account absorptive capacity of the institutions with possible access to resource within the next five years. It is possible that some subject areas not covered by the listed priorities at present could possibly emerge as new priorities during implementation of the NASDP. At such situation, this document *per se* should not refuse housing such new

priorities. Viewing from this perspective, the NASDP should be treated as a living document that requires updating of the emerging needs and priorities.

The purpose of NASDP is not to abruptly replace previous commitments for the ongoing or pipeline programmes. Such commitments should still be maintained till they reach their natural end. The NASDP is reflective of national priorities and linked with the country's commitment towards regional as well as global framework. It is hoped that the implementation of NASDP will be useful for the achievement of related MDGs and PRS.

1.4.1 MDGs and NASDP

The implementation of NASDP, in particular, will harmonize technical services related to MDG No. 1 (Eradicate Extreme Poverty and Hunger) - Target 1 *“reduce by half the proportion of people living on less than a dollar a day* and the MDG No. 7 *“Ensuring Environmental Sustainability”*. It will also contribute to human rights approach concerning *“rights to food”*.

The Draft Report on Nepal MDGs Progress Report, 2010 identifies gap between the sectoral targets and achievements. This NASDP can serve as a tool for revising sectoral targets in line with the needs indicated by the MDGs.

The NPC has planned to develop Simplified Macro-economic Framework (SMF). It will help to assess the poverty impact of growth. It will also form a basis to project resources required for the achievement of MDGs by 2015. In this context, the NASDP contributes to ensure greater support of the DPs.

1.4.2 PRS and NASDP

Nepal, as one of the 80 low-income countries, is entitled for concessional lending and debt relief facilities of the World Bank and International Monetary Fund (IMF) under the PRS category. It is associated with Highly Indebted Poor Countries (HIPC) facilities. With the formulation of NASDP, the DPs can best place their support aligning with the Government's priorities.

As agriculture is a lead sector employing majority of the poor people in the country, the NASDP provides opportunity for the DPs to implement activities in line with a broader PRS framework. It helps to select the interventions for better food and nutrition security impacts.

II. SITUATION ANALYSIS

2.1 Overall Economic Development

Nepal is characterized with low Human Development Index (HDI) among the South Asian countries. It is ranked 144th among 182 countries in the world (UNDP, 2009). The GDP per capita income of the country has reached USD 473.- in 2008. According to the Nepal Living Standards Survey (NLSS-II), 2008 around 31 percent Nepalese live below the absolute poverty line. This is an improvement from 42 percent recorded in the past. As the performance of economy was not so promising over the past few years, it is said that this change was possible largely due to the increasing remittance. The reduction can also be attributed to increased wage rate, urbanization and the development of skills and capacities. However, the gap between rich and poor has not been narrowed down as revealed by the Gini-coefficient value from 0.34 to 0.41. Owing to such development scenario, Nepal has been emphasizing broad based economic growth with social inclusion and poverty reduction.

Majority of the poor people live in the rural areas. Only around 9.6 percent of the total population lives in the urban setting. Around 78 percent of the poor are farmers and agricultural labourers (NPC, 2007). Therefore, an increased effort made for agriculture development not only helps for economic growth but also contributes to reduce poverty.

Nepal emphasized poverty reduction in its Tenth Plan (2002/03 – 2006/07). It prioritized private sector led growth. The TYIP (2007/08 – 2009/10) continued same thrust (i.e. growth with poverty reduction) and highlighted greater presence of the state in the remote areas and inclusion of marginalized groups. While the conflict was intense in the Tenth Plan period, the TYIP period was privileged with a relaxed environment resulted from signing of the Comprehensive Peace Agreement. However, the country is still unable to win confidence of the private sector in doing the business. Compounded by frequent change of the Governments and their subsequent policies, the confidence building process was considerably hindered.

2.2 Agriculture Sector and the Nepalese Economy

Nepalese economy has been experiencing structural changes over the years. Since 1990s, the contribution of agriculture to Gross Domestic Product (GDP) has decreased by around 11 percent. Nevertheless, the role of agriculture still remains prominent, with around 74 percent labour force employed in this sector. Currently, the country accrues 32 percent GDP from the farming sector.

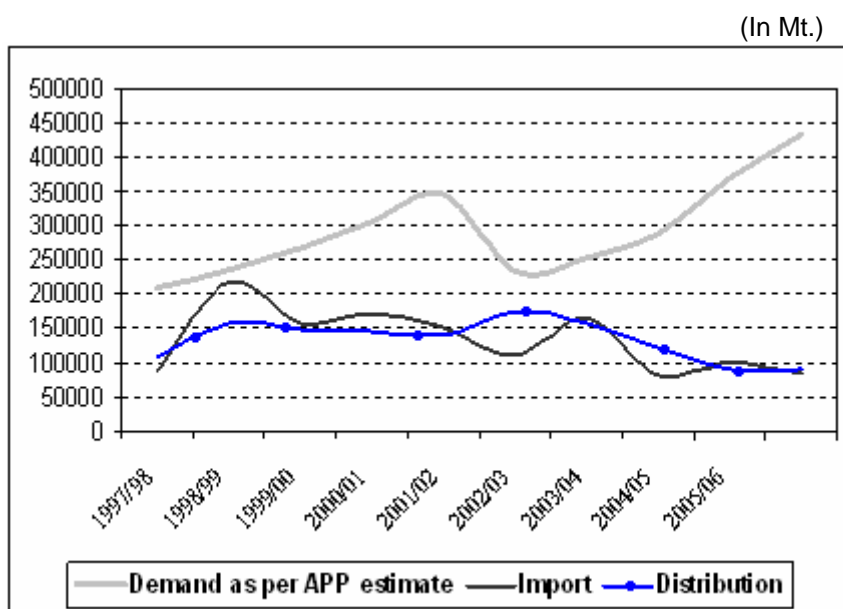
Nepal's rural economy with greater number of people dependent on agriculture for their livelihoods demands modernization and commercialization of the sector. Attempted have been made in this direction in some pocket areas already. Vegetables are grown and goat raising has been promoted as meaningful enterprises for more income generation. Fruit cultivation is increasing together with their increased demand of taking nutritious food (MoAC, 2008).

In the recent years, the concern for food and nutrition security has been adding challenges to improve delivery of irrigation services together with the supply of seeds and fertilizers. Equally important has become promotion of storage facilities, marketing services, research and human resources development.

Despite the emphasis for increased production, the distribution of chemical fertilizers from the formal channel has reduced. After the withdrawal of subsidy, the distribution has declined to 25,169 mt. in 2007/08 from 38,950 mt. distributed in 2002/03.²

The average rate of chemical fertilizers supplied during the Tenth Plan (2002/03 - 2006/07) was 6.3 kg. per ha. It is one of the lowest figures when compared to other countries in South Asia. This level of application is also far below the expectation made by APP.

Figure 2: Demand, Import and Distribution of Fertilizers



Source: MoAC, 2007

Most of the fertilizers are used for commercial farms other than the regular subsistence level production farms.³ On the other hand, the use of quality seeds for the high yielding crops (mainly rice, wheat and maize) is also low.

² Actual use could have been higher because of illegal import from India. Farmers are encouraged for such import because of cheaper price prevailed in India (nearly 1/3 price, especially in the case of phosphate fertilizers).

The production and processing operations of most of the agricultural activities are not power-based. The APP had considered rural electrification as one of the priority inputs in modernizing agro-processing and pumping ground water for irrigation. However, the progress accomplished in these fronts is not so noteworthy.

Despite continued attempts to increase production and productivity in the past, the per-capita food availability has eroded in the recent years because of increased population rate against almost stagnant performance of the agriculture sector. The per-capita holding size of agricultural land is less than 0.8 ha. It is also shrinking over the years due to increased population pressure. The farms in the hills and mountains render management difficulties due to scattered parcels.

With the current holding size of cultivated land, it is estimated that a farmer can meet only about six months' food from their own farm (CBS, 2003). Around 42 districts (out of 75) in the country encounter food deficit each year (WFP, 2006). At such situation, the poor families can hardly protect themselves against the occasional shocks created by droughts, floods and prolonged illness.

The distribution of food in the remote areas is difficult because of the lack of road access and transportation facilities. Five districts in the country are yet to be connected by road. Therefore, the transportation of food in these districts is not only time taking but also costly.

Owing to various difficulties related to the livelihoods, more than one million prime-age male adults have migrated abroad for the foreign jobs. The money remitted by them has provided cushion for buying food for the family members at home. However, such migration has created agricultural labour shortage in the villages.

The country is attempting transfer of subsistence character of the agriculture sector to a vibrant business system for greater economic growth. However, the process of transformation is very slow. To accelerate the process, the Government is attempting implementation of activities related to research, marketing, extension services, food technologies development, quality control and rural infrastructure development (GoN/NPC, 2008).

Since the agricultural system is heavily dependent on monsoon rain, effort for expanding irrigation command area has remained a priority. Emphasis has also been given for the industrial base of production, where more people can be employed. To bring necessary changes in the production system, policy reforms have been attempted for effective delivery of services.

³ Pokhrel, Deepak Mani and Pant, Kishor Prasad Pant (2009), Perspectives of Organic Agriculture and Policy Concerns in Nepal, The Journal of Agriculture and Environment, Vol:10, June 2009.

The country introduced Agri-business Promotion Policy in 2006; while the Dairy Development Policy was launched in 2007. Further, the Agriculture Bio-diversity Policy was formulated in 2007. All these policies were developed in support of National Agriculture Policy, 2004. The country has also developed tea, coffee, irrigation, fertilizer and seeds policies. They were formulated prior to the introduction of the National Agriculture Policy, 2004.

The investment in agriculture is still poor. To augment greater return, more investments are required for basic infrastructures development and the supply of inputs.

Despite various challenges, Nepal has enormous potential for agriculture development. The country is blessed with favourable agro-biodiversities. It can grow wide range of crops (cereals, pulses, oilseed crops, fruits, vegetables and other cash crops) at different locations in the same season. Animal husbandry has remained an integral part of the Nepalese farming system. Many farmers are raising cattle, buffalo, goat, pig and poultry. The scope of aquaculture is also growing in Terai area. To address the problems of poverty and ensure food security, the country needs reforms for the creation of more self-employment opportunities.

2.3 Government and Non-Government Institutions Supporting Agriculture

Major Government and non-government organizations supporting agriculture are as follows:

2.3.1 Government Organizations

Among the government organizations, four types of agencies are involved in providing direct or indirect support to agriculture. They represent: (a) line ministries and departments, (b) advisory bodies, (c) autonomous entities, and (d) institutions outside the government structure.

Seven ministries serve agriculture and associated sectors / sub-sectors. The MoAC covers crop production, food security, horticulture, livestock, fishery, technology management, inputs supply and marketing. The activities such as rural development, irrigation, soil conservation, watershed management and forestry are covered by the line ministries other than MoAC.

The departments of each line ministry implement the planned activities. Some of the selected activities are implemented through Development Boards, Corporations and Companies. Most of them have decentralized offices at the district level. Some of them have office at the sub-district level as well. The agriculture development activities are supported through some autonomous entities also **(See Annex - III for further details)**.

The NPC is an advisory body. It sets national development goals and policies. It operates under the National Development Council (NDC) - an apex body chaired by the Prime Minister. This Council is a venue for ensuring Government's political commitment towards development.

The line ministries formulate sectoral policies and programmes. They endorse laws for the approval of parliament. The policies are approved by the Cabinet. They are approved through the Parliament upon recommendation of the Cabinet. All line ministries have established their Planning Cells. These cells contribute to the design of sectoral and sub-sectoral plans.

The plans are formulated both at the national and district levels. At the district level, the Local Development Officer (LDO) coordinates the formulation process.

2.3.2 International / Non-Government Organizations

More than 100 INGOs and around 30,000 NGOs work in Nepal. They support income generation, employment creation, environmental conservation and infrastructure development activities with the mobilization of internal and external resources. The Government has been encouraging their involvement in the backward communities. The Local Self-Governance Act 2055 (1999) anticipates their collaboration with the local government agencies.

The role of I/NGOs have increased after the 1990s with new political set-up in the country. They have been implementing poverty reduction, economic development, environmental conservation and rural infrastructures development programmes such as trails construction, road repairs, market centres development and micro-irrigation systems development.

2.3.3 Private Sector Organizations

The private organizations contributing to the development of agriculture are farmers, agro-enterprises, commodity marketing groups and cooperative unions. The farmers are primarily engaged in the production process, while the agro-enterprises supply inputs (seeds and fertilizers) and process the agricultural products. They are also engaged in marketing.

The farmers have also formed commodity marketing groups such as the groups for fruits, vegetables and milk marketing. Similarly, the cooperative unions are established at the national and district levels. Some of them for example are: District Cooperative Unions, National Federation of Milk Producers Cooperative, Federation of Community Forestry Unions and Seed Entrepreneurs Association of Nepal.

At the local level, the traders are organized into district specific Chamber of Commerce and Industries, while they are organized under the Federation of Nepalese Chamber of Commerce and Industries (FNCCI) at the national level. The FNCCI has an affiliated wing called Agri-Enterprise Centre (AEC), which supports promotion and marketing of agricultural commodities such as tea, sericulture, floriculture and apiculture.

2.4 Progress Accomplished Under the Recent Periodic Plans

Against a target of 5.5 percent economic growth, the TYIP recorded closer achievement (5.3 percent) to it in the first year. For agriculture sector, the achievement was even more (4.7 percent) than targeted (3.6 percent). The growth of 2007/2008 was one of the highest recorded in seven years. It was mainly contributed by favourable weather conditions. However, this trend did not last in the second year onwards. The reasons associated with such failure were: frequent poor rainfall, bandhs, protests, power cuts and social insecurity.

Table 1: Economic Growth Rate Targets and Achievements of TYIP (2007/08 - 2009/10)

(In percent)

Sector	Economic Growth Target	Achievement		
		2007/08	2008/09	2 Year's Average
Agriculture	3.6	4.7	2.1	3.4
Non-agriculture	6.5	5.7	4.9	5.3
Overall	5.5	5.3	3.9	4.6

Source: National Planning Commission, Central Bureau of Statistics and Nepal Rastra Bank, 2009.

Milk production targeted by the Tenth Plan (2002/03 – 2006/07) was 50.85 litres per capita. The achievement of this target was 51 litres per capita in 2006/07. Meat production slightly rose from 8.5 kg. to 8.6 kg per capita. However, the target set was to 9.94 kg per capita. The production of poultry meat and egg could not meet the target due to occasional market disturbances caused by bird-flu outbreak. Fish production for the TYIP was 1.87 kg per capita but the achievement was 1.5 kg per capita (NPC, 2007). Though fishery is an emerging sub-sector in agriculture, its contribution to the GDP is still below one percent. However, with increasing demand of nutrition-rich food, the demand for fish production is increasing as well. In 2007/08, its growth rate was recorded at 7.25 percent

During the TYIP period various efforts were made to diversify the crops. Similarly, improved cultivation practices were introduced. Some modern varieties of cereals, pulses, oilseeds and vegetables were recommended. Moisture conservation technologies were applied for high value crops. However, the rate of adoption of

these efforts was not so encouraging due to the gap in the supply of necessary inputs.

In the course of developing TYIP, the Government made positive projections with the hope for improved security situation and political stability. Unfortunately, the action environment appeared different from what was expected earlier. Like other activities, the operational activities of agriculture were also affected by occasional disturbances owing to the political unrest. It increased recurrent expenditures for investment in the security affairs than sparing capital investment climate for the agriculture sector.

2.5 Progress on the MDG Targets

Nepal produced MDGs Progress Report in 2005 for the first time. It emphasized formulation of supportive policies and programmes to overcome institutional gaps noticed in the implementation of MDG targets. In 2006, the Needs Assessment for MDGs was carried out to fix the nationalization of targets and estimate required resources. To make the set targets achievable, this assessment suggested the need for enhanced delivery of services above the “business-as-usual” situation (NPC and UNDP, 2006). It advocated for more investments and emphasized MDG target-focused coordinated initiatives from both national and international development partners. For the eradication of extreme poverty and hunger (related to MDG-1), the assessment emphasized improvements in agricultural productivity, market linkage development, rural employment promotion, control of food quality and arrangements for targeted food assistance.

Despite the prevailing socio-political difficulties, Nepal appears closer to the achievement of most of the MDG targets. Some targets that may need special effort to cover the serious gaps include: employment, mitigation of climate change effects and the control of HIV/AIDS.

The MDG Progress Report, 2010 claims that the poverty rate has decreased by around 6 percent. It also mentions reduction of chronic food insecurity situation. Further, it states that the underemployment and unemployment rates have also decreased. It recognizes remittance as one of the contributors to these changes in the rural economy. The Report also mentions positive trend towards gender equality as indicated by a balanced enrolment of girls and boys in the primary schools (NPC, 2010).

The Report notes that the allocation of resources in favour of marginalized groups in the remote geographic areas has also increased. Similarly, the protection and conservation environment has gained greater attention as compared to the situation prevailed in the past. It appreciates incorporation of the agenda for adaptation to climate change effects as a matter of priority.

The Report further states that the Government has been able to institute poverty monitoring systems and implementation plans. The improved provisions made for Medium Term Expenditure Framework and Results Based Development Management have been acknowledged.

According to the Progress Report, the policy environment for achieving most of the MDG targets seems favourable as they are largely guided by the objectives of poverty reduction, inclusion and social justice. The Interim Constitution of Nepal 2063 (2007) and its subsequent laws have also emphasized inclusive, participatory and decentralized governance.

The Report observes that the Government requires priority attention towards the following in meeting the MDG specified targets by 2015:

- Move people up from their below poverty line status;
- Create better environment for private sector investments;
- Develop and enforce supportive policies;
- Address food security and climate change issues;
- Maintain gender balance while providing access to the development opportunities; and
- Ensure support entitlements for the benefit of marginalized groups.

Following these thrusts, the Government has decided to align its forthcoming TYIP with the MDG targets. In this context, the NPC is updating the status of each MDG and suggesting way forward in expediting the achievements within the remaining five years (i.e. by 2015). Accordingly, the concept paper of the forthcoming TYIP has emphasized the aspects like employment generation, poverty reduction, food security and adaptation to climate change effects.

III. CURRENT AGRICULTURE DEVELOPMENT AND FOOD SECURITY CHALLENGES

Several issues and challenges surround agriculture development and food security situation in Nepal. Major issues confronting these subject areas are follows:

Increasing food insecurity due to low and almost stagnant agricultural productivity and production amidst the annually growing population: Majority of the farms in Nepal are small. They use low quality inputs and adopt traditional technology. Compared to the farmers of neighbouring country India, the Nepalese farmers are less privileged in terms of obtaining subsidies and institutional support services. As a result, their cost of production is high. More than 80 percent agriculture production in the country comes from rain-fed farms. The access to year-round irrigation facility is limited. The farmers also lack access to marketing and credit facilities. The sector suffers from under-investment because of low return to land and labour. As a result of low productivity and production, the country is increasingly facing food in-security problem. According to WFP, around 3.7 million Nepalese are food insecure. In the remote drought-prone mountainous areas, three out of five children are said to have underweight because of malnutrition.

Lack of effort to control post handling loss: As availability of food is insufficient, it is important to control the post-handling loss. It is said that most of the farmers bear a loss of around 50 percent in average for food and 40 percent for vegetables simply due to their haphazard handling method.

Declining attention towards utilization of traditional crops: The contribution of traditional food items (such as millet, buckwheat, yam etc) is important for food and nutrition security. However, they are gradually being neglected. Therefore, there is a need for establishing focus on their utilization to minimize the food insecurity problem.

For food and nutrition security, not only providing access to food is important but also their proper utilization should be insured. Therefore, attention should be given towards screening of the product quality for safety. The nutritional supplement should be integrated bearing in mind the gender dimensions, which might require interventions for behavioural change at the household level.

Low control of food protein losses caused by poor animal health and diseases: The livestock sub-sector plays significant role in supporting food and nutrition security. It is estimated that around 20 percent food protein loss takes place simply due to the absence of control of animal diseases (such as foot and mouth disease, swine fever, Avian Influenza etc.). Therefore, attempts should be made to control such animal diseases. Such control should be initiated not only from the perspective of international trade but also from the perspective of domestic food and nutrition security contributions the control mechanisms can make.

Limited attention towards food quality control and management for consumer protection: Many people consume unhygienic food due to their poor affordability condition and the lack of awareness. On the other hand, the Government also lacks food epidemiology database. It is also weak in reinforcing the acts and regulations to control the food quality and maintain basic food hygiene requirements. The laboratory facilities for the quality tests are not sufficient. There is no trustworthiness about organic products among the large segment of the population yet. For both internal and export markets, the accreditation facilities should be well established yet.

Limited research activities: As research is important to capture emerging issues and introduce improvements in the food production and utilization systems, it deserves special attention. It is only through research the improvements in technologies applied and the new areas of interventions can be introduced. However, the focus of research on these aspects is currently minimal.

Complications of distributing food in the remote areas: As most of the remote areas in the hills and mountains do not produce sufficient food, they largely depend on food supplied from outside. However, the transportation services to these areas are poor. Though attempts are made to enhance production in these areas, the magnitude of the problem is so deep that their requirements will not be locally met even by doubling the local production. To meet the need of such areas, the food and nutrition security issue should not only focus on enhancing production but also in improving the distribution system.

Limited attempts to commercialization of agriculture: Majority of the agricultural producers are subsistence scale based farmers. They lack commercial orientation. The attempts to enhance scale of production are limited. There is a need for product diversification. Developing commodity value chains for internal and international markets is equally important. Similarly, need also exists for quality control and safety regulations encompassing the channels of production, distribution, export and import of the agricultural products.

Poor extension services delivery capacities: Public sector is the largest extension service provider in the country. The services extended by them are not demand-led but often supply-led. As the skills of staff are not upgraded for modernization of the sector, the capacity to extend the services is limited. Some NGOs are also involved in extending the services. However, their services are not coordinated.

The farmer to farmer exchange of information is widespread. There is a need to make these services inclusive to address the need of poor and marginal groups living in the remote areas. The role of private sector in enhancing such services has yet to be materialized. Need exists for aligning agricultural research, education and extension services with priorities of the farmers **(See Annex - IV for further details)**. Current institutional support, in general, is less effective.

Therefore, there is a need for induction of reforms on the institutional structures and systems, as appropriate.

Limited effort for planning and implementation of the interventions under the APP spirit: APP is very much talked about subject as an important framework for agriculture development. However, its priorities are not adequately addressed during the efforts made for planning the interventions.

APP made a call for enhancing productivity and production in the remote areas. It demanded more technical support and physical infrastructures (rural roads, irrigation system and market centres) for the establishment of agricultural growth centres. However, these priorities were largely unmet.

Low public sector investment in agriculture: The agriculture sector enjoyed greater allocation of resources since the Third Five Year Plan period. Theoretically, it is still a priority sector but in terms of the relative allocation of resources it has encountered decrease and remained stagnant for the past few years. Though the value of allocation has increased in volume, the relative percentage across the sectors of development has not changed so much. The percentage has rather declined when compared to the period covered under the Third Five Year Plan till Ninth Five Year Plan.

The operations of the agricultural sector activities are largely dependent on the allocations of central government budget and projects. However, the resources mobilized by the local government bodies at the local level (through central government grants and locally raised taxes) are rarely used for local agricultural development activities. In the context of increasing investments in agriculture, counting these local government body sources and the mobilization of private sector funds should be considered as well.

Limited institutional credit facilities: Not many financial institutions operate in the rural areas. As a result, most of the farmers rely on informal sources of credit, which involves exorbitantly high interest rates. As the farmers cannot afford expensive loans, they cannot afford to buy required quality seeds and fertilizers as well. It has subsequent effect on the level of production and productivity. This situation invites the need for institutional earmarking of agricultural credit covering production, processing and marketing activities.

As the stake for lending in agriculture is relatively risky due to the crop failure and livestock death possibilities, most of the financial support agencies extend agricultural loans as their second priority. To overcome this situation, covering the risk of lending through the provisions of agricultural insurance would be essential.

The farmers are organized into cooperatives for their access to collective benefits including credit. However, such cooperatives are weak in offering demand-led

services related to agriculture production, processing and marketing. They have limited capacity to diversify their services. They lack facilitative rules and regulations suitable to meet the farmers' demand (e.g. inter-lending provisions to meet the demand for loan). The members also lack training.

Depleting natural resource conditions affecting agriculture: When Nepal's population was relatively small in the past, adequate quality land reserves were available for the conversion of forest or grassland into the arable land. During those times, the country had enough production not only feed its population but also to export abroad. However, with increased population pressure in the recent years, the forest encroachment has increased. The quality of arable land and forest cover has been degraded demanding sustainable management of land for both conservation and earning livelihoods while maintaining the environmental standard at the same time. The mountains and hills have become prone to soil erosion and landslides, while the Terai plains suffer from sedimentation and alluvial deposits. The monsoon torrential rains often wash away top soils in the ill managed crop production systems.

As poor people do not have alternate access to resources for income generation and food security, they are over-dependent on the use of natural resources. Their livelihood pressure even compels them to ignore the vulnerable conditions of the bio-diversities in their surroundings. To maintain environmental sustainability at such situation, the Government needs tackling of the livelihood condition of the poor hand-in-hand through conservation agriculture and other alternate employment opportunities.

Limited capacity for adaptation to climate change effects: Nepal has been experiencing irregular rainfalls, floods, droughts, cold waves and landslides. New pests and diseases have also appeared at different locations. These factors directly affect food production. Therefore, the country needs to enhance its capacity with adequate attention for safeguarding the vagaries of climate change effects in agriculture **(For further details See Annex - V).**

Low application of mechanized power in substituting manual labour: The performance of agriculture has been hindered by the shortage of labour due to increased out-migration in the recent years. On the other hand, the application of animal operated and other power-using mechanized tools are also limited. As a result, the drudgery among those who remain at home (usually the female members) has increased significantly. To overcome this situation, the application of power-using technologies should be promoted in view of their greater efficiency and cost effectiveness.

Limited implementation of land reform measures: As land is the basic resource for agriculture development and food security, its size of holding signifies social well-being of the families in the rural areas. Given the affiliation of such status and also its importance for food and nutrition security, the villagers often try to grab more

lands (public and private) under their control. This situation is evidenced by a greater number of land related cases in the court.

Since the population pressure is increasing, the number of squatter settlements in the urban and sub-urban areas is also increasing. These settlements often encroach the public lands.

Due to increasing price of land, the purpose of land holding has also changed in the sub-urban areas in the recent years. Some hold the land for agricultural purposes, while the others hold for price speculations. In case of the latter, the land held is often left fallow without cultivation. Such use of land has affected the level of production, to some extent.

Fragmentation of land is a common problem Nepalese society. The lands ownerships are divided upon the separation of members from a joint family. Such practice reduces the size of land being cultivated by the household. It also affects the level of agricultural production, to some extent.

While there are some people holding a large size of land, there are others without any land entitlements. For example, Nepal freed the bonded labourers almost a decade ago but they are still to be rehabilitated. Besides, there are many other landless people, who also hope for the access to land for their livelihoods. For handling these situations, the country needs to introduce necessary land reform measures.

The Government has no strong database on land holding, land use and the number of landless people. Neither it has an up-to-date record of tillers, who have not received the land tenure certificate but are practically eligible.

To solve the problems of ownership and use of land, the Government needs formulation and enforcement of some acts and regulations. Further, it also needs to introduce scientific land reform measures.

Lack of irrigation facilities: The availability of year-round irrigation services is limited. There is no participation of farmers in the maintenance of public irrigation systems. As the existing systems are poorly maintained, most of them operate below their potential level of efficiency.

The Government introduced Water Resources Strategy and National Water Plan to encourage participation of the farmers. However, the achievement to this effect was limited because these frameworks did not pay much attention towards creating greater impact on agricultural productivity and production.

Collection of service fee in irrigation is one of the problems as most of the farmers are reluctant to pay because of irregularity of the services being provided.

Similarly, the Government has attempted management transfer to the users. However, it has become a longer time taking process.

Excessive out-migration creating shortage of agricultural labour: The migration from rural to urban areas and also abroad is increasing. Such migration is often pushed by poverty and limited access to employment opportunities for the village youths. On the other hand, it is also induced by frequent natural calamities (loss of lives and famines), especially in the disaster-prone areas. It pronounces the need for persuading scientific mitigation and adaptation to climate change effects including creation of new employment opportunities at the local level before it becomes too late.

Limited institutional capacity for planning and implementation of interventions: The planning and implementation capacity of staff is limited. As a result, the delivery of extension services for producers, processors and traders is affected. Therefore, the country needs to enhance planning and implementation capacities of the staff members working for agriculture development.

Insufficient support price policies for agricultural inputs and outputs: Nepal emphasizes commercialization of agriculture but lacks supportive price policies. As a result, the Nepalese products cannot compete with the subsidized price of open border market in India. To overcome this problem, policy reforms are necessary for providing input and output price incentives to the producers, processors and traders of the agricultural commodities.

No control of excessive use of fertilizers and pesticides: The effort for increasing agricultural production and food security are contingent on the access to natural resources (land, water and forest). For ensured food and nutrition security, these resources should sustain. In this context, promoting conservation agriculture among other alternatives is useful.

Excessive use of pesticides and chemical fertilizers is common the commercial farms. It is desirable that such use of overdose should be controlled by determining the quantity to their manageable limits. To minimize the negative effects of excessive use, promoting coverage of Integrated Pest management (IPM) system would another aspect to consider.

Poor management and use of information in agriculture planning and implementation: The database for agriculture sector should be strengthened as it provides basis for planning, implementation and monitoring of desirable interventions. However, it has remained as one the neglected areas yet.

The emphasis for agriculture development is changing over the years. From a simple orientation towards production, the current move is towards optimization of land use and labour efficiency so that the sector's performance can be made more lucrative. Such thrust requires sufficient business orientation among the farmers. This invites promotion of value chain activities at all levels (i.e. extending from the supply of inputs to production, processing and marketing). To ensure adequate efficiency, the comparative advantage of key stakeholders should be best utilized.

The food and nutrition security not only depends on the quantity and quality of food produced but more importantly on their distribution efficiency. To provide equal access to all citizens of the country, the distribution capacity should be enhanced for the remote areas. For a country like Nepal, the challenge for ensuring food and nutrition security requires "enhancing production" in one hand and "preventing hunger" on the other. In view of this, the thrust of ensuring food and nutrition security should follow two-track approach: (a) enhancing production and productivity; and (b) addressing the emergency food needs (of the vulnerable population in food deficit areas). To meet these challenges, urgent actions are needed. It is urgent because the starving masses cannot afford to wait longer.

IV. OVERRIDING NATIONAL DEVELOPMENT PLANS AND POLICIES

While agriculture has been identified as a priority sector in all plans, the level and continuity of actual investment in this sector has not been consistently matching in the same order of priority. Though the amounts allocated to agriculture and related sectors / sub-sectors have increased over the years, the investment figures related to these do not indicate corresponding investment priorities.⁴ **(See Annex - VI for sectoral allocation under various periodic plans).**

4.1 Agriculture Perspective Plan (1995/96 - 2014/15)

Nepal developed 20-Year Agriculture Perspective Plan (APP) in 1995. It emphasized focus on four priority input areas (irrigation, fertilizer, technology and the roads and power) for livestock, high value crops, agri-business and forestry sector growth. Poverty reduction and food security are its priorities.

The APP emphasized demand-led commercialization of agriculture promotion of lead commodities in the hills and mountains with coordinated production and marketing relationships. Specific objectives followed by the Plan were:

- To accelerate growth in agriculture through increased productivity;
- To alleviate poverty with expansion of employment opportunities;
- To transform the subsistence agriculture into commercial agriculture with diversification of crops through the identification of comparative advantage;
- To expand economic transformation opportunities by fulfilling pre-conditions for agricultural development;
- To identify short and long term strategies for implementation; and
- To establish guidelines for preparing periodic plans and programmes.

The Plan believed to achieve 3 percent growth of Agricultural GDP per year and reduce the incidence of poverty to 14 percent by 2015. It envisaged multiplier effects of agricultural interventions on the non-agriculture sector too. Six strategies proposed for ensuring the multiplier effects were:

- Accelerated economic growth through technology-driven agriculture development;

⁴ Nepal started planned development efforts since 1956. The First Five Year Plan (1956/57 – 1960/61) allocated 9.7 percent of its resources for agriculture and forestry with an additional 12.9 percent share for village development. The allocations remained above 25 percent for agriculture and related sectors till Eighth Five Year Plan (1992/93 – 1996/97) keeping in view that the agriculture and rural development sectors contribute to employment and livelihoods for majority of the people in the country. In terms of the needs for development of this sector, the position is still remains the same. However, the relative share of allocations to this sector declined from the Ninth Five Year Plan (1997/98 – 2001/02) onwards, demonstrating a proportion allocated to the agriculture, irrigation and forest sectors as 12.9 percent in the current TYIP (2007/08 – 2009/10).

- Agricultural growth creating production demand with multiplier effects on all sectors of the economy;
- Higher employment growth;
- Investment on human capital, physical infrastructure and service delivery institutions;
- Package approach to development with coordination of activities launched in the Hills, Mountains and Terai; and
- Broader participation of key stakeholders including women.

Since its adoption in 1997, the APP has remained a major policy document for agriculture and rural development. All successive governments formed thereafter have directly or indirectly endorsed its platform in planning the agricultural activities. It emphasizes implementation of programmes and projects based on the comparative advantage. The APP in a way is a policy framework for the Government in agriculture and rural development to date as it contributes to reiterate consistent aims and approaches for poverty reduction.

4.2 Three-Year Interim Plan (2007/08 - 2009/10)

The current TYIP encompassed the mandates provided by the Peoples' Movement II. It aims to ensure prosperity, peace and social justice in the country. It was developed with a vision for modernizing and commercializing agriculture in line with the APP and National Agriculture Policy (2004). It underlines the importance of broad-based, gender-inclusive and sustainable agricultural growth as follows:

- Increase agricultural production and productivity;
- Maintain food sovereignty;
- Transform subsistence agriculture into commercial agriculture;
- Increase employment opportunities, conservation and promotion; and
- Ensure sustainable use of agricultural biodiversities.

The TYIP adopted PRS and MDG priorities by undertaking the responsibilities of reforms that were envisaged but had remained pending during the Tenth Five Year Plan (2002/03 - 2006/07) period as well. It targeted annual economic growth of 5.5 percent with 3.6 percent and 6.5 percent growths in the agriculture and non-agriculture sectors, respectively.

The TYIP emphasized use of quality seeds and raising of improved breed animals. It highlighted the importance of sustainable use of productive resources (land and water) and irrigation services. Other aspects underlined by the Plan were: provisions for access to institutional credit; modern technologies; and marketing capacity development. Similarly, infrastructure development support for productive pocket areas; promotion of agricultural value chains; human resources development;

promotion of agriculture biodiversities and the maintenance of genetic resources are also stressed.

As the current TYIP ends in June 2010, the MoAC has worked out indicative priorities for the Forthcoming Three Year Plan (2010/11 – 2012/13). It plans to transform subsistence agriculture into competitive, commercial and employment generating sector for poverty reduction and food security. Agri-business promotion and utilisation of opportunities available at the internal and external markets have remained its priority.

The policy framework of MDGs and National Agriculture Policy both emphasize modernization of agriculture. Keeping in view the emerging needs of the country, the MoAC has adopted following objectives for agriculture sector in the forthcoming Three Year Plan. .

- 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;
- To minimize adverse effects of environment and climate change in the agriculture sector;
- To develop cooperatives for agriculture development; and
- To develop human resources for sustainable agriculture development process.

(See Annex - VII for details on the indicative priorities of the agriculture sector in the forthcoming TYIP).

4.3 Master Plan for Forestry Sector, 1989

Nepal developed Master Plan for the Forestry Sector (MPFS) in 1989, which provides 25-years policy and planning framework for the forestry sector in Nepal. The long-term objectives specified by the MPFS are:

- To meet people's basic needs for forest products on a sustained basis;
- To conserve ecosystems and genetic resources;
- To protect land against degradation and the effects of ecological imbalance; and
- To contribute to local and national economic growth.

For the medium-term, following objectives are specified:

- To promote people's participation for forestry resources development, management and conservation;
- To develop legal framework needed to enhance contribution of individuals, communities and institutions; and

- To strengthen organizational capacity of forestry sector related institutions.

MPFS has laid out 6 primary programmes for forestry by putting greater emphasis on 'community and private forestry' development through collective conservation and use practices. It laid out programmes related to community and private forestry development; national and leasehold forestry development; medicinal and aromatic plants (MAPs) development; soil conservation and watershed management; conservation of ecosystems and genetic resources; and the policy, legal and institutional reforms.

Community and private forestry development: It emphasizes development and management of forest resources through active participation of individuals and communities to meet their basic necessities. .

National and leasehold forestry development: It emphasizes development and management of national forest through the government agencies or private sector lessees complementing to the community and private forestry for increased supply of forest products.

Medicinal and aromatic plants development: It emphasizes increased supply of MAPs through their conservation and conversion into useful commodities for distribution to the local and foreign markets to contribute to the local and national economy with trade and employment generation. The promotion plantation, managed natural forest and farms could also go a long way in the conservation of forest resource base. Establishment of regional herbal centers, training in herbal farming and sustained yield collection of MAPs could make the resource base strong.

Soil conservation and watershed management: It emphasizes protection of land against degradation and conservation of its value by mobilizing national and local resources. It follows preventive, rehabilitation and conservation education to minimize soil erosion and environmental degradation. One of the preventive measures emphasized is the restoration of forest cover on open and degraded land.

Conservation of ecosystems and genetic resources: It emphasizes protection of special areas for their ecosystem and genetic resource values. It also highlights the provision of amenities to promote in-situ and ex-situ conservation of plant and wildlife genetic resources. Conserving forest ecosystems and genetic resources through gene banks and botanical gardens is essential with proper management and use of land and forest resources. These conservation measures could become major assets for income generation through tourism.

Policy and legal reforms: The need for policy and legal reforms has been felt necessary to enhance contribution of individuals, communities and institutions for forest resource development, management and conservation. The Plan emphasizes the need for adoption of policies on providing long-term support to forest development with sustainable community forestry, enforcement of law for forest

protection, production of raw materials for forest-based industries and definition of the role of forestry with regard to pasture.

Institutional reforms: Institutional reforms are considered necessary for more efficient and effective development and implementation of the programmes.

The Forest Act, 1993 made provision for granting leasehold forest to operate agro-forestry for income generation and poverty reduction. It emphasized facilitation for the production of raw materials required by the industries based on the forest products; sell or utilize forest products by promoting production through afforestation; operate agro-forestry, tourism industry, farm of insects, butterflies and the wildlife in compatibility with conservation and development of forest.

4.4 National Water Plan – Nepal, 2005

Nepal is in the Monsoon zone. Its rainfall varies both in the spatial and temporal terms.⁵ The river systems (especially those originating in the lower hills) carry flood during monsoon and dryness in the winter and summer).

The country has untapped potentials for gravity flow and ground water. The National Water Plan (NWP), 2005 emphasizes their conservation and sustainable management for overall development and maintenance of the livelihoods of people, while promoting economic growth.

Mitigation of hazards, environmental protection and resolving water use conflicts are major priorities indicated by the Plan. It specifies three output areas: security, utilization and institutional systems for effective service delivery.

Security: Disaster management and environmental protection have been emphasized to maintain secured availability of water. Institutional capabilities enhancement for water-induced disasters management have been underlined to mitigate adverse effects. Emphasis has also been laid for institutional arrangements for strengthening watershed / ecosystem protection. The need for sustainable management of full scale watershed / aquatic ecosystem has been considered essential.

Utilization: Utilization of water resources for drinking purpose, irrigation development, hydropower generation and the uses for other economic development activities has been prioritized. Emphasis is given for both improvement and expansion of water supply and sanitation services. Sustainable irrigation systems development and effective water management practices have been emphasized to maintain optimal utilization of irrigable land.

Priority is given to the development of hydropower to meet domestic energy needs, industrial needs and the potential export of power. Promotion of economic activities

⁵ For example, monsoon rain is intense in the east and gradually less westward, while in winter the rainfall is heavy in the west but declines eastward.

through the development of fisheries, aquaculture, recreational service, tourism, navigation and industrial water uses have also been considered important.

Institutional systems for effective service delivery: Priority is assigned for information systems development, policy reforms and legal reforms. To enhance access to information, strengthening of functional water-related information collection and dissemination system has been planned. For maintaining equitable water use rights, design of necessary policies and legal frameworks has been proposed. The Plan also highlights the need for adjustments to respond to the changing circumstances as necessary.

Strong institutional mechanisms have been considered necessary for efficient as well as integrated water management systems development. Priority has also been given to the promotion of regional / bilateral cooperation for mutual benefits.

Overall objective of the NWP is to contribute to economic development, poverty alleviation, food security, public health and safety and the protection of national environment. The Plan follows doctrines of integration, coordination, decentralization, popular participation and implementation of water-related programmes within the envisaged framework of good governance, equitable distribution and sustainable development.

4.5 Nepal Trade Integration Strategy (NTIS), 2010

In spite of the extension of market access due to Nepal's entry into the World Trade Organization and regional trading arrangements of SAFTA and BIMSTEC, the Nepalese exports particularly, the agro-based products could not be promoted. One of the reasons for low promotion was deficiencies involved in production emanated from topographical difficulties, climatic and vegetation diversities, poor application of appropriate technologies and the lack of skilled human resources and investments.

To create favourable trade environment, Nepal requires coherence between trade and industrial policies along with other sectoral policies contributing to develop forward and backward linkages in agriculture, non-timber forest sector, tourism and other service industries. To promote export, Nepal needs increasing market competitiveness. It should effectively mobilize the means for raising productivity such as physical, human and social capital with necessary structural changes and technical capacity development by maintaining a development-friendly culture.

The country has been portraying bleak export performance in the recent years. The balance of payment situation has increasingly become non-favourable. To overcome these problems, the Government launched a Trade Integration Strategy, 2010 emphasizing some priority actions for necessary trade competitiveness and diversities. It aimed to ensure proper market access; establish business-friendly environment for Nepali exporters in addressing the business challenges; strengthen supply capacity of exporters with competitive advantage (in terms of the production costs, quality of products and/or productivity); and mobilize greater Overseas

Development Assistance (ODA). To facilitate these, it emphasized strengthening of the trade negotiation capacity; technical capacities for domestic non-tariff-barrier; export capacity of “inclusive” goods and services; and capacity to coordinate and manage trade-related technical assistance.

The strategy emphasized coordinated relationship among the state and non-state agencies. It identified 19 export priorities: seven agro-based (e.g. large cardamom, ginger, honey, lentils, tea, noodles, medicinal and essential oils); five industrial products (e.g. handmade paper, silver jewelry, iron and steel and wool products); and seven service areas (tourism, labour, health, education, information technology, engineering and hydro-electricity). It also specified top ten market destinations for exportable products and services (**See Annex – VIII for the list of specified market destinations**). The strategy stipulates to contribute to overall national development, while alleviating poverty with export-led inclusive growth focus.

4.6 Other Supportive Policies, Acts, Rules, Regulations and International Commitments Related to Promotion of Agriculture and Food Security

Nepal aims to transform its subsistence agriculture into a competitive agribusiness. The National Agriculture Policy, 2004 holds long-term vision of developing sustainable agriculture for food security and poverty reduction. Specific objectives followed by the Policy are:

- To increase agricultural production and productivity;
- To make agriculture competitive with regional and world markets by developing commercial agriculture system; and
- To protect, promote and utilize natural resources, environment and biological diversities.

The Policy provides room for engagement of all kinds of farmers including those with or without access to adequate means and resources. It emphasizes production and productivity increase, while protecting, promoting and utilizing the natural resources. Accordingly, sub-sector policies, acts, regulations and guidelines have been developed covering food, feed, pesticide, livestock, meat, aquatic species, fertilizers, dairy, tea and coffee, seeds, research, agriculture service, consumer protection, forest and wildlife, environment, water, irrigation, electricity and land bank as the subject areas related to agriculture. International commitments are made and the conventions have been ratified in view of their support to agriculture development. However, these supportive policies, acts and regulations are not adequate. There are gaps in their coverage, which affects the strengths of the enforcement process (**See Annex – IX for details**).

V. SUPPORT OF DEVELOPMENT PARTNERS IN AGRICULTURE SECTOR RELATED ACTIVITIES

Nepal has access to generous support of multiple agencies. Both multilateral and bilateral DPs have been providing financial and technical assistance. They have developed their respective country strategies indicating the priority areas for collaborations. For example, the *World Bank in its Country Assistance Strategy (CAS-2004-07)* emphasizes its concerns for bringing resources closer to the beneficiaries for productive use, and collective donor actions in fostering strong governance to reduce waste and mismanagement of resources. The Bank supports decentralized activities, which involves local stakeholders including the private sector. It emphasizes donor cooperation. The Bank's priority-lending to agriculture is focused on ground water development (in Terai), rural development and investments for irrigation systems development. Other areas of support cover land tenure, off-farm employment and agriculture marketing. Similarly, the *Asian Development Bank (ADB) in its Country Strategy and Programmes (CSP-2005-09)* emphasizes stakeholders' capacity building for a sustained impact of the investments. Support is extended for policy reforms and institutional capacity building for increased production with diversification of opportunities. This Bank has been supporting fertilizer trade, irrigation development, food grain marketing and rural credit. It emphasizes community mobilization and accords priority to capacity building for planning and implementation at all levels.

For the International Fund for Agricultural Development (IFAD), Nepal was one of the first countries to obtain loan in 1978. Since then, it has been supporting Nepal's development efforts with an anticipation of bilateral contribution in its lending operations (i.e. for one dollar lent by IFAD, equivalent one dollar should be invested from the Government either on its own or in collaboration with other donors). Recent support of IFAD is focused on the development of policies and programmes related peace-building, reconciliation, reconstruction and economic recovery. Its deals with poverty issue that lie at the heart of conflict. IFAD has been directing its support to the hill and mountain areas, where the level of poverty is relatively high and the access to infrastructural services including market facilities is limited. IFAD's support has been largely confined to infrastructure development and delivery of services. It promotes targeting of marginalized groups in the context of improving income-generating opportunities.

The Department for International Development (DFID) in this Country Assistance Plan (2004 - 2008) emphasizes broad based sustainable development in Nepal. It provides support for economic growth, human / social sector development, social inclusion, improved governance and peace-building. It accord priority to poverty reduction and establishment of lasting peace in the country. Keeping in view the uncertain political environment, DFID has been maintaining flexibilities in the implementation of planned activities. It believes that such flexibility would contribute to respond to the emerging development needs and opportunities in the country.

The Country Operation Plan of the Government of Japan aligns with Nepal's recent priorities and emphasizes support for poverty reduction. It advocates pro-poor growth as a basis for economic development. As a short-term goal, it emphasizes poverty reduction based on local initiatives, while giving importance to sustainable growth for the medium-term. As a long-term goal, it gives priority to the industrial growth. For the accomplishment of these goals, it emphasizes human resources development and environmental conservation as the cross-cutting needs.

The Food and Agriculture Organization of the United Nations holds a vision of "the world free of hunger and malnutrition, where food and agriculture contribute to improving the living standards of all, especially the poorest, in an economically, socially and environmentally sustainable manner". In line with this vision, it emphasizes raising the level of food and nutrition securing through increased productivity and production as they contribute to improved living conditions of the people, which is free from hunger.

FAO has been supporting agricultural and rural development policy reforms in Nepal. It has been extending technical assistance for capacity building, early warning alerts for food security, exchange of policy dialogues, promotion of successful practices in enhancing production, natural resource conservation, agriculture development and food security.

The USAID, EU, Norway, Denmark, Finland, Switzerland and German Governments are other development partners contributing to Nepal's development. They emphasize economic growth, support to democracy, human rights, natural resource management and adaptation to climate change (e.g. Government of Finland). Support is also extended for Integrated Pest Management in agriculture (through SDC and Norway).

As one of the least developed countries in the region, Nepal is successful in appealing attraction for support from various development partners. The donors have been positively responding to its position as the country is reviving its lost development opportunities because of decade long conflict in the past **(See Annex – X for the Support Areas Covered by Various Development Partners Working in Nepal)**.

The UN development partners have commonly prioritized effective mobilization of support for Nepal's development to ensure peace. For agriculture and food security, they highlight the relevance of APP and Special Area Development Programme for Poverty Alleviation (SPPA). Likewise, in its Common Country Assessment (CCA) undertaken in 2006, the UNCT emphasized reduction of poverty and hunger by

highlighting the need for environmental sustainability, increased agricultural productivity and generation of employment opportunities. Some activities specified by this CCA were: crop diversification, adoption of improved technologies (including improved seeds, fertilizers and agro-forestry species), commercialization of agriculture, farmers' access to inputs, market infrastructure development, collection and management of disaggregated data for improved policy making and planning, development of irrigation schemes, reduction of post-harvest losses (with improved food storage and processing technologies), incentives for the involvement of private sector, access of farmers to land and other natural resources, development of non-farm small scale enterprises for employment generation, gender equity in the sharing of workloads etc.

Like CCA the UNCT have also developed UNDAF (2008 – 2010), which is extended up to 2012 now. It recognizes the need of ensuring participation of disadvantaged groups in the process of consolidating peace, access to the delivery of services, access to sustainable livelihoods opportunities and establishment of human rights as well as gender equality. To accomplish these, it has been supporting improvement of policies, institutions and programmes for poverty reduction; improvement of household food security; improvement of market access; improvement of energy services; improvement of environmental conservation efforts; and preparedness against natural disasters management. The UNDAF promotes partnership with a range of Government counterparts (central, district and local), donor agencies, NGOs, civil society organizations and community based organizations (CBOs).

The support provided by various development partners in the past suggests some lessons for the future. To make the implementation process stronger and meaningful, paying attention towards the following would be useful:

- Facilitate development process with consistent priorities;
- Maintain good governance in the delivery of institutional services;
- Anchor programmes and projects with sufficient availability of resources;
- Implementation of coordinated activities for greater synergy;
- Use monitoring to guide implementation of activities towards the right track;
- Mobilize local institutions for effective implementation;
- Promote broad-based economic growth for poverty reduction;
- Encourage participation of private sector with necessary incentive provisions; and
- Adopt inclusive approach for the representation of the needs of poor, vulnerable and socially excluded groups in mainstream development.

The MoAC and other ministries related to the agriculture sector are currently implementing around 40 projects with support from different DPs. Some of these projects are also supported by the INGOs (**see Annex – XI for details**).

VI. PROPOSED NATIONAL AGRICULTURE SECTOR DEVELOPMENT PRIORITY (NASDP) FOR THE MEDIUM-TERM (2010/11 – 2014/15)

The APP (1995/96 - 2014/15) follows twin objectives of poverty reduction and sustainable agricultural growth envisaging multiplier effects on the non-agriculture sector. The National Agricultural Policy 2004 lends from APP and outlines the implementation mechanisms to achieve the goals set. The Three-Year Interim Plan (2007/08 – 2009/10) encompasses the objectives of ensuring food security with enhanced agricultural productivity and commercialization. It emphasizes inclusive delivery of services and conservation for sustainable agro-biodiversity. It pays greater attention towards some cross cutting issues such as gender integration, management of migration of agricultural labour, adaptation to climate change effects and reforms on land utilization policies and incentives for increased investments. These priorities also coincide with the support of interest of various DPs. By reconciling the complementarities between Government's priorities and the possible areas of support that the development partners may wish to extend, following priority outcomes have been identified for the NASDP:

- 7.1 The agriculture system in Nepal largely represents rain-fed cultivation system. The application of quality inputs is limited. Soil nutrients are declining over the years. The farmers' attention towards soil management is limited. Investment in the farm activities is less encouraging due to lower return. The production largely suffers from the lack of access to basic agricultural inputs, improved animal breed and adequate animal feed. Pasture land for livestock is declining over the years. Encroachment of forest is increasing. The access of farmers to the institutional source of credit is limited. Though agriculture development has been accorded high priority in relation to other activities, the percentage of budgetary allocation is almost stagnant in relative terms.

Given that the production from agriculture sector is crucial for food and nutrition security, this sector demands increased attention towards enhanced productivity and diversification of crops. Similarly, it demands raising more productive livestock and fisheries. In order to promote planned activities for the future, the country needs to develop an action plan for food security for a longer term followed by subsequent production and employment generation programmes.

People holding small size of land (less than 0.5 ha.) or having no land (landless) are largely food in-secured in Nepal. The vulnerable groups of this category are: sharecroppers, non-tourist porters, agricultural labourers and the so-called lower caste groups. Currently, 42 hill and mountain districts (out of 75) in the country encounter food deficit. Ensuring food safety nets for these vulnerable groups is very much necessary. There is a need for increasing their access to farm and non-farm employment opportunities. At the farm level, involving them into a

collective agricultural system through farmers' organization could remain one of the options.

In relative terms, the marginalized communities such as Kamaiyas, Baadis, Deukis and other poor families are the most affected ones by food insecurity problems. Most of them are poor farmers or landless. The country lacks mapping of such vulnerable groups living in the hazard-prone areas. To prevent from the effects of natural and human-induced disasters, these groups should be provided with access to productive incentives (e.g. seed, fertilizer support etc.) and NTFP-based leasehold forestry activities. For this, assessment of natural resource endowments associated with the livelihoods of vulnerable households should be carried out. In view of all these, **"enhancing food and nutrition security and safety"** has been identified as one of key elements of NASDP.

- 7.2 For increased production and productivity, the agriculture sector needs transfer of technology among the farmers as most of them at present are less familiar about the advantage of switching over to technologies and tools. They need to use more farm machineries and tools with the application associated inputs (e.g. seeds and fertilizers). The use of farm machineries and tools has become important so as to reduce drudgery on women created by excessive out-migration of male agricultural labours.

The production pockets in the remote areas need substantial improvements in the use of improved technologies and tools supported by necessary access to associated services. This subsequently means that the delivery of the services (technology and inputs) should also be enhanced. For example, there is a wide gap between the demand and supply of artificial insemination services for cows and buffaloes. The same case is true for the delivery of quality veterinary services as well.

In the use of new technologies and tools, it is necessary to conduct adaptation trials for the new cropping practices. Suitable technologies and tools should be applied not only in the farm sector but also in the value chains (e.g. processing, storage and marketing) of the agricultural commodities. Taking these matters into consideration, it is felt that **"enhancing application of getting-better technologies and tools"** has been considered another important component of the NASDP.

- 7.3 Nepalese agriculture is suffering from higher cost of production due to the insufficiency of policy protection measures and the lack of provisions of minimum price guarantee of outputs. When compared to the cross-border situation, the Nepalese input and output prices cannot compete in the open

boarder markets. Nepal is also constrained by the design of incomplete policies and their supportive measures for implementation (e.g. acts, rules and regulations).

The service capacity is also low in agriculture as there are no adequately trained staff members against the skills demanded by their jobs. On the other hand, the support activities of the development agencies are less coordinated. At such situation, monitoring becomes a powerful tool in enhancing efficiency and effectiveness in planning and implementation. It also contributes to evolution of sustainable development process. Currently, the monitoring of policy enforcements is poor.

The participation of private sector in the areas of their comparative advantage is still poor. They lack incentives for involvement.

Despite the relatively higher priority accorded to the agricultural sector at the national level, there is no match between such thrust and actual allocation order. The country is significantly bringing-in remittance for the foreign workers. However, only one percent of such remitted money has been invested in the agriculture sector from the returnees. This situation demonstrates lower incentives for investment in agriculture. The share of institutional credit is only 28 percent. Against the fact that around 70 percent people hold agriculture as their occupation, this level of institutional disbursement is not enough to serve the agriculture sector needs.

There is a need for policy reforms for price incentives as appropriate and make the agriculture sector activities more lucrative (in terms of return to land and labour). It is also necessary that the policies and strategies should be backed up by subsequent acts, rules and regulations to make the planning and implementation process more operational and effective. This demands consistency in the priorities and political commitments. Without such support, the policies, strategies and legislations developed in the country simply remain unattended. They get crashed before they become operational in the current Nepalese situation because they are compounded by frequent changes in the Government.⁶

Nepal has already developed some policies, acts, rules and regulations to support achievement of efficient and effective management of development interventions. However, their successful results depend on the application of

⁶ For example, almost all Governments talked about private sector participation as one of the priorities but practical implementation of such priority has still to be realized yet. This kind of situation does not give good message to the private sector, which often plans its investments with fairly long-term consideration.

good governance practices, which maintain transparency in the utilization of resources. At macro level, the Government should fill the policy and legislation gaps⁷, while at micro level these provisions should be properly enforced.⁸

The country needs to strengthen institutional capacities for the implementation of priority activities. The staff members need to be trained on the subject areas suitable to their jobs. Incentives should be provided for private sector involvement in the areas of their comparative advantage, while strengthening the capacity of public sector in facilitative actions and regulatory services. The Ministry and Departments should be capacitated for the specified priority missions for the work to be accomplished quickly, among others. In view of these reflections **"promoting enabling environment"** has been selected as one the focus areas of NASDP.

- 7.4 The Nepalese agricultural production system is not so much market-oriented yet. Though the country is emphasizing commercialization of agriculture, it lacks infrastructural support facilities. Due to the difficulties of access to markets, the agricultural products mostly suffer from higher cost of production. As Nepal is import-dependent for the raw materials and inputs (e.g. feed for the livestock, seeds and fertilizers), it is frequently affected by price fluctuations. Due to the country's access to open border market, the sale of local products becomes less competitive⁹ (the import of chicks and eggs are some examples affecting the domestic market price of local products).

Trans-boundary disease is another problem area affecting the market access (e.g. swine flu and bird flu affecting both raising and hatching cycles).

To promote commercialization of agriculture, Nepal needs to access competitive markets. For this, the Nepalese farmers require support on inputs and marketing of products. Strengthening sustainable links between production and marketing is therefore necessary. Support is also necessary for storage facilities and increased adoption of processing technologies. The country should work on removing trade barriers in export and import. It should also arrange supportive equivalence and accreditation systems.

⁷ For example, some subject areas are covered by already designed policies and legislations, while many other areas still need to design similar measures. .

⁸ The implementation of Local Self-Governance Act, 1999 could be a good example for the DADO and DLSO related functions in this regard.

⁹ The market price of Nepalese product is often high compared to similar product made available from the Indian market. The Indian products benefit from subsidy, while the Nepalese farmers are deprived of such facilities. As a result, they cannot compete with Indian commodities produced across the border.

Establishing quality control and safety mechanisms in the production, distribution, import and export is necessary. The in-country policies, regulations and institutional competencies should be made compliant to the provisions of the World Trade Organization (WTO) in the context of membership taken by the country already. All these suggest that ***"promoting market-orientation and competitiveness"*** should be given proper attention as one of the concerns for NASDP.

- 7.5 The development of agriculture sector is dependent on the conservation and utilization of natural resources. Owing to the population pressure, the watershed areas in the country is however on a serious stress. The deforestation rate is estimated at 1.7 percent per year due to excessive encroachment of forest areas. Occurrence of flood, landslide and soil erosion have been adding hazards at various locations each year. The natural resources are thus over exploited than their retaining capacity. Their environmental effects are not adequately monitored.

The forest land area is also increasingly degrading. People are cultivating in the marginal lands with less care about the use of environment-friendly technologies. Research on the environmental effects of such land is poor.

Due to the deteriorating forest and watershed conditions, the conservation of bio-diversities has suffered a lot. The depletion of rare and native resources is on rise. As meeting the livelihoods pressure is a matter of priority, the poor people cannot balance the harvest of forest resources. Most of them are hardly aware about the sustainable ways of bio-diversity management.

Promotion of leasehold forestry has become one of the ways of supporting livelihoods, poverty reduction and food security for the poor families. Similar efforts should be expanded with pro-poor / marginalized people friendly forest management practices. The forest areas should be productively used for sustainable livelihoods opportunities. Institutionally, developing a federation of the leasehold forestry groups would be useful as well.

Promoting plantation of Non Timber Forest Products (NTFPs), medicinal and aromatic plants (MAPs) in the private land, Community Forest and Leasehold Forest would be useful to generate more employment opportunities. For this, private investment friendly policies and guidelines for the NTFPs should be developed.

There conservation and use of forest resources requires research on sustainable utilization potential of the resources. It should also examine how

benefit can be derived to the agriculture sector, while maintaining sustainability at the same time.

The country needs to delineate bio-diversity rich areas and conserve them. The rare and native species should be protected. To facilitate this, establishment of a gene bank at the Nepal Agricultural Research Council (NARC) would be useful.

Keeping in view the increasing number of food insecure people each year, Nepal needs sustainable management of natural resources (land, water and bio-diversity). As these resources contribute to income generating opportunities, they should be utilized in view of their consistency to a sustainable conservation limit. The country needs to conserve and effectively manage the watersheds with enforcement of necessary environmental quality standards and sustainable management of forest.

People are not fully aware about the effects of climate change at different levels (national, district and community). The rainfall deficit is often triggering intensive emergency operations in the country (e.g. in 2006 and 2009). The country seriously needs location specific adaptation strategies to manage the risks associated with climate variability and change in agriculture. It requires promotion of environment-friendly production practices.¹⁰ The institutional and technical capacities should be strengthened for disaster risks management. Assessments and monitoring of adverse effects should be carried out to protect vulnerabilities through early warning system.

Enterprises should be diversified¹¹ and bio-engineering approach should be promoted.¹² The country needs to utilize the benefit of National Adaptation Programme of Action (NAPA) process for coordinated interventions (among different stakeholders such as Government, non-government organizations and international communities).

The climate change adaptation and disaster management experience gained from piloted sites should be up-scaled.¹³ The technical capacity of MoAC, Department of Agriculture (DoA) and Department of Livestock Services (DoLS) should be strengthened to pro-actively address the climate change risks management and disasters prevention / preparedness from the agricultural perspectives. Climate Change Adaptation (CCA) and Disaster Risk Management (DRM) system should be introduced in planning sustainable

¹⁰ By developing drought / heat stress tolerant varieties and supportive technologies.

¹¹ For example, by changing farming of food grains to vegetables,

¹² For examples, by planting trees to protect the soil from erosion.

¹³ For example, FAO has tested some location specific pro-poor adaptation interventions already at the local level in the risk-prone districts.

agriculture and rural development activities of the MoAC Alertness should be enhanced against the possible disasters, while developing the agricultural practices suitable for adaptation to the climate change effects.

The country is increasingly facing food shortage due to low production of food per capita.¹⁴ To overcome this situation, there is a need for developing proper land use practice and system¹⁵ that can contribute to increase agricultural production and productivity with necessary environmental sustainability and conservation of bio-diversities. As there is no definite land use plan, the status of land use in the country is less known. The Ministry of Agriculture, Ministry of Forestry and Ministry of Housing and Transportation have done some land use planning but they are not well integrated.¹⁶

The land issue in Nepal is also a source of conflict leading towards the political instability in the country. Unequal distribution, greater number of landless people and the squatters moving into the urban areas are major problems associated with land. The confiscation of land, encroachment of the forest areas and the occupancy of open areas in the cities are growing. Plotting of fertile land areas for housing purpose has adversely affected food production. In the recent years, the land in the sub-urban areas is not owned to produce food but to earn more money through price speculation.

The Government formed three high level commissions – Commission on Land Reform; Commission on Providing Solutions to Problems of Resettlement of Squatters; and the Commission on Solving the Problems of Kamaiyas. A National Land Use Project is implemented to facilitate planning. A provision of Land Council also exists under the NPC.¹⁷ Formulation of these commissions and Council indicates that the need for formulating effective Integrated Land Use Plan / Policy (i.e. an ‘integrated land policy’, which stipulates clear priorities with decentralized process and allows the application of improved technologies) has been realized. It also needs reform in the present legal systems. The country needs ‘integrated land use law’ with specific guidelines.

Ground studies would be useful to explore unused land (like river beds) and practice managed cultivation of such areas for the benefit of poor and landless

¹⁴ About 3.4 million households in the country are facing food insecurity problems (WFP et al 2009). Sixty-six percent of rural households surveyed as part of this assessment are already experiencing food shortages; the worst hit areas are in the Far- and Mid-Western Hill and Mountain Districts.

¹⁵ The term "land use system" discussed in this report covers agricultural land, forestland, community forestry, leasehold forestry, pasture and waste land. It also considers the management regime of land such as owner cultivated, user rights, leasehold and management with traditional rights.

¹⁶ For example, the Ministry of Forestry maintains 40 percent of the country's land as area under forest (which is more or less the same as it exists now), while the MoAC maintains agriculture land at about 20 percent of the total area of the country.

¹⁷ However, this Council, together with its district level committees, is not functional.

communities. The capacity of Ministry of Land Reform and Management should be strengthened on land administration. Policies should be developed for preservation of pasture, especially in the highland to support animals like yaks, highland sheep and goats.

Piloting of different modalities of land consolidation would be useful in reducing excessive land fragmentations. Policies and strategies can be developed to expand 'leasehold forestry' areas for the benefit of landless households. The Community Forestry activities can be expanded with policies and practices to increase food for the poor and landless families. Appropriateness of the "land tax structure" should also be reviewed to discourage misuse of land.

In view of all the above mentioned reasons, **"sustaining natural resource conservation and utilization"** has been selected as one of the focus areas of NASDP.

- 7.6 Nepalese agriculture is largely rain-fed.¹⁸ Because of higher dependency of cultivation on the uncertainties of rainfall, the farming system is less predictable. Moreover, increasing climate change effects over the years has made the production calendars more vulnerable. The timings of cultivation have become uncertain thus affecting the level of productivity.

Nepal being a rich country in terms of availability of water resources, there are potentials for the development of more number of irrigation infrastructures. However, the progress towards this end is still limited to-date. In addition to the development of gravity flow and ground water uses, the country could promote water harvest techniques to increase some command areas of irrigation. Considering the demand for irrigation, the country needs to develop and rehabilitate several irrigation infrastructures, while reducing the sedimentations and enhancing overall water management efficiency in the current systems.

Low road density¹⁹ or no road connection²⁰ is another problem area affecting mobility of inputs to the farms and outputs to the market in most of the remote areas of the country. The transport cost of inputs to these areas is also high due to the soaring price of fuel. The prices relieved by the farmers for farm products are unfavourable. As a result, there is no market-oriented production incentive among the farmers. To overcome this kind of situation, the country needs to connect farmers with the market by increasing rural road connections, especially in the production pocket areas. Further, new market centres should be

¹⁸ Only around 35.4 percent of the cultivated land has been recorded as irrigated in 2008/09.

¹⁹ Only around 30 percent of the rural population have access to all weather roads. More than 60 percent of such road network falls in the lowland area.

²⁰ Around 15 out of 75 districts are still not connected by all weather roads.

developed to make the agriculture sector more agribusiness-oriented. In view of these, **"developing infrastructure support facilities"** for agriculture development and food security has been selected as one of the important elements of NASDP.

- 7.7 Women in Nepal are marginalized in accessing resources and also in getting benefit from the development opportunities when compared to their male counterparts.²¹ As the HDR puts it "unequal human development is both a cause and result of their exclusion". To overcome this situation, the country needs strong socio-economic transformation.

Nepal has been emphasizing commercialized agriculture, which is possible only through the transformation of current production-oriented economy into a market-oriented economy. This demands equal and effective participation of both men and women.

Women contribute significant proportion of labour force in agriculture. Therefore, their capacity needs to be enhanced. Conducive environment should be created with gender friendliness. Some factors that could contribute to such environment are: increased involvement of women in the agricultural training programmes; incentives for women's involvement in agribusiness; application of women-friendly tools and technologies; introduction of drudgery reducing technologies; and linking women groups with more productive activities and markets.

Women are the ones, who suffer most from poverty and food insecurity. To reduce feminization of these issues, adequate attention should be given for gender budgeting, gender planning and gender auditing. The household level work should be reallocated and redistributed between men and women with subsequent valuation of women's contribution to the household affairs.

More extension and training services should be provided to women. Their entrepreneurship skills should be developed in all value chains. The gender dimension should be accepted as a social issue. Its mainstreaming should be internalized as a development culture to be promoted. In view of all these **"enhancing integration of gender in agriculture"** has been selected as one of the important components of NASDP.

- 7.8 Nepalese people in the remote areas are affected by food deficit for about 6 to 8 months in a year. As the productivity of agriculture is low and also that there are no adequate off-farm employment opportunities at the local level, the poor

²¹ According to the CBS 2009, women's participation in economic activities is 55.2 percent as opposed to 71.6 percent men. Since women's access to the household assets and other productive resources is limited, the poor women outnumber the figures of poor men (HDR 2009).

people²² often tend to migrate. As the country has not been able to enhance the rate of agriculture growth closer to the population growth pressure, it has added fuel to the push factors of migration.

Every year more than 400,000 youths enter into the labour market. However, the employment opportunities to accommodate them in jobs are limited. The unemployment rate is increasing against a majority of poor people demanding food security. There is a need to cope with both push and pull factors of migration for the benefit of agriculture sector.

Subsequent to the out-migration people from village, the shortage of agriculture labour is increasing, which adds drudgery on the family members (mostly women) who have not migrated.²³ Such increase in migration has not only caused labour shortage in the agriculture season but also added risk to the inter-generational transfer of agricultural knowledge from the elders to youths. Nepal needs to correct this situation by attracting youths in the agriculture sector. For this, promoting value chain activities for the generation of more employment opportunities would be useful.

Preventing the tendency of youths' withdrawing from agriculture is important. To revert distracted interest, the country needs to make the agriculture sector more glamorous. Some youths-friendly production incentive packages should be introduced. As the current investment level for the sector is low, increasing investments together with the mobilization of remitted money is important.²⁴

The drudgery on women is increasing together with the rise in the number of out-migrating males. The number of female-headed households is increasing in the rural areas.²⁵ To reduce their work burden, training women and enhancing application of mechanized technologies and tools should be emphasized.

Viewing all these circumstances ***"managing the effects of migration of agriculture labour"*** has been considered as one of the crucial components of NASDP.

²² Around 22 percent people in the rural areas are poor, while their proportion is around 8 percent in the urban areas, In the Mid-western Development Region their proportion is 37.4 percent as the highest.

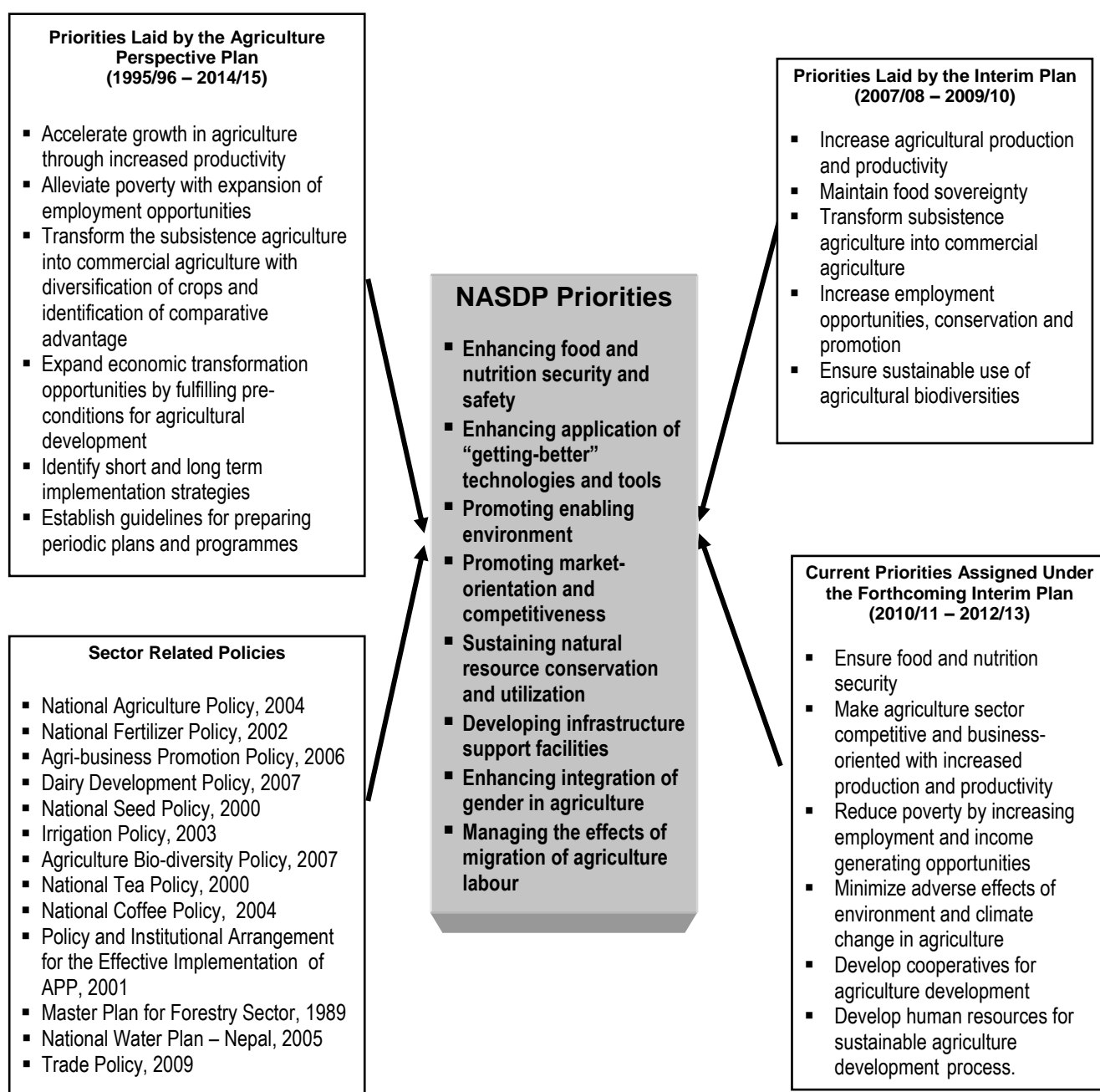
²³ The migration of village youths for foreign job indicates that around 90 percent of the migrants are male, while the female migrants are only 10 percent.

²⁴ Currently, around 30 percent households receive remittance of around NRs 65,755.- in average per year. Of this, they invest only one percent in agriculture.

²⁵ It has reached 22 percent in 2008 from 14 percent in 2001.

The focus areas of the NASDP are proposed in view of the Government's key preferences among various choices. They comply with the potential support interest of the development partners as demonstrated from their past collaborations. The priorities are determined with analysis of current situation of the agriculture sector and food security, their relation with the overriding policies, plans and emerging thrusts. They are captured into eight selected clusters as presented in the conceptual framework below:

Figure -1: National Agriculture Sector Development Priority (2010/11 – 2014/15)



For each of the eight priority outcomes identified, some expected improvements / outputs are also recognized. It is believed that by accomplishing these outputs, the following priority outcomes would be attained:

PRIORITY 1: ENHANCING FOOD AND NUTRITION SECURITY AND SAFETY
<i>Expected Improvements/Outputs:</i>
1.8 Productivity and production increased
1.9 Access of farmers to improved quality extension, research and related support services
1.10 Increased rural finance coverage
1.11 Animal health improved for enhancing production and productivity of protein supplement to food
1.12 Access of sufficient and safer food for the poor and vulnerable groups ensured
1.13 Strengthen food supply management / distribution system
1.14 Emergency preparedness, response and recovery support strengthened to minimize the extent of vulnerabilities
PRIORITY 2: ENHANCING APPLICATION OF “GETTING-BETTER” TECHNOLOGIES AND TOOLS
<i>Expected Improvements/Outputs:</i>
2.3 Increased adoption of improved / efficient technologies for enhancing agriculture production and processing
2.4 Reduced drudgery in the agricultural value chain operations
PRIORITY 3: PROMOTING ENABLING ENVIRONMENT
<i>Expected Improvements/Outputs:</i>
3.1 Supportive policies, acts, rules and regulations developed with complementary functional linkages
3.2 Enhanced institutional capacity in the delivery of demand-friendly agricultural services
3.3 Increase investment in agriculture
PRIORITY 4: PROMOTING MARKET- ORIENTATION AND COMPETITIVENESS
<i>Expected Improvements/Outputs:</i>
4.5 Production diversified with market orientation from agri-business perspective
4.6 Prices made supportive for both inputs and outputs
4.7 Institutional support services for marketing of inputs and outputs enhanced
4.8 Cross boarder import and export promoted through control of trans-boundary diseases and barriers to trade

PRIORITY 5: SUSTAINING NATURAL RESOURCE CONSERVATION AND UTILIZATION
<i>Expected Improvements/Outputs:</i>
5.6 Conservation and utilization of bio-diversities sustained
5.7 Watershed services revived for sustainable use
5.8 Land management practices improved for sustainable use in a conflict-free environment
5.9 Sustainable management of forest resources for income generation and food security
5.10 Climate change risks adapted with enhanced counteracting capacities of the local communities
PRIORITY 6: DEVELOPING INFRASTRUCTURE SUPPORT FACILITIES
<i>Expected Improvements/Outputs:</i>
6.5 Irrigation infrastructures expanded with enhanced water management efficiency
6.6 Rural roads constructed and maintained for enhanced access to the major market centres
6.7 Rural energy promoted for the production and processing value chain operations
6.8 Rural infrastructures for processing, quality test of products and marketing facilities improved
PRIORITY 7: ENHANCING INTEGRATION OF GENDER IN AGRICULTURE
<i>Expected Improvements/Outputs:</i>
7.3 Integration of gender improved in productive spheres of the agricultural development activities
7.4 Women empowered for equal development opportunities
PRIORITY 8: MANAGING THE EFFECTS OF MIGRATION OF AGRICULTURAL LABOUR
<i>Expected Improvements/Outputs:</i>
8.3 Migration minimized with promotion of more employment opportunities at the local level
8.4 Agricultural occupation made more lucrative for the attraction of youths

(See Annex XII for focus activities related to expected improvements / outputs desired).

VII. CONCLUDING REMARKS

The low productivity and production of agriculture in Nepal have not only increased the risk of food insecurity but also accelerated unsustainable use of natural resources. Poor people desperately attempt to cultivate extended parcels of marginal lands to meet their livelihoods. Taking this situation into consideration, Nepal has been emphasizing broad based agricultural development for both economic growth and food security of the vulnerable groups. Accordingly, emphasis has been given for the delivery of demand-led services, while promoting participation of the private sector in the areas of their comparative advantages. As the prospect for expanding cultivation area is gradually shrinking, the country has to focus more on the ways of diversifying agriculture and enhancing productivity with necessary support.

One of the problems encountered by the country in improving agricultural performance was frequent shift of priorities subsequent to the change of Governments in the absence of a consolidated priority framework. With the design of this NASDP, it is believed that such prejudice will be minimized as it provides an agenda for the medium-term. It is also expected that the formulation of this NASDP would also encourage cooperating partners to support in the priority sector. This way, it would also contribute to attract more investments in agriculture corresponding to the priority objectives of food security, poverty alleviation, inclusive growth, promotion of agribusiness and sustainable natural resource management. For successful implementation of this NASDP, coherence, timeliness and assistance to the common priority areas would remain crucial.

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Annexes

List of Inter-Ministerial Taskforce Members Contributing to the Formulation of NASDP

S. N.	Name	Designation and Office
1	Mr. Nathu Prasad Chaudhary*	Secretary, MoAC
2	Ms. Bui Thi Lan*	FAO Representative
3	Dr. Purushottam Mainali	Jt. Secretary (Planning), MoAC
4	Mr. Bishnu Aryal	DDG (Planning), DoA
5	Mr. Bishnu Prasad Aryal	DoA
6	Dr Nara Bahadur Rajwar	DDG (Planning), DLS
7	Mr. Dhruva Prasad Acharya	Sr. DE, DoI
8	Mr. Sudhir Man Basnyat	DoI
9	Mr. Pradeep Kumar Manandhar	Sr. DE, DoI
10	Mr. Biju Kumar Shrestha	ARD, NPC
11	Mr. Mahendra Nath Poudel	Senior Agri Economist, MoAC
12	Mr. Lalan Kumar Singh	Agri Economist, MoAC
13	Ms. Bindira Adhikari	Agri Economist, MoAC
14	Ms. Sabnam Shivakoti	Senior Plant Protection Officer, MoAC
15	Mr. Kamal Gaire	Senior Agri Extension Officer, MoAC
16	Mr. Drona Pokhrel	Under Secretary, Ministry of Land Reform and Management
17	Jeiwan Prabha Lama	DG, DFTQC
18	Mr. Shrawan Adhikary	PO/FAO
19	Dr. Lokendra Poudyal	TL / NMTPF/FAO
20	Mr. Purna Lal Shrestha	NA / NMTPF/FAO

* Attended some meetings as "invitee"

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S. N.	Name	Designation	Organization
A. FAO Staff			
1	Ms Bui Thi Lan	FAO Representative	FAONP
2	Mr. Lakshman Gautam	Assistant Representative	FAONP
3	Mr. Shrawan Adhikary	Programme Officer	FAONP
4	Mr. Selvaraju Ramasamy*	Natural Resources Officer	FAONRC
B. Consultants (NASDP/NMTPF Formulation)			
1	Dr. Lokendra Poudyal	National Team Leader	FAO
2	Mr. Purna Lal Shrestha	National Assistant	FAO
C. Consultants (Thematic Studies)			
3	Mr. Tek Bahadur Thapa	Agricultural Extension Support System	FAO
4	Dr. Govind Koirala	Pricing Policies for Agricultural Inputs and Outputs	FAO
5	Mr. Shree Krishna Adhikary	Agriculture Mechanization	FAO
6	Ms. Milan Adhikary	Integration of Gender in Agriculture (UNIFEM)	FAO
7	Mr. Shingha B. Khadka	Food Security and Nutrition	FAO
8	Mr. Jagannath Adhikary	Land Use Policy and Planning	FAO
9	Mr. Shyam Prasad Poudel	Market-led Meat Production and Processing	FAO
10	Mr. Mahendra Raj Sapkota	Dairy Development	FAO
11	Mr. Krishna Prasad Sankhi	Hides and Skins	FAO
12	Mr. Ramjee Prasad Ghimire	Livestock in High Altitude Areas	FAO
13	International Organization for Migration, Nepal	Labour Migration and Agriculture	FAO

* Contributor to the thematic study on “Climate Change and Agriculture Production System”

Annex - III

Line Ministries, Departments, Development Boards, Corporations and Companies Associated with Different Agricultural Activities

S.N.	Institutions	Associated Activities
A. Ministries Contributing to Agriculture and Associated Sectors / Sub-Sectors		
1	Ministry of Agriculture and Cooperatives (MoAC)	Crop, livestock, horticulture and fishery development
2	Ministry of Land Reform and Management (MLRM)	Land reform
3	Ministry of Irrigation (MoInd)	Irrigation facility
4	Ministry of Energy (MoE)	Rural energy
5	Ministry of Forest and Soil Conservation (MoFSC)	Soil conservation and watershed management; leasehold forestry; and medicinal and aromatic plants
6	Ministry of Local Development (MLD)	Rural development
7	Ministry of Health and Population (MoHP)	Nutrition
8	Ministry of Finance (MoF)	Budget allocation to all line ministries. Also a liaison ministry for the ADB/N supported Tubewell Irrigation Project
9	Ministry of Industry	Promotion of agro-based industry
10	Ministry of Commerce and Supplies (MoCS)	Promotion of export potential agro-based and industrial products
11	Ministry of Science and Technology (MoST)	Promotion of appropriate technology
B. Departments, Boards, Corporations and Companies		
1	Line departments	Line functions of the Ministry.
2	Autonomous development boards	Functions indicated in the Development Board Act, 1956.
3	Affiliated corporations	Specified development functions.
4	Companies (Established under the Corporations or Company Act 1964).	Distribution of inputs and marketing of products.
C. Autonomous Entities		
1	Nepal Agricultural Research Council (NARC)	Agriculture research
2	Nepal Veterinary Council (NVC)	Veterinary services
3	National Cooperative Development Board (NCDB)	Development of cooperative societies
4	National Dairy Development Board (NDDB)	Dairy development
D. Public Sector Institutions Outside the Government Structure		
1	Institute of Agriculture and Animal Science	Train technical graduates
2	Institute of Applied Science and Technology	
3	Institute of Forestry	

Agricultural Extension Support System

Nepal formalized offering of agricultural extension services together with the import of foreign technologies in 1951. Since then, many bilateral and multilateral development partners have supported modernization drive of agriculture to improve the livelihoods of farming communities. Over the years, several experiments such as 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 on a project basis, the lessons learned from these experiments could not be institutionalized much owing to the budgetary limitations. However, the Farmers' Group method of extension service delivery is still in use as a system for advising farmers.

As Government is the only extension service provider in Nepal, the present level of coverage is around 15 percent agricultural households nationwide. The private sector service providers were engaged in the Asian Development Bank assisted Crop Diversification Project. However, its replication was limited due to funding constraints. In the livestock sub-sector, animal health services show some degree of privatization.

Frequent restructuring of the MoAC also influenced agricultural extension system and services offered. "One-window" extension service was attempted time and again but failed to materialize. Currently, the DoA and DLS under the MoAC are responsible for public extension services delivery through their district agencies.

NARC focuses on crop research to enhance productivity. The high-value such as livestock, horticulture, fisheries and medicinal / aromatic plants has not received adequate research priority. Post-harvest activities, business development and marketing functions are lagging behind thus affecting commercialization and national / international trade. Grading, processing, packaging, quality control and certification systems required to enhance producers' competitiveness have not been adequately addressed. There is no agricultural university in the country although the Institute of Agriculture and Animal Sciences and the Central Campus of Technology of the Tribhuvan University offer undergraduate and graduate courses. The vocational education falls under the jurisdiction of the Ministry of Education.

Linkages among extension, research and education sub-systems are weaker. The Agriculture Technical Working Group under National Agricultural Research Council is almost dormant. Active participation of sub-system stakeholders for joint programming is lacking. The attempt for results-oriented monitoring, evaluation and feed-back mechanisms and scaling up of best practices is also limited. Not all extension agents are equally competent to meet contemporary needs, priorities and

the demands of agricultural producers. Funding support is barely adequate to support required extension programmes costs. The technical recommendations passed on the farmers by extension workers are not readily usable in the absence of required production inputs (seeds, breeds, fertilizers, drugs, animal feed, fingerlings, chemicals etc.) in the remote areas. The agricultural credit is not earmarked in consonance with the extension programme objectives. There is a lack of rural infrastructures for farm to market movement of agricultural products. The devolution of agriculture and livestock extension is not effective due to the absence of elected body at the district level to facilitate devolved functions.

Adaptation to Climate Change Effects in Agriculture and Food Security

The climate of Nepal varies greatly from South to North due to the vast altitudinal variations. It has made the country an abundant storehouse of biodiversity and ecological niches with diverse agro-climatic zones ranging from the subtropical to the alpine and tundra. Temperature observations show greater warming trend with an annual mean temperatures increase of 0.06°C. Such increase is more pronounced at the higher altitude areas and in winter. The trend of warming is greater not only in higher elevation areas but also in the lower elevations of *Terai* region. Most of the Terai belts and western Nepal observe negative trends of such changes. The overall temperature in the country is expected to rise at the rate of 0.41° per decade.²⁶

Since majority of the farmers in Nepal are reliant on rainwater for irrigation, they prepare their cropping calendar based their past experience about the intensity and the time of rainfall. However, the emerging situation of the climate related natural hazards undermine their agriculture productivity adding fuel to more poverty, food insecurity and conflicts. The agriculture dependent livelihood activities of farmers are frequently exposed to a variety of natural disasters such as floods, landslides, cold waves, heat waves, drought and epidemics. Rapid population growth, shrinking farm size, unplanned agriculture in the hazard-prone areas is likely to further increase the hazard exposure and losses, if no countermeasures are put in place. The cropping intensity in the vulnerable areas is increasing due to population pressure and demand for food. Overall cropping intensities on rain fed areas are noted as being more than two to three times the quoted national average of 1.3 and 1.6.

In the Terai region, people report of more frequent and less predictable monsoon flooding making it more difficult to prepare for and to cope with. They also face more extremes, including severe 'cold waves' that destroy winter vegetable crops, temperature extremes and prolonged heat spells affect wheat at maturity stage. Winter droughts are also increasingly evident causing widespread damage to agriculture in Terai and mid-hills.

Changing hydrological flows both due to glacial retreat and more variable precipitations are expected impact on many irrigation systems, water-powered grain mills, hydropower plants and drinking water supply systems. This will affect agricultural production leading to increasing levels of malnutrition.

The current coping strategies such as growing vegetables instead of grain crops; rain water harvesting and erosion control measures are not enough to manage the future

²⁶ National Communication to the Conference of the Parties of the UN Framework Convention on Climate Change, Ministry of Environment, Science and Technology, Kathmandu, July 2004.

expected changes in climate and associated impacts. On the other hand, there is inadequacy in the preparedness against disasters too.

The country needs to follow disaster risk reduction approaches to the best possible (e.g. the approaches like flood mitigation by using 'bio-engineering' – the use of plants to bind soils and stop erosion and the development of early warning systems for floods and drought and weather and climate information for risk management in agriculture).

Nepal has recently embarked on creating a National Adaptation Programme of Action (NAPA), which would guide the process for climate change adaptation as awareness of climate change at the national, district and community level is still a challenge in the country as is coordination of the many actors. The country needs to utilize NAPA process as a catalyst to develop appropriate policies and strategies and a means to build shared understanding and coordination between the Government, non-government organizations and the international community.

Nepal has developed national strategy for disaster risk management in collaboration with UNDP. UNDAF has included disaster management as one of the major areas requiring support of FAO. European Union and DFID have also included disaster management and Climate change adaptation as one of their areas for assistance.

Majority of disaster risk reduction project and activities being identified relate to the preparedness for saving lives and better establishment of infrastructural measures. Some focus on reforestation, soil conservation and watershed management. However, very little has been done so far on preventive and preparedness actions in the core areas of agriculture like adapting crop varieties, seeking suitable cropping patterns, fruit tree or hedge row intercropping, identifying suitable seeds systems, reducing risk on water management at the farmers field and livestock management practices. FAO is currently involved in supporting preparation of DRM plan in four districts, which largely focuses on the DRM and climate change adaptation related to agriculture sector. In addition, FAO and UNDP are jointly assisting to develop DRM plans in two more districts.

The institutional and technical capacity of the MoAC at national and district levels (within its DoA and DLS) is needed to address climate risk management and disaster prevention / preparedness related issues from an agricultural perspective in a proactive way. They should mainstream DRM into the MoAC's sustainable agricultural and rural development planning process.²⁷ Building institutional and technical capacity within MoAC related to climate change impacts, vulnerability assessment and adaptation planning and implementation will provide comparative

²⁷ The new strategy for DRM provides for the first time in Nepal an institutional framework which recognizes the important role of agriculture in DRM.

advantage to better represent the agriculture sector at the national level adaptation initiatives facilitated by MoEST.

FAO is moving ahead with technical support for the preparation of Five Year Plan of Action (PoA) to prioritize essential elements of climate change adaptation and disaster risk management. Its technical assistance covers facilitation of the processes related to prioritization of agriculture and food security perspectives into NAPA.

Pro-poor adaptation interventions need to focus on community needs. As the climate change impacts and adaptation are location specific, interventions at the local level require introduction and demonstration of innovative adaptation options through a guided learning by doing process. Locally adapted gender-friendly process should be enhanced: with local awareness about adaptation to climate variability and changes.

Within the framework of NAPA and the Five Year Plan of Action (PoA) for DRM and climate change adaptation in the making can assist to implement a comprehensive approach to manage climate risks. The National Strategy for Disaster Risk Management and the priorities set for Government's Legislation and Disaster Management Act, the New Climate Change Policy and Strategy (under development) can contribute to MoAC in shifting its reactive emergency response towards a pro-active natural hazard risk prevention / preparedness approaches.

Opportunities exist to learn, up-scale and institutionalize potential actions within the context of implementing prioritized actions under the Five Year PoA for MoAC and adaptation priorities to be outlined in NAPA. It will be consistent to the new national strategy for disaster risk management prepared in collaboration with UNDP and the likely interest of the development partners such as Global Environment Facility, DFID, USAID, World Bank, JICA, ADB, SDC, EC, Germany-GTZ, Norway, Italian Cooperation (MAE-DGCS) and DGIS/SNV.

Sectoral Allocations under Various Periodic Plans

Sectors/Sub-sectors	Total Outlay (NRs. Million)	Sectoral Allocation as Percentage of Total Outlay	
		Agriculture Related	Other than Agriculture
First Five-Year Plan (1956/57 - 1960/61)	330		
Agriculture and Forestry		9.7	
Irrigation and Drinking Water		6.1	
Village Development		12.9	
Public Works, Transport and Communications			37.6
Electricity			9.1
Industry, Mining and Tourism			7.6
Health			7.6
Education			5.8
Miscellaneous			3.8
Second Three-Year Plan (1962/63 - 1964/65)	600		
Agriculture, Irrigation and Forest		13.6	
Land Reform, Survey and Statistics and Training		13.2	
Transport, Communications and Power			39.1
Social Services			17.1
Industry and Tourism			17.0
Third Five-Year Plan (1965/66 - 1969/70)	2,500		
Agriculture and Irrigation		25.9	
Transport, Communications and Power			37.2
Industry			17.5
Social Services			16.6
Miscellaneous			2.8
Fourth Five-Year Plan (1970/71 - 1974/75)	3,540		
Agriculture, Land Reform, Irrigation, Forest and Botany		33.1	
Transport and Communications			35.4
Industry, Commerce, Power and Mining			20.3
Panchayat, Education, Health and Social Services			10.8
Statistics			0.4
Fifth Five-Year Plan (1975/76 - 1979/80)	11,404		
Agriculture, Land Reform, Irrigation and Forestry		34.8	
Transport and Communications			29.7
Industry, Commerce, Electricity and Mining			17.9
Education, Health, Drinking Water, Panchayat and Social Services			17.6
Sixth Five-Year Plan (1980/81 - 1984/85)	33,940		
Agriculture, Irrigation and Forest		31.1	
Industry, Mining and Power			26.0
Social Services			25.6
Transport and Communications			17.3
Seventh Five-Year Plan (1985/86 - 1989/90)	50,410		
Agriculture, Irrigation and Forest		34.3	
Social Services			29.8
Industry, Mining and Power			21.5
Transport and Communications			14.4

Eighth Five-Year Plan (1992/93 - 1996/97)	113,479		
Agriculture, Irrigation and Forest		25.7	
Social Services			31.6
Electricity			20.9
Transport and Communications			17.7
Industry and Mining			2.0
Trade and Tourism			1.3
Miscellaneous			0.9
Ninth Five-Year Plan (1997/98 - 2001/02)	372,711		
Agriculture, Irrigation and Forest		16.8	
Electricity, Gas and Water			19.1
Social Services			17.1
Finance and Land (Real Estate)			16.4
Transport and Communications			13.0
Industry (including Quarrying and Mining)			9.5
Trade, Hotel and Restaurant			6.2
Construction			1.9
Tenth Five-Year Plan (2002/03 - 2006/07)	609,823		
Agriculture, Irrigation and Forest		13.8	
Social Services			21.5
Transport and Communications			20.1
Finance and Land (Real Estate)			15.0
Electricity, Gas and Water			14.1
Trade, Hotel and Restaurant			7.3
Industry and Mining			6.0
Construction			2.2
Three-Year Interim Plan (2007/08 - 2009/10)	280,281		
Agriculture, Irrigation and Forest		12.9	
Social Services			41.5
Electricity, Gas and Water			19.5
Transport, Communications and Storage			17.9
General Administration and Defence			3.1
Miscellaneous			2.7
Trade (Wholesale and Retail)			1.2
Hotel and Restaurant			0.7
Industry, Geology and Mining			0.6
Three Year Plan (2010/11 – 2012/13)	1,018,831		
Agriculture and Forestry		12.8	
Fishery		0.3	
Industry			15.0
Services			71.9

Note: Classification of sectors / sub-sectors is presented as per the segments categorized under the respective periodic plans.

Source: Planned Development in Nepal - A Brief Survey, National Planning Commission, December 1986 and the respective Plan Documents.

**Indicative Priorities of MoAC for Forthcoming Three-Year Interim Plan
(2010/11 – 2012/13)**

Major objectives of agriculture sector for the forthcoming TYIP (2010/11 – 2012/13) will remain as follows:

- 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, and
- To develop human resources for the management of sustainable agriculture development process.

Strategies related to the accomplishment of abovementioned objectives will be as follows:

Related to Objective 1: “Ensure food and nutrition security”

- Increase production and productivity of agriculture (including crop, livestock and fish);
- Increase access to quality technical services;
- Emphasise research on farmers’ problems including quick-yielding technology;
- Arrange quality testing, monitoring and regulation of edible food items; and
- Control and prevent communicable livestock diseases and epidemics.

Related to Objective 2: “Make agriculture sector competitive and business-oriented, with increased production and productivity”

- Develop agro-industries;
- Make production and processing of agricultural products more competitive;
- Substitute import and promote export;
- Increase access to domestic, regional and world markets for agri-business.

Related to Objective 3: “Reduce poverty by increasing employment and income generating opportunities in agriculture sector”

- Adopt inclusive agricultural development processes to increase equitable employment opportunities;
- Promote value chains encompassing production to post-production stages; and
- Encourage production of low-volume-high-value commodities through small and marginalized farmers.

Related to Objective 4: “Minimize adverse effects of environment, climate variability and climate change in the agriculture sector”

- Carry out climate impact assessment, adaptation, awareness activities and related research;
- Develop and disseminate environment and climate-friendly technology; and
- Conserve, promote and utilize agricultural bio-diversities.

Related to Objective 5: “Develop cooperatives for agriculture development”

- Develop rural cooperatives as integral part to agriculture development;
- Develop agricultural extension, infrastructure development, marketing and local resource mobilization through cooperatives;
- Develop regulations to promote and strengthen cooperative sector; and
- Promote ‘working together’ approach among the Government, cooperative, non-government and private sector agencies.

Related to Objective 6: “Develop human resources for the management of sustainable agriculture development process”

- Train farmers, entrepreneurs and specialists to utilize technologies developed for agriculture commercialization, monitoring, quality test / control and regulations to be followed; and
- Promote ‘working together’ approach through joint activities with the agricultural education sector - e.g. with Institute of Agriculture and Animal Science (IAAS).

In relation to the abovementioned objectives and strategies following **working policies** will be adopted:

- Support supply of fertilizers, seeds, breeds and infrastructures (e.g. irrigation and agriculture road) to enhance production;

- Strengthen sources of seed including establishment and effective operation of certified seed production farms / centres;
- Emphasize production of secondary crops in addition to the major crops;
- Expand services coverage for the benefit of farm-stakeholders;
- Increase production of raw materials for agriculture-based industries;
- Orient programmes towards facilitating import substitution;
- Develop market network (collection and wholesale centres) closer to the commercial production pocket areas;
- Intensively mobilize resources in the priority areas;
- Promote programmes directly contributing to poverty reduction and ensuring food security;
- Develop income generating programmes based on community resources;
- Empower women, Dalit, and Janajati empowerment for effective agriculture development programmes;
- Conduct climate impact assessment and support to prioritize and implement adaptation strategies and relevant research to manage adverse effects of climate change in agriculture;
- Organize awareness raising programmes on appropriate use of pesticides and controlling their negative effects;
- Promote organic farming;
- Promote and strengthen the roles of agriculture cooperatives and farmers' groups;
- Coordinate agriculture education, research and extension activities; and
- Make farmers' participation mandatory in monitoring and evaluation of implemented programmes.

Based on the various agricultural development issues assessed, the forthcoming TYIP (2010/11 – 2012/13) emphasizes attention towards but not limited to the following:

- Ensure food security and nutrition;
- Make agriculture sector competitive and business-oriented;
- Develop market network in the inaccessible and remote areas;
- Launch agro-industry-friendly programmes;
- Develop vegetables and fish market;
- Construct animal slaughter houses in the urban areas;
- Adapting agriculture to changing climate and natural disasters
- Maintain public health condition by controlling and preventing communicable diseases related to livestock;
- Ensure availability of improved seeds / breeds for enhancing production and productivity;
- Promote and strengthen source as well as certified seeds producing farms / centres;

- Increase access of farmers and agro-based entrepreneurs to the delivery to services;
- Make agri-business competitive for import substitution and export promotion;
- Promote coordination with local government bodies, cooperatives, non-governmental organizations and the private sector;
- Provide subsidy on organic and chemical fertilizers;
- Monitor and regulate quality of food and production inputs;
- Emphasize commercial production with market management in the areas with already developed road infrastructure;
- Organize agricultural research programmes for the prevention of diseases and soil test based on the problems encountered by farmers.

Ten Most Attractive Markets for Export Potential Agro-based and Industrial Products

	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10
Agro-based Products										
Large Cardamom	Pakistan	Saudi Arabia	UAE	UK	USA	Malaysia	Japan	South Africa	Kuwait	Oman
Ginger	India	Pakistan	Bangladesh	USA	Netherlands	UK	Malaysia	Germany	Yemen	Vietnam
Honey	UK	France	Japan	USA	Germany	Belgium	Poland	Australia	Saudi Arabia	Slovakia
Lentils	Turkey	UAE	Sri Lanka	Algeria	Iran	Egypt	Saudi Arabia	Spain	UK	Pakistan
Tea	Egypt	UAE	Russia	USA	UK	Iran	Pakistan	Germany	Kazakhstan	Australia
Noodles	China	Indonesia	Japan	USA	Vietnam	South Korea	Philippines	Thailand	Russia	India
Medicinal Herbs	USA	France	Germany	Vietnam	Singapore	Japan	Italy	Russia	Belgium	South Korea
Essential Oils	Singapore	Switzerland	India	France	Germany	USA	UK	Japan	China	Mexico
Industrial Products										
Handmade Paper and Paper Products	Denmark	Canada	Netherlands	Saudi Arabia	Nigeria	India	Qatar	Egypt	Japan	Malta
Pashmina Products	UK	Germany	Spain	France	Hong Kong	USA	Italy	Japan	China	Switzerland
Wool Products	Germany	France	UK	Italy	Spain	Japan	Canada	Belgium	USA	Hong Kong

Source: Export Potential Assessment (Nepal Trade Integration Strategy 2010, Chapter 2)

Legal Policies, Acts, Rules, Agreements and International Commitments Made by the Government

Following policies related to agriculture prevail in the country. In addition, several acts and rules also are framed. The Government has also agreed with international commitments by signing agreement on the issues concerning agriculture.

1. Policies

Major policies derived to guide the agriculture sector in Nepal are as follows:

- (i) National Agriculture Policy, 2061 (2004)
- (ii) Agribusiness Promotion Policy, 2063 (2006)
- (iii) National Fertilizer Policy, 2058 (2002)
- (iv) Irrigation Policy, 2060 (2003)
- (v) Commercial Agriculture Policy, 2064 (2007)
- (vi) National Seed Policy, 2056 (2000)
- (vii) National Tea Policy, 2057 (2000)
- (viii) Policy and Institutional Arrangement for the Effective Implementation of Agriculture Perspective Plan, 2057 (2001)
- (ix) National Coffee Policy, 2060
- (x) Dairy Development Policy, 2064 (2007)
- (xi) Agriculture Bio-diversity Policy, 2063 (2007)
- (xii) Trade Policy, 2009
- (xiii) Pesticides Policy (under preparation)

The Agriculture Perspective Plan (APP) emphasized agriculture-led growth strategy for poverty reduction and overall economic development without adverse effect to environment. It focused on acceleration of sustainable high growth path of agriculture sector with poverty reduction as its mission based on rapid transformation of agriculture that would propel growth even in the non-agricultural sectors through the multiplier effects.

The APP strategy is technology-driven. Its priority inputs cover fertilizer, irrigation, roads, electrification and technology. It emphasizes livestock, high-value crops, agribusiness and forestry as its priority outputs.

(i) National Agriculture Policy, 2061 (2004)

The National Agriculture Policy, 2061 follows an objective of creating enabling environment for agriculture-led rural development. It emphasizes competitiveness of agriculture sector encouraging farmers to go for commercial production. The policy divides farmers into two groups – small and big ones and aims to provide more resources to the small farmers. Those owning less than four hectares of land are

labeled as resource poor farmers. They enjoy government assistance provision to boost their productivity. The policy aims at increasing productivity and promoting natural resources to utilize them in the interest of farmers.

The long-term vision of the agriculture sector is to bring improvement in the living standards through sustainable agricultural development by transforming subsistence agricultural system into a commercial and competitive agricultural system.

The policy aims at achieving high and sustainable economic growth through commercial agriculture system contributing to food security and poverty reduction. It emphasizes:

- increased agricultural production and productivity,
- making agriculture competitive in regional and world markets with commercial agriculture system,
- conserving, promoting and utilizing natural resources, environment and bio-diversity

The policy intends to facilitate the farmers of both types: (a) the farmers who have access to means and resources, and (b) the farmers who have comparatively low access to the means, resources and opportunities. Emphasis is given for enhancing agriculture production and productivity, developing commercial and competitive agriculture system, and protecting as well as promoting the use of natural resources without adverse effect to environment

(ii) Agro-business Promotion Policy, 2063 (2006)

The MoAC prepared Agri-business Promotion Policy in 2006 highlighting diversification, commercialization and promotion of agriculture sector with private sector involvement in commercial farming. It emphasized that the living standard of the farmer would not improve unless the agriculture sector is transformed from subsistence level to commercial farming.

The policy aims to reduce poverty by encouraging production of market-oriented and competitive agro-products. It realizes the need of promoting internal and external markets. This policy was prepared in the spirit of National Agriculture Policy 2061 emphasizing business service centers establishment for quality agriculture inputs and services. Partnership between the private sector and Government has been emphasized for the export of quality goods. In the context of Nepal's entry into the WTO, developing market network is its priority. The policy considers infrastructure development as a cornerstone for commercialization. The policy has envisaged promotion of partnership approach between Government and the private sector.

(iii) National Fertilizer Policy, 2058 (2002)

Nepal followed liberal, open and market-oriented economic policy from 1997, which facilitated involvement of private sector in fertilizer trade. The National Fertilizer Policy was formulated to support agricultural production by ensuring supply (production, import and distribution) of good quality fertilizer. This Fertilizer Policy is

sub-component of the Government's broad National Agriculture Policy as set out in the Agriculture Perspective Plan.

The aim of this policy is to enhance agricultural productivity through improvement in soil fertility and thereby contribute to the national goal of poverty alleviation. Specifically, this policy emphasizes the following:

- (a) Provision of conditions (policy and infrastructure management) for enhancing fertilizer consumption; and
- (b) Promotion of integrated plant nutrients management system for efficient and balanced use of fertilizer.

The policy adopts following strategies to achieve its objectives:

- Ensure fertilizer availability;
- Making fertilizer distribution system transparent, competitive and effective
- Maintain the use of quality fertilizer; and
- Manage Integrated Plant Nutrients System

After the Government's decision to deregulate fertilizer trade, a Fertilizer Unit was established in the Monitoring and Evaluation Division of the MoAC in 1997. Its main function was to guide the changes emerged in the fertilizer sector (deregulation). With a view to include different agricultural inputs into the monitoring system of the unit along with chemical fertilizers, the unit's name was again changed to Agriculture Input Supply Monitoring Section in 2004.

The Fertilizer (Control) Order, 2055 (1999) specified roles and responsibilities of the Section (Fertilizer Unit). They covered monitoring and managing changes in the fertilizer sector to create conducive financially and environmentally sustainable fertilizer supply systems. Emphasis was laid for acceleration of farmers' use of fertilizer to the level targeted by the Agriculture Perspective Plan to contribute to envisaged agricultural output, improved food security and reduced rural poverty condition.

(iv) Irrigation Policy, 2060 (2003)

Extension of irrigation services is important in the context of meeting the objectives of increasing agricultural production and reduction of poverty as perceived by the APP. This demands promotion of conjunctive use of ground and surface water based irrigation systems along with new / non-conventional irrigation systems such as rain water harvest, pond irrigation, sprinkler irrigation, drip irrigation and treadle pump irrigation. In the country, the irrigation systems developed so far are limited to run-off the river system. To make the system good for round the irrigation, it is necessary to develop storage so that the problem of low flow of rivers during the winter season can be mitigated to some extent. The policy aims to develop irrigation facility for the achievement of following objectives:

- To avail round the year irrigation facility through effective management of existing water resources;

- To develop institutional capacity of water users for sustainable management of existing systems; and
- To enhance knowledge, skills and institutional working capability of technical human resources, water users and NGOs relating to development of irrigation sector.

(v) Commercial Agriculture Policy, 2064 (2007)

The MoAC unveiled a policy focusing on commercialization of agriculture. Under the policy, MoAC plans for a long-term lease of Government-owned barren land to the landless people for commercial and cooperative farming practices.

Commercialization of agriculture got top priority under the 'One Village One Product' programme of fruits and fish (especially Trout). The Government is also encouraging commercial farming of herbs. Emphasis is given for the promotion of cooperative animal husbandry in 22 districts inhabited by backward people including emancipated Kamaiyas. Similarly, emphasis is also given for off-season vegetables farming inside the green house to generate income for the underprivileged people.

The policy encourages programme of lending goats in 30 districts to provide opportunity to the poor farmers. It also emphasizes operation of fisheries through women's groups along the highway in Kailali and Kanchanpur.

The Ministry has also framed a policy to expand tea cultivation in eastern districts under the programmes of intensifying high-valued crops. It also emphasizes off-season agricultural products, while the programme will be initiated to expand coffee cultivation in the additional districts of western hilly region.

(vi) National Seed Policy, 2056 (2000)

The National Seed Policy, 2056 (2000) has been developed to effectively manage production, processing and testing of high quality seeds and their timely availability to the farmers. The Seed Act of 2045 and Seed Regulations framed under this Act in 2054 signifies contribution of the quality seeds in agricultural production. Its objectives are to ensure:

- Availability of quality seeds of different crops in a required quantity
- Production of quality seeds and promotion of export
- Making seed business effective in view of the international market
- Conservation of genetic characteristics of the indigenous seeds and maintain patent right

(vii) National Tea Policy, 2057 (2000)

The National Tea Policy, 2057 (2000) has been developed within the framework of National Tea and Coffee Development Board Act, 2049. It intends to promote private sector's participation in production, processing and trade of tea. It emphasizes development of tea industry as a means of income generation, employment promotion and foreign exchange earning. Its objectives are to ensure:

- Qualitative and quantitative improvement in the production of tea by encouraging participation of private sector, tea entrepreneurs and farmers;
- Poverty reduction by enhancing income generating and employment opportunities;
- Promotion of market for tea by making tea enterprise sustainable and lucrative;
- Expand tea farming with environmental protection;
- Institutions development for the promotion of tea enterprises; and
- Increase opportunity for foreign exchange earnings and also meet domestic demands;
- Conduct research for tea development;
- Develop technology associated with tea production; and
- Develop human resources.

(viii) Policy and Institutional Arrangement for the Effective Implementation of Agriculture Perspective Plan, 2057 (2001)

Policy arrangements made for effective implementation of the APP were:

- Identification of growth centre (production pocket) based on comparative and competitive advantage suitable to the agro-ecological zone;
- Different level working committees to expedite the work in the pocket area package strategies;
- Coordination and feedback through Agriculture Development Committee

Institutional arrangements made for effective implementation were:

- National Cooperation Committee under the chairmanship of NPC Vice-chair
- National Agriculture Development Committee
- Central Agriculture Development Implementation Committee
- APP Monitoring and Analytical Unit
- Regional Agriculture Development Committee
- District Agriculture Development Committee

(ix) National Coffee Policy, 2060

The Government developed National Tea Policy, 2057 (2000) within the framework of National Tea and Coffee Development Board Act, 2049 with a objective of promoting private sector's participation in the production, processing and trade of tea and develop tea industry as a means of income generation, employment promotion and foreign exchange earning. It also aimed at:

- Import substitution and export promotion;
- Poverty reduction by increasing income generating and employment opportunities;
- Environment protection by expanding coffee farming;
- Making coffee enterprise sustainable and lucrative

(x) Dairy Development Policy, 2064 (2007)

Keeping in view of the importance of livestock sub-sector in the Nepalese farming system, the Dairy Development Policy, 2064 (2007) has been developed. It is in line with the spirit of Agriculture Perspective Plan, National Agriculture Policy, 2004, National Milk Market Management and Strategy of 2001 and the Agri-business Promotion Policy, 2063.

The long-term vision of Dairy Development Policy is to encourage participation of public, private and cooperative sectors in milk production. It emphasizes the role of commercial and competitive enterprises, while maintaining reasonable price for milk and milk products both for the producers and consumers. Major objectives of the Policy are:

- To increase production and productivity of milk in rural areas;
- To expand milk collection, transportation and processing by making the production of milk and milk products more commercial and competitive;
- To diversify milk products for import substitution and promotion of export; and
- To control and regulate the quality of milk and milk products.

(xi) Agriculture Bio-diversity Policy, 2063 (2007)

The Agriculture Bio-diversity Policy 2063 (2007) has been framed in accordance with the objectives of National Agriculture Policy to protect, promote and utilize bio-diversities. It also considers recommendations of the International Convention on Biological Diversity, 1992 and Nepal Bio-diversity Strategy, 2059. It emphasizes sustainable development and maintenance of ecological balance by protecting agriculture bio-diversities. It intends to benefit from protection and utilization of genetic resources for food security and poverty reduction. Other objectives followed are:

- To protect, promote and utilize genetic resources for sustainable agriculture development coupled with food and nutrition security;
- To protect and promote farmers' indigenous knowledge, skills and practices;
- To maintain equitable and fair distribution of benefits accruing from access and utilization of agricultural genetic sources and materials; and
- To promote ecological balance by protecting and promoting agricultural bio-diversities.

(xii) Trade Policy, 2009

Nepal had formulated Trade Policy in 1992 for the first time, which could not address the issues of international trade dynamisms (such as affiliation with the regional and multilateral trading system, expansion of bilateral free trade areas, simplification of trade procedures, development of new transit system etc.). It could not enforce Sanitary and Phyto-Sanitary (SPS) measures and the technical barrier to trade (TBT), which could contribute towards sustaining the export trade.

As the country occupied negligible share of exports in the world market, it required improvements in the production technology, processing and quality of export-oriented industries. To capture the export capacity, it needed utilization of special privileges accorded by the multilateral and regional trade agreements for the least developed

countries. Currently, the country's export is comprised of 8 percent of the GNP as compared to 26 percent imports. Keeping in view the country's target of achieving two digits economic growth in the coming years, it needs to pursue export-led growth at least to cover substantial portion of its imports. Viewing these contexts, Nepal developed a liberal and comprehensive Trade Policy in 2009. This policy aims to support economic development and poverty alleviation initiatives through enhanced development of the trade sector in the national economy. Major objectives followed by the policy are:

- To create conducive environment for trade promotion by making the business internationally competitive;
- To minimize trade deficit by increasing exports of value added products through the links between import and export trade;
- To increase competitiveness of goods and services trade in raising more income and employment opportunities for poverty reduction; and
- To establish interrelationship between internal and foreign trades by making them complementary and supplementary to each other.

Nepal has been adopting open and market oriented trade policy for the last two decades. However, it has not able to realize much benefits of trade liberalization due to the difficulties of accessing capital, technology and market and also due to the unequal economic levels prevailed among the countries.

(xiii) Pesticides Policy

The Government framed Pesticides Act, 2051 (1994) and Pesticides Rules, 2050 (1994). It designated Plant Protection Directorate of Department of Agriculture as the Pesticides Registration Unit. The formulation of Pesticides Policy is in process at present.

2. Sectors and Sub-sectors Covered by the Prevailing Acts, Rules, Agreements and International Commitments of the Government

The sectors and sub-sectors covered by the prevailing acts, rules and commitments of the Government are as follows:

Sectors and Sub-sectors Covered

Sector / Sub-sector	Act	Rules / Procedures	Orders	Guidelines / Directives	Bilateral Agreements	International Commitments
A Food						
Food Act, 2023 (1966) [<i>Third Amendment in 2049</i>]	√					

Sector / Sub-sector	Act	Rules / Procedures	Orders	Guidelines / Directives	Bilateral Agreements	International Commitments
Agriculture related New Provision Act, 2019	√					
Agriculture related Crop Act, 2012	√					
Need Food Service Abolition Act, 2008	√					
Food Rules, 2027 (1970) [<i>Amendment in 2030, 2032, 2048 and 2054</i>]		√				
Vegetable Main Seed Buffer Stock Management Related Plan of Action or Procedures		√				
Food Management Board Rules, 2020		√				
Nepal Food Service (Formation) Rules, 2016		√				
Kalimati Fruits and Vegetables Market Development Committee (Formation) Order, 2058 (2001) (replaced Kalimati Fruits and Vegetables Market Development Committee (Formation) Order, 2051[Third Amendment, 2063 (2007)])			√			
Food (Control) Order, 2041			√			
Agriculture Production Quality Control Guidelines				√		
Industry Inspection Guidelines				√		
Hotel and Restaurant Inspection Guidelines				√		
Quality Fixation of Consumable Commodities, Ministry of Agriculture Notice, 2057				√		
Agriculture Product Market Place Management and Handling Directives, 2053				√		
B Feed						
Feed Act, 2033 (1976) [<i>Amendment in 2048 and 2055</i>]	√					
Feed Rules, 2041 (1984)		√				
Animal Feed Production Development Committee (Formation) Order, 2041 (1984)			√			
C Pesticides						
Pesticide Act, 2048 (1991) [<i>Amendment in 2048 and 2055</i>]	√					
Pesticide Rules, 2050 (1994) [<i>Amendment in 2064</i>]		√				
Notice on Registered Pesticides, 2057				√		
D Livestock						
Animal Health and Livestock Services Act, 2055 (1998)	√					
Nepal Veterinary Council Act, 2055 (1999)	√					
Country's Code (Muluki Ain), 2020 (1963) (Chapter on Animal and Missing and Finding of Lost Animal)	√					
Animal Health and Livestock Service Rules, 2056 (2001) [<i>Amendment in 2064</i>]		√				
Nepal Veterinary Council Rules, 2057 (2001)		√				

Sector / Sub-sector	Act	Rules / Procedures	Orders	Guidelines / Directives	Bilateral Agreements	International Commitments
Guidelines or Norms of Department of Livestock Services				√		
Animal Service Program Handling Guidelines, 2051				√		
Rural Level Private Sector Health Service Expansion Revolving Fund Management Related Base Paper and Guidelines, 2055				√		
Rural Level Private Sector Animal Health Service Guidelines				√		
Expansion Management Revolving Fund Handling Guidelines				√		
Private Sector Veterinary Clinic Establishment Guidelines				√		
Encouraging and Expanding Qualitative Animal Medicine Services Guidelines, 2055				√		
E Meat						
Animal Slaughter House and Meat Inspection Act, 2055 (1999)	√					
Local Self-Governance Act, 2055 (1999)	√					
Animal Slaughter House and Meat Inspection Rules, 2057 (2001)		√				
Local Self-Governance Rules, 2056 (2000)		√				
F Aquatic Species						
Aquatic Species Protection Act, 2017 (1961) [Amendment in 2020, 2048 and 2055]	√					
Aquatic Species (Tendering) Rules, 2019		√				
G Fertilizers						
Essential Commodities Control (Authorization) Act, 2017 (1961)	√					
Chemical Fertilizer (Control) Order, 2055 (1999)			√			
H Dairy						
National Dairy Development Board Act, 2048 (1992) [Amendment in 2055]	√					
National Dairy Development Board (Procedures or Employee Administration) Rules, 2049		√				
National Dairy Development (Financial Administration) Rules, 2050		√				
Directives for the Handling of Dairy Development Fund, 2056				√		
Code of Conduct (Guidelines) of Dairy Industries.				√		
I Tea and Coffee						
	√					

Sector / Sub-sector	Act	Rules / Procedures	Orders	Guidelines / Directives	Bilateral Agreements	International Commitments
National Tea and Coffee Development Board Act, 2049 (1993)						
National Tea and Coffee Development Board Rules, 2050		√				
National Tea Policy Implementation Guidelines, 2058				√		
J Cooperatives						
Cooperative Act, 2048 (1992) (replaced Cooperative Act, 2016) [First Amendment in 2057]	√					
National Cooperative Development Board Act, 2049 (1992)	√					
Cooperative Bank Act, 2019	√					
Cooperative Rules, 2049 (1993) (replaced Cooperative Rules, 2043)		√				
National Cooperative Development Board (Working Procedure) Rules, 2050		√				
National Cooperative Development Board (Cooperative Development Fund) Rules, 2050		√				
Cooperative Institution Rules, 2018		√				
National Cooperative Bank Rules, 2059		√				
K Seed						
Seed Act, 2045 (1988) [First Amendment in 2064]	√					
Seed Rules, 2054 (1998) [Amendment in 2062]		√				
Seed Certification and Minimum Quality Procedures, 2051		√				
Chandra Dangi Seed and Dairy Development Board (Formation) Order, 2052 (1996)			√			
Seed Program Execution Guidelines, 2056				√		
Guidelines for Seed Quality Control and Minimum Seed Certification Standard				√		
District Level Seed Sufficiency Programme and Seed Multiplication Guidelines, 2055				√		
Private Lab Establishment Minimum Requirement (Norms)				√		
Seed Analyst and Seed Inspector, Crop Inspector, Seed Sampler Minimum Requirement Norms				√		
L Agricultural Research						
Nepal Agriculture Research Council Act, 2048 (1991) [First Amendment in 2053]	√					
Nepal Agriculture Research Council (Working Procedure) Rules, 2049		√				
Nepal Agriculture Research Council (Financial Administration) Rules, 2049		√				
Nepal Agriculture Research Council (Employee Administration) Rules, 2049		√				

Sector / Sub-sector	Act	Rules / Procedures	Orders	Guidelines / Directives	Bilateral Agreements	International Commitments
M Agriculture Service						
Civil Service Act, 2049	√					
Civil Service Rules, 2050		√				
Nepal Agriculture Service (Formation, Group or Class Division and Appointment) Rules, 2050		√				
N Consumer Protection						
Consumer Protection Act, 2054(1998)	√					
Consumer Protection Rules, 2056		√				
O Forest and Wildlife						
Forest Act, 2049 (1993)	√					
Private Forest Nationalization Act, 2013	√					
Pasture Land Nationalization Act, 2031	√					
National Parks and Wildlife Conservation Act, 2029 (1973)	√					
Wildlife Protection Act, 2015	√					
Plant Protection Act, 2064 (2007) [Replaced Plant Protection Act, 2029]	√					
Forest Protection (Special Provision) Act, 2014	√					
Forest Rules, 2051		√				
Private Forest Rules, 2041		√				
National Parks and Wildlife Conservation Rules, 2030		√				
Wildlife Conservation Rules, 2034		√				
Plant Protection Rules, 2031		√				
Protection Area Governance Management Rules, 2057		√				
Forest Commodities (Sale and Distribution) Rules, 2018		√				
Forest Protection (Special Provision) Rules, 2027		√				
Hunting Rules, 2019, 2023 and 2026		√				
Leasehold Forest Rules, 2035		√				
P Environment						
Environment Protection Act, 2053 (1997)	√					
Environment Protection Rules, 2054		√				
Ozone Layer Destructing Industries Rules, 2057		√				
Shivapuri Watershed Development Board (Formation) Order, 2033			√			
Environment Protection Guidelines				√		
Q Water, Irrigation and Electricity						
Water Resources Act, 2049 (1992)	√					
Irrigation Act, 2018	√					

Sector / Sub-sector	Act	Rules / Procedures	Orders	Guidelines / Directives	Bilateral Agreements	International Commitments
Electricity Act, 2049 (1992)	√					
Canal or Electricity and Water Resources related Act, 2024	√					
Water Resources Rules, 2050		√				
Irrigation Rules, 2056 (2000) [First Amendment in 2060]		√				
Electricity Rules, 2050		√				
Nepal Electricity Corporation Rules, 2015		√				
Chitwan Irrigation Development Committee (Formation) Order, 2032			√			
Narayani Irrigation Development Board (Formation) Order, 2032			√			
Sunsari - Morang Irrigation Development Committee (Formation) Order, 2035			√			
Mahakali Irrigation Development Committee (Formation) Order, 2037			√			
Ground Water Resources Development Committee (Formation) Order, 2052			√			
R Land Use						
Land Act, 2021 (<i>Amendment in 2058</i>)	√					
Land of Forest Area (Jhora) Act, 2028	√					
Land Acquisition Act, 2034	√					
Land and Land User Record-keeping Act, 2013	√					
Immovable Property Acquisition Act, 2013	√					
Land (Measurement) Act, 2019	√					
Nepal Trust Corporation Act, 2033	√					
Land Revenue Act, 2034	√					
Land Administration Act, 2024 (1967)	√					
Land and Watershed Protection Act, 2039	√					
Muluki Ain (Civil Code), 2020 [Chapter on Trust; Land Deforestation (Jagga Abad Garne Ko); Land Distribution (Jagga Pajani) and Land Encroachment (Jagga Michne Ko)]	√					
Land Rules, 2021		√				
Land Acquisition Rules, 2026		√				
Land (Sale and Distribution) Rules, 2013		√				
Immovable Property Acquisition Rules, 2016		√				
Land (Measurement) Rules, 2058		√				
Land Management Board Rules, 2018		√				
Land Tax Rules, 2019		√				
Land Revenue Rules, 2036		√				
Land Administration Rules, 2024		√				
S Financial Institutions						
Agriculture Development Bank Act, 2024	√					
Bank Loan Recovery Act, 2058	√					
Rural Development Bank Act, 2053	√					

Sector / Sub-sector	Act	Rules / Procedures	Orders	Guidelines / Directives	Bilateral Agreements	International Commitments
T Corporations / Parastatals						
Agriculture Input Corporation Act, 2021	√					
Dairy Development Corporation Act, 2021	√					
Nepal Food Corporation Act, 2021	√					
U Miscellaneous						
Industrial Enterprises Act, 2049 (1992)	√					
Foreign Investment and Technology Transfer Act, 2049 (1992)	√					
Black Marketing and Some Other Social (Crime and Punishment) Act, 2032	√					
Communicable Diseases Act, 2020	√					
Liquor Act, 2020	√					
Export and Import (Control) Act, 2013 (1957)	√					
Constitution (Part IV)	√					
Company Act (Agriculture Lime Industries Ltd.), 2023	√					
Mother's Milk Substitutes (Control of Sale and Distribution) Act, 2049 (1992)	√					
Patent, Design and Trade Mark Act, 2022 (1965) (replaced Patent, Design and Trade Mark Law, 1993) [Amendment in 2044 and 2048 (1992)]	√					
Iodinated Salt (Production and Sale/Distribution) Act, 2055 (1999)	√					
Contract Act, 2056 (2000) (Replaced Contract Act, 2023)	√					
Custom Act, 2056	√					
Commodity Control Temporary Right Act, 2011, 2012 and 2015	√					
Nepal Peasant Organization Act, 2025	√					
Development Committee Act, 2013	√					
Liquor Rules, 2033		√				
Nepal Government (Work Division) Rules, 2057		√				
Statistics (Agriculture) Order, 2018			√			
Nepal Jute (Control) Order, 2026			√			
Cotton Development Committee (Formation) Order, 2037 (1980)			√			
Bird Flu Disease Control Order, 2064 (2006)			√			
Hill Area Development Board (Formation) Order, 2031			√			
National Productivity Council Order, 2050			√			
V. Bilateral Agreements						
Agreement between Nepal and Japan on Agriculture Input (Instruments) Assistance, 2027.					√	
Agreement between Nepal and Japan on Food					√	

Sector / Sub-sector	Act	Rules / Procedures	Orders	Guidelines / Directives	Bilateral Agreements	International Commitments
Assistance Convention, 2028.						
Exchange of Letter between Nepal and Japan on Assistance of Irrigation Equipments, 2043.					√	
Exchange of Letter between Nepal and Japan on Increase of Food Production, 2044.					√	
Agreement between Nepal and China on Cotton Production Survey and Experiment, 2028.					√	
Agreement between Nepal and China on Pokhara Water Project and Irrigation Project, 2035.					√	
Agreement between Nepal and India on Horticulture Development, 2029.					√	
Memorandum of Understanding between Nepal and India on Cooperation in the field of Agriculture, 2048.					√	
Trade and Transit Treaty between Nepal and India.					√	
Agreement between Nepal and Switzerland on Narayani Hill Irrigation Project, 2044.					√	
Agreement between Nepal and Netherlands on Mechi Hill Irrigation and Related Development Programme, 2044.					√	
Agreement between Nepal and France on Food Assistance Elementary Aid, 2044.					√	
W. International Obligations						
(i) Under the World Trade Organization (WTO) Agreement						
Agreement on Agriculture.						√
Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS).						√
Agreement on Technical Barriers to Trade (TBT).						√
Agreement on the Application of Sanitary and Phyto-sanitary Measures (SPS) (Note: Nepal became 147th member of WTO on 23 April 2004).						√
(ii) Under the Article XIV of FAO						
Agreement for the establishment of the Asia-Pacific Fishery Commission (1948) (Nepal is a party).						√
Constitution of the International Rice Commission (1948) (Nepal is a party).						√
International Plant Protection Convention (1951) (Revised text approved by FAO). Conference at its 29th Session (November 1997) (Nepal has acceded to the Convention, but has not ratified it).						√
Plant Protection Agreement for the Asia and the Pacific Region (1955) (Nepal is a party).						√
Agreement for the establishment of a Regional Animal Production and Health Commission for						√

Sector / Sub-sector	Act	Rules / Procedures	Orders	Guidelines / Directives	Bilateral Agreements	International Commitments
Asia and the Pacific (1973) (Nepal is a party).						
Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (1993). (Nepal is eligible to accept the Agreement and it would strengthen the instrument if it did so, despite being land-locked).						√
International Treaty on Plant Genetic Resources for Food and Agriculture (2001) (Nepal has signed the Treaty but has not ratified it).						√
(iii) Conventions and Agreements concluded outside the Framework of FAO in respect of which the Director-General Exercises Depositary Functions						
Agreement for the establishment of the Centre on Integrated Rural Development for Asia and the Pacific (1978).						√
Agreement for the establishment of the Inter-governmental Organization for Marketing.						√
Information and Technical Advisory Services for Fishery Products in the Asia and the Pacific Region (1985) (Nepal is eligible to accede to the Agreement.)						√
Agreement on the Network of Aquaculture Centers in Asia and the Pacific (1988) (Nepal is a party).						√
(iv) Others						
Convention on Biological Diversity (CBD) (Nepal has ratified it).						√
International Environment Protection Convention(s) (Nepal is a party to a number of them).						√
Agreement on Establishing the SAARC Food Security Reserve (Nepal is a party).						√

Support Areas Covered by Various Development Partners Working in Nepal

Sectors	UN Agencies												Multilateral								Bilateral															
	ILO	UNAIDS	UNDP	UNESCO	UNFPA	UN Habitat	UNICEF	UNIFEM	UNODC	UNPBF	WFP	WHO	ADB	EC	GEF	GF	IFAD	IFC	IMF	WB	AusAID	DFID	KOICA	SDC	SNV	Canada	Denmark	Finland	France	Germany	Japan	Korea	Norway	USA		
Education				√			√						√	√						√	√	√	√	√			√	√			√		√	√		
Health							√					√		√		√				√	√	√		√						√	√			√		
Population		√			√		√	√	√			√		√							√	√												√		
Water Supply and Sanitation						√	√						√							√	√	√						√			√					
Government and Civil Society			√		√		√	√		√			√	√					√	√	√	√		√		√	√	√		√	√		√	√		
Transport and Storage				√									√							√		√	√	√		√					√					
Energy Generation and Supply													√	√						√					√		√			√	√	√	√			
Banking and Financial Services													√							√		√			√					√						
Agriculture													√	√			√			√		√		√	√						√		√	√		
Forestry																					√	√		√	√			√								
Fishing																												√					√			
Industry																					√									√	√					
Construction																															√					
Trade Policy Regulations and Trade-Related Adjustment													√	√											√											
Tourism													√																							
Development Food Aid/Food Security Assistance											√			√																	√					
Humanitarian Aid			√											√							√			√										√		
Emergency Response																						√						√						√		
Reconstruction Relief and Rehabilitation													√													√				√				√		
Disaster Prevention and Preparedness											√	√		√																						
Support to NGOs														√								√	√			√	√				√					
Unspecified / Unallocated																					√															

Sectors	UN Agencies											Multilateral							Bilateral															
	ILO	UNAIDS	UNDP	UNESCO	UNFPA	UN Habitat	UNICEF	UNIFEM	UNODC	UNPBF	WFP	WHO	ADB	EC	GEF	GF	IFAD	IFC	IMF	WB	AusAID	DFID	KOICA	SDC	SNV	Canada	Denmark	Finland	France	Germany	Japan	Korea	Norway	USA
Other Social Infrastructure and Services	√					√	√	√				√		√			√			√		√		√	√				√				√	√
Multi Sector/Cross Cutting			√	√			√						√	√	√		√	√		√	√	√	√	√	√	√		√		√			√	√

Note: Based on the observation of 625 projects/programmes implemented during last 13 year

Ongoing Agriculture Sector Related Projects Implemented by Different Ministries

S. N.	Project / Program	Duration	Major Activities	Amount of Assistance	Development Partners / Institutions
	Ministry of Agriculture and Cooperatives				
1	Olive Production and Processing Program	August 2004 - December 2009	<ul style="list-style-type: none"> Commercial farming, processing and promotion of Olive 	US\$ 1,042,419	FAO
2	Promotion of Quality Cocoon Production and Processing Project	December 2006 - November 2011	<ul style="list-style-type: none"> Promoting quality cocoon production and processing 	Japanese ¥ 120,000,000	JICA
3	Standards and Trade Development Facility	March 2008 - February 2010	<ul style="list-style-type: none"> Preparation of training materials and user guidelines/manuals covering food security, animal and plant health and agricultural trade Organization of various training programme for more than 600 government officials on the SPS measures 	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"> Strengthening technical and institutional capacity of the Department of Agriculture Strengthening basic services system for DRM in pilot districts 	US\$ 470,000	FAO
5	Dairy Cattle Improvement	April 2008 – November 2009	<ul style="list-style-type: none"> Strengthening existing laboratories facilities Establishment of pilot performance recording scheme with modern analytical methods 	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	<ul style="list-style-type: none"> 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"> 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 	20.00	ADB / FAO
8	Leasehold Forestry – Livestock (LFL)	2005 – 2013	<ul style="list-style-type: none"> Reducing poverty in the area by allocating leasehold forestry plots to poor families to enable them to increase income from forest products and livestock 	12.8	IFAD
9	Community Managed Irrigated Agriculture Sector	2006 - 2010	<ul style="list-style-type: none"> Improved access to Irrigation 	20.00	ADB
10	Improving the Livelihoods of Poor Farmers and Disadvantaged Groups in EDR	2007 - 2010	<ul style="list-style-type: none"> Poverty reduction 	1.0	ADB/JFPR
11	Hill Maize Research Project (HMRP) Phase III	2007 - 2010	<ul style="list-style-type: none"> Increase productivity and sustainability of maize-based production technologies for improved food security and livelihoods of farm families 	1.03	SDC
12	Sustainable Soil Management Programme (SSMP) Phase III	2007 - 2010	<ul style="list-style-type: none"> 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 	4.57	SDC

13	Avian Influenza Control Project (AICP)	2007 – 2011	▪ 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.	18.2	IDA / FAO
14	Irrigation and Water Resource Development Project (IWRMP)	2007 - 2013	▪ Improving irrigated agriculture productivity and management of selected irrigation schemes, and enhance institutional capacity for integrated water resources management.	60.00	IDA
15	Social Safety Net Project (SSNP)	2007 - 2013	▪ Ensure access to food and basic needs in short term	3.0	IDA
16	Commercial Agriculture Development Project (CADP)	2007 - 2013	▪ Commercialization of agriculture	18.00	ADB
17	IPM Phase II	2008 - 2013	▪ Pest management	4.03	NORAD / FAO
18	Emergency Flood Damage Rehabilitation Project	2009 - 2011	▪ Flood damage rehabilitation	25.60	ADB
19	Project for Agricultural Commercialization and Trade (PACT)	2009 - 2015	▪ Agriculture and rural business development; support for sanitary and phyto-sanitary facilities and food quality management; and project management, monitoring and evaluation	10.50	World Bank
20	High Value Agriculture Project in Hill and Mountain Areas	2009 -	▪ To integrate into the local rural economy through initiatives that develops small businesses and increase trade by building the capacity of rural institutions.	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
	Ministry of Environment				
1	High Altitude Technological Research Project in Nepal	April 1990 - December 2012	▪ Research and Evaluation	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
	Ministry of Forests and Soil Conservation				
1	Western Terai Landscape Development Project	August 2005 - July 2012	▪ Support in the preparation of national policy on Western Terai landscape, integrated landscape management, sustainable management and conservation of bio-diversity, etc.	US\$ 10,494,838	SNV / UNDP GEF
2	Conservation and Sustainable Use of Wetland in Nepal	March 2007 - February 2012	▪ To support in enhancing capacity, and legal and policy framework for the development of ecosystem by conserving and sustainably using wetland	US\$ 4,061,969	UNDP
3	Terai Arc Landscape Program	2007 - 2011	▪ Sustainable forest management	US\$ 5,824,000	WWF / USAID Finland / DFID
4	Sacred Himalaya Arc Landscape Program	2007 - 2011	▪ Sustainable forest management	US\$ 3,445,000	WWF / USAID Finland / DFID
5	Northern Hills Conservation Project	2007 - 2011	▪ Sustainable forest management	US\$ 731,000	WWF / USAID Finland / DFID
6	A Grant Assistance for Research Center Project of National Trust for Nature Conservation	December 2007 -	▪ To construct Research Center and Headquarter Office of National Trust for Nature conservation	RMB Yuan 35,000,000	China
7	National Action Plan on CBD on Protected Area	November 2008 - October 2010	▪ Capacity building training for protected area staff and community	US\$ 150,000	GEF
					3
8	Biological Management, Rhinoceros, Grass Land and Public Engagement	April 2009 - March 2010	▪ Rhinoceros monitoring and public awareness	GBP 36,462	ZSL

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

INGO Supported Ongoing Projects Related to the Ministry of Agriculture and Cooperatives

S. N.	Projects/Programmes	Duration	Amount of Assistance (NRs in '000)	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	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 (Gorkha, 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	Scaling up of Indoor Smoke Alleviating Technology: Dhading and Gorkha districts				
10	Renewable Energy Village Programme (Gorkha, Tanahun, Chitwan, Nawalparasi and Dhading districts)	2006 - 2011	10,000	USA	World Wildlife Fund
11	Terai Arc Landscape Program, Himalayan Landscape Program and Northern Mountains Conservation (36 Districts)				
12	Community Based Multi Hazard Risk Reduction Program (Kabhre, Udayapur, Sindhuli, Lalitpur, Kathmandu and Bhaktapur districts)	2007 - 2009	16,473	Denmark	Danish Red Cross Society
13	Disaster Preparedness and Sustainable Livelihood Development Project (Chitwan district)	2007 - 2009	3,617	Japan	Shalpa Neer
14	Poverty Reduction through the organization of Farmers (Saptari, Siraha and Dhanusha districts)	2007 - 2010	6,377	USA	International Development Enterprise Nepal

S. N.	Projects/Programmes	Duration	Amount of Assistance (NRs in '000)/Annum	Development Partners / Institutions	INGOs
15	Increasing Access of Poor Nepali Communities to Biogas Technology to Strengthen Livelihoods and Enhance Environment Management (Dailekh, Surkhet, Salyan, Gorkha, Sindhupalchok and Dolakha)	2007 - 2010	1,114	USA	Winrock International
16	Karnali Support Programme (Water and sanitation, long-term food security and capacity building) (Mugu and Humla districts)	2007 - 2012	3,478	Denmark	Mission East
17	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
18	Rights Based Safe Migration and Disaster Risk Reduction Program : 15 Districts	2008 - 2010	7,668	Denmark	Dan Church Aid
19	Forestry Extension Service in Central Terai (Dhanusha, Mahottari and Sarlahi districts)	2008 - 2010	6,408	Denmark	Danish Forestry Extension
20	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.

NASDP FOR THE MEDIUM-TERM (2010/11-2014/15)

Core Issues and Main Causes	Improvements Required	Responsible Organizations
PRIORITY 1: ENHANCING FOOD AND NUTRITION SECURITY AND SAFETY		
A 1.1: Low production and productivity	B 1.1: Productivity and production increased	
A 1.1.1 Farming is a less attractive profession now A 1.1.2 Small and fragmented land holdings A 1.1.3 Skewed land tenure system A 1.1.4 Inadequate commercial orientation A 1.1.5 Migration of productive youths A 1.1.6 Heavy dependency on rain-fed cultivation system (Inadequate irrigation facilities) A 1.1.7 Inadequate availability of inputs (quality, quantity, timeliness and affordability) A 1.1.8 Declining soil fertility and increased intensity of landslides and floods A 1.1.9 Limited investments in agriculture by farmers due to poverty A 1.1.10 Less number of productive animals A 1.1.11 High incidence of pest and diseases A 1.1.12 Poor orientation to farm mechanization A 1.1.13 Poor access of farmers to improved agriculture technology A 1.1.14 Lack of attention towards productive use of land	B 1.1.1 Develop mechanisms for the implementation of National Land Use Policy (focusing on the productive use of land) B 1.1.2 Expand irrigated area (through ground water extraction, surface irrigation, small and micro-irrigation and rain water harvesting) B 1.1.3 Strengthen (overhaul) agriculture research system (with research focus on varietal development and breed improvement, input use efficiency, rain-fed agriculture, climate change adaptability and high value crops) B 1.1.4 Strengthen functional linkages between agriculture research, extension and education B 1.1.5 Ensure seed security (improve access to quality seeds) B 1.1.6 Promote sustainable soil management practices B 1.1.7 Ensure timely availability of quality fertilizers B 1.1.8 Establish feed industries for productive animals B 1.1.9 Conservation of genetic materials B 1.1.10 Increase participation of private sector in multiplication and distribution of genetic materials B 1.1.11 Promote IPM technologies B 1.1.12 Promote integrated farming system [crop, livestock, fishery and agro forestry including Non-Timber Forest Products (NTFPs)] B 1.1.13 Reduce post-harvest losses through improved management system B 1.1.14 Promote contract and cooperative farming B 1.1.15 Launch package programme to attract youths in agriculture B 1.1.16 Formulate and enforce stringent laws and regulations to discourage land fallowing and use of agriculture land for non-agri. purposes B 1.1.17 Promote organic agriculture B 1.1.18 Improve animal health service and expand the coverage	DoA, DLS, MoAC, MoFSC, Molrr, MoLRM, NARC, SSMP

	B 1.1.19 Expand the coverage of fodder production B 1.1.20 Launch effective disaster preparedness and management programmes B 1.1.21 Improve conditions to retain youths in agriculture B 1.1.22 Promote improved animal raising practices	
A 1.2: Less effective public agricultural extension support services	B 1.2: Access of farmers to improved quality extension, research and related support services	Responsible Organizations
A 1.2.1 Insufficient investment on agricultural research, extension and education A 1.2.2 Slow pace of technology development catering farmers' need A 1.2.3 Low coverage of public extension services A 1.2.4 Poor mobilization of farmers' groups / committees A 1.2.5 Limited participation of private sectors in service delivery A 1.2.6 Supply driven services than demand-driven A 1.2.7 Inadequate number of qualified and trained research and extension personnel in public sector A 1.2.8 Poor linkage between agriculture research, extension and education A 1.2.9 Poor infrastructure(physical, institutional and human resource) A 1.2.10 Poorly motivated staff	B 1.2.1 Involve private sector in operating government facilitated / accredited resource centres for services related to livestock breeds, seed multiplication and distribution, fish species, fruits, fodder saplings, farm machinery, AI, animal health services and marketing B 1.2.2 Minimize risk with crop / livestock insurance services B 1.2.3 Expand agricultural cooperative networks with soft loan for provisions for member producers B 1.2.4 Develop strong farmers' organizations and scale them up as cooperatives B 1.2.5 Ensure coordinated delivery of services among the Government, cooperative, NGO and private sector agencies B 1.2.6 Strengthen functional links between research, extension and education B 1.2.7 Promote Public Private Partnership (PPP) in the delivery of extension services (i.e. Government's role as facilitator, regulator, policy formulator and quality monitor with increased involvement of the private sector in other activities) B 1.2.8 Enhance capacity of public sector organizations in regulating and facilitating the delivery of services B 1.2.9 Devise and/or strengthen regulatory framework for the quality control of inputs, genetic materials and other support services (with strict monitoring of quality control system encompassing import, production and distribution) B 1.2.10 Promote field-based hands-on training (e. g. Farmers' Field School Training as practiced for Integrated Pest Management) B 1.2.11 Strengthen field level capacities with transfer of more technicians to the districts B 1.2.12 Develop support for complete value chains of the commodities (production, processing, storage and marketing) B 1.2.13 Improve working condition and facilities to research scientists and extension workers	Farmers' Groups / Cooperatives, Insurance Co., DoA, DLS, MoAC, MoEd., NARC, NFC, NEFSCUN, NRB, SSMP

A 1.3: Insufficient financing	B 1.3: Increased rural finance coverage	Responsible Organizations
<p>A 1.3.1 Poor access to institutional credit for farmers and agro-processing enterprises (due to the difficulties of submitting collateral against the loan and absence of lending institutions in the remote areas)</p> <p>A 1.3.2 Cumbersome institutional lending procedures</p> <p>A 1.3.3 Low return on agricultural investment</p> <p>A 1.3.4 High risk involved in agricultural lending</p> <p>A 1.3.5 Long repayment gestations (particularly in livestock and perennial crops)</p> <p>A 1.3.6 High interest on agricultural loans (compared to the non-agricultural loans)</p> <p>A 1.3.7 Increasing tendency of banks to invest in urban areas</p>	<p>B 1.3.1 Ensure regular budgetary provision to establish revolving fund in financial institutions like RMDC and mobilize fund through cooperatives and micro-finance institutions operating in rural areas</p> <p>B 1.3.2 Introduce interest subsidy scheme on selected enterprises on the basis of approved business plan</p> <p>B 1.3.3 Establish interest rates linked within the margins between production cost and revenue</p> <p>B 1.3.4 Adopt borrower friendly lending procedures (i.e. simplified procedures)</p> <p>B 1.3.5 Engage cooperatives for more financing services</p> <p>B 1.3.6 Crop-livestock insurance cover to ensure loan security</p> <p>B 1.3.7 Provide collateral free group loans to the poor farmers including women</p> <p>B 1.3.8 Encourage private sector investment through incentives</p> <p>B 1.3.9 Make effective use of remittance in agriculture</p> <p>B 1.3.10 Strictly enforce the provision of priority sector lending in rural areas</p>	<p>ADB/N, Commercial Banks, Cooperatives, DoC, MoAC, MFIs, NRB, RMDC</p>
A 1.4: Poor animal health affecting supply of quantity and quality of protein supplement to food	B 1.4: Animal health improved for enhancing production and productivity of protein supplement to food	Responsible Organizations
<p>A 1.4.1 Higher incidence of animal disease (e.g. foot and mouth disease, swine fever, Avian Influenza etc.) causing around 20 percent loss in protein supply)</p> <p>A 1.4.2 Poor animal health support facilities</p> <p>A 1.4.3 Low investment of private sector in animal raising due to higher risk of low productivity and animal deaths (See B. 1.2.2.also)</p> <p>A. 1.4.4.Higher risk of trans-boundary disease (See A 4.4.1 also)</p>	<p>B 1.4.1 Develop health support facilities and control diseases with application of both preventive and curative methods (e.g. foot and mouth disease, swine fever, Avian Influenza etc.)</p> <p>B 1.4.2 Provide credit support for maintaining animal health</p> <p>B 1.4.3 Provide livestock insurance facilities</p> <p>B. 1.4.4 Make animal quarantine services more effective (See 4.4.3 also)</p> <p>B. 1.4.5 Promote involvement of private sector in supporting health services</p>	<p>DFTQC, DLS, MoAC</p>

A 1.5: Inadequate availability of safe and nutritious food (especially for the marginalized groups having low-income)	B 1.5: Access of sufficient and safer food for the poor and vulnerable groups ensured	Responsible Organizations
<p>A 1.5.1 People under extreme poverty condition (e.g. sharecroppers, landless non-tourist porters, people living with HIV/AIDS, agricultural labourers and lower caste groups)</p> <p>A 1.5.2 Landlessness or small size of land (with less than 0.5 ha.)</p> <p>A 1.5.3 Inadequate production of food grains at self-owned small farms (around 70 percent)</p> <p>A 1.5.4 Inadequate income earning opportunities (on-farm and off-farm) to afford food purchase</p> <p>A 1.5.5 Heavy dependency on rice as a staple food</p> <p>A 1.5.6 Low level of awareness and Inadequate exploration of indigenous sources of food</p> <p>A 1.5.7 Limited efforts made to develop and diversify the consumer friendly food items based on indigenous food stuffs</p> <p>A 1.5.8 Inadequate extension on the utilization part of the food items (for preserving and enhancing nutritious quality of the food item in question)</p> <p>A 1.5.9 Unhygienic food consumption practices (due to the lack of knowledge about food safety measures)</p> <p>A 1.4.10 Weak regulatory mechanisms (poor enforcement of food laws and regulations related to food safety)</p> <p>A 1.5.11 Shortage of laboratory facilities for the test of food quality</p> <p>A 1.5.12 Poor transportation facilities in the rural areas</p> <p>A 1.5.13 Increasing dependency on remitted money for food security (than the farmer's production in self-cultivated land; around 30 percent households receive remittance per year)</p> <p>A 1.5.14 Low control of post-harvest losses</p> <p>A 1.5.15 Fluctuations at the level of annual production</p>	<p>B 1.5.1 Provide inclusive access to distributed food (for the marginalized groups)</p> <p>B 1.5.2 Enhance awareness about food quality and safety</p> <p>B 1.5.3 Increase farm and off-farm employment opportunities in the rural areas</p> <p>B 1.5.4 Promote commodity value chains for more employment creation</p> <p>B 1.5.5 Ensure consumer safety and nutrition with the supply of quality food (through diagnostic services encompassing import, wholesale, retail marketing and export)</p> <p>B 1.5.6 Expand coverage of DFTQC from 20 to 75 districts to regulate the quality control process</p> <p>B 1.5.7 Update and enforce laws and regulations related to the control of food quality and safety</p> <p>B 1.5.8 Conserve and utilize indigenous genetic materials (in the hills)</p> <p>B 1.5.9 Increase coverage of High Yielding Varieties (HYVs) in the Terai areas</p> <p>B 1.5.10 Establish partnership with private sector to regulate control of food quality</p> <p>B 1.5.11 Involve poor people in collective management of agriculture production (through the farmers' organization and contract farming system under leasehold forestry)</p> <p>B 1.5.12 Expand institutional credit for farm and non-farm activities</p> <p>B 1.5.13 Stabilize balance between the production and food security</p> <p>B 1.5.14 Launch massive awareness campaign on utilization of food stuff to preserve and enhance nutrition in the food</p> <p>B 1.5.15 Promote involvement of private sector in food technology development</p> <p>B 1.5.16 Promote food safety technology</p> <p>B 1.5.17 Expand food distribution mechanisms in the deficit areas</p>	<p>DoA, DDC, DFTQC, DLS, Meat Processing Plant, MoAC, MoCS, MoFSC, MoInd., NARC, NFC, Private Dairies</p>

A 1.6: Less effective food supply management system	B 1.6: Strengthen food supply management / distribution system	Responsible Organizations
<p>A 1.6.1 Lack of use of scientific method in assessing and forecasting total food production, requirement, demand and supply situation</p> <p>A 1.6.2 Lack of comprehensive food security monitoring system</p> <p>A 1.6.3 Insufficient warehouses</p> <p>A 1.6.4 Insufficient transportation subsidies for supplying foods in the food deficit remote hilly districts</p> <p>A 1.6.5 Inadequate transport facilities</p> <p>A 1.6.6 Inadequate networks and poor road condition</p> <p>A 1.6.7 Inadequate buffer stock</p> <p>A 1.6.8 Massive use of food grains in the production of alcohol</p> <p>A 1.6.9 Inadequate mobilization of cooperatives in running 'cooperative shop'</p> <p>A 1.6.10 Inadequate coordination between the food supplying agencies</p> <p>A 1.6.11 Limited presence of the sales outlets of major public enterprises in remote hilly areas</p>	<p>B 1.6.1 Establish food security (monitoring) section at MoAC and set working environment in the section</p> <p>B 1.6.2 Increase number of warehouses and capacity of existing warehouses</p> <p>B 1.6.3 Provision sufficient budget for transportation of food in food deficit remote and hilly districts</p> <p>B 1.6.4 Increase road networks and improve road condition</p> <p>B 1.6.5 Increase the volume of buffer stock to cope with emergency</p> <p>B 1.6.6 Promote cooperatives in running 'cooperative shop'</p> <p>B 1.6.7 Strengthen coordination and collaboration between various public enterprises</p> <p>B 1.6.8 Open up more sales outlets of public enterprises in food deficit remote and hilly areas</p> <p>B 1.6.9 Discourage using food grains in producing alcohol</p>	<p>DoC, DOLIDAR, MoAC, MoF, MoLJ, MoPPW, NFC, NEFSCUN</p>
A 1.7: Increasing food insecurity among the vulnerable groups	B 1.7: Emergency preparedness, response and recovery support strengthened to minimize the extent of vulnerabilities	Responsible Organizations
<p>A 1.7.1 Reliance of marginalized communities (e.g. poor Kamaiyas, Baadis, Deukis etc.) on the use of marginal land areas for livelihood</p> <p>A 1.7.2 No mapping of hazard prone areas and their subsequent vulnerabilities</p> <p>A 1.7.3 Lack of disaster management plans</p> <p>A 1.7.4 Uncoordinated relief support services</p>	<p>B 1.7.1 Enforce implementation of Disaster Management Act</p> <p>B 1.7.2 Support hazard-prone farmers with productive incentives (e.g. seeds, fertilizer etc.)</p> <p>B 1.7.3 Encourage community participation in managing degraded forest areas</p> <p>B 1.7.4 Promote the role of cooperatives in handling NTFP-based leasehold forestry activities</p> <p>B 1.7.5 Map out hazard-prone areas (e.g. flood, landslide and droughts)</p> <p>B 1.7.6 Prepare disaster management plan at district level</p> <p>B 1.7.7 Reclaim agricultural land lost due to landslide and floods</p> <p>B 1.7.8 Train communities for disaster prevention (mainly in the disaster prone areas)</p> <p>B 1.7.9 Establish National Disaster Mitigation Fund</p> <p>B 1.7.10 Implement coordinated disaster relief activities</p> <p>B 1.7.11 Promote water conservation and management practices (on-farm)</p>	<p>MoAC, MoEnv, MoFSC, MoHA, Molrr, NARC</p>

	and off-farm)	
PRIORITY 2: ENHANCING APPLICATION OF “GETTING BETTER” TECHNOLOGIES AND TOOLS		
A 2.1: Low agricultural return due to the application of traditional / less efficient technologies and tools	B 2.1: Increased adoption of improved / efficient technologies for enhancing agriculture production and processing	Responsible Organizations
A 2.1.1 Poor knowledge and skill among the farmers about the advantage of using improved technologies for commercialisation and diversification of agriculture sector ,and enhancement of production and productivity A 2.1.2 Unavailability/limited use of appropriate tools and machineries as per ecological diversity A 2.1.3 Limited access to finance and proper credit facility (farmers have low affordability for the adoption of improved measures in the rural areas) A 2.1.4 Risk averting nature of the small scale subsistence farmers and agro-processing entrepreneurs A 2.1.5 Limited facilities for in-country fabrication and repair of farm machineries and tools A 2.1.6 Limited access to energy and alternative energy sources	B 2.1.1 Promotion and capacity building of application of improved technologies and tools B 2.1.2 Research and development for adaptation of appropriate technologies and tools B 2.1.3 Improve credit services (simplify, enhance and increase scope) for the adoption of improved technologies B 2.1.4 Involve cooperatives in offering farm machinery and tool hiring services B 2.1.5 Provision for crop and livestock insurance to minimize risks B 2.1.6 Develop service centres for the repair of farm machineries and tools B 2.1.7 Develop rural electrification (promote alternative energy)	DoA, DLS, DFTQC, MoAC (ABPSD), NARC, MoF, MoEn., Bio-gas Companies, BTI, Small Hydropower Companies
2.2: Cumbersome workloads related to production and processing of agricultural commodities	B 2.2: Reduced drudgery in the agricultural value chain operations	Responsible Organizations
A 2.2.1 Increasing shortage of agriculture labour (due to outmigration of youths) A 2.2.2 Greater reliance on manual work for the farm and non-farm operations (e.g. in planting, harvesting and processing) A 2.2.3 Small and fragmented holdings restricting mechanization of agriculture A 2.2.4 Gender and social Inclusion issues are often neglected	B 2.2.1 Reduce manual workloads with substituted use of mechanized technologies and tools B 2.2.2 Conduct adaptation trials for the test of technologies for new cropping practices (as applicable) B 2.2.3 Train farmers for the adoption of suitable technologies and tools in their farm / non-farm operations B 2.2.4 Integrate gender and social inclusion issues in the plans and regularly assess its impact	DoA (AED), DoC, DFTQC, DLS, MoAC (GEED), NARC, NARDF
PRIORITY 3: PROMOTING ENABLING ENVIRONMENT		
A 3.1: Gaps in supportive policies, acts and regulations	B 3.1: Supportive policies, acts, rules and regulations developed with complementary functional linkages	Responsible Organizations
A 3.1.1 Inadequate monitoring and review of compliance to	B 3.1.1 Review and monitor compliance to policies and acts regularly	MoAC, MoLJ

<p>existing policies</p> <p>A 3.1.2 Incomplete design of supportive policies and acts (e.g. no policies at all or the existence of policies without subsidiary regulations for implementation support)</p> <p>A 3.1.3 Ineffective implementation</p>	<p>B 3.1.2 Formulate supportive policies and acts(e.g. endorsement of Agricultural Marketing)</p> <p>B 3.1.3 Develop subsidy and technology support policy for organic fertilizers, inorganic fertilizers and bio-pesticides</p> <p>B 3.1.4 Strengthen support chains with the design of complementary acts, rules and regulations (for strong functional linkages)</p> <p>B 3.1.5 Strengthen motivation and commitment for effective implementation</p> <p>B 3.1.6 Ensure coordination</p>	
A 3.2: Less effective support due to capacity limitations	B 3.2: Enhanced institutional capacity in the delivery of demand-friendly agricultural services	Responsible Organizations
<p>A 3.2.1 Insufficiently trained staff (in view of the skills demanded by their jobs)</p> <p>A 3.2.2 Lack of refresher courses</p> <p>A 3.2.3 Less coordinated efforts among service providing institutions (e.g. Government agencies, I/NGOs and CBOs)</p> <p>A 3.2.4 Limited monitoring of existing policy enforcements</p> <p>A 3.2.5 Limited involvement of private sector in the delivery of support services</p> <p>A 3.2.6 Gaps in technical support from centre to the local level</p> <p>A 3.2.7 Poor linkage between agricultural research and extensions</p>	<p>B 3.2.1 Strengthening of local level institutions and farmer to farmer extension approach for transfer of agricultural technologies</p> <p>B 3.2.2 Encourage private sector involvement in the suitable areas of their comparative advantage</p> <p>B 3.2.3 Strengthen monitoring and communication/information system (supported with up-to-date flow of information) to facilitate informed decision making</p> <p>B 3.2.4 Promote transparency and accountability with public hearing system (where applicable)</p> <p>B 3.2.5 Establish functional linkages between agricultural research and extension</p> <p>B 3.2.6 Develop competence of human resources (in view of the skills demanded by their jobs)</p>	DoA, DoC, DLS, ICC, MoAC, MLD, NARC
A 3.3: Low investment in agriculture	B 3.3: Increase investment in agriculture	Responsible Organizations
<p>A 3.3.1 Percentage of government budget allocation for agriculture remained stagnant despite priority to this sector</p> <p>A 3.3.2 Private sectors investment not adequate</p> <p>A 3.3.3 Institutional credit covers only around 28 percent of the total size of borrowings</p>	<p>B 3.3.1 Increase in percentage of government budgetary allocation (in R&D)</p> <p>B 3.3.2 Create enabling environment and encourage involvement of private sector in the areas of their comparative advantage (shift the role of public sector gradually towards regulatory and quality control functions)</p> <p>B 3.3.3 Mobilize local resources (e.g. the grant provided to the local government bodies and resources mobilized by them locally)</p>	MoAC, MoF, NPC

PRIORITY 4: PROMOTING MARKET – ORIENTATION AND COMPETITIVENESS		
A 4.1: Inadequate market-orientation in the production process	B 4.1: Production diversified with market orientation from agri-business perspective	Responsible Organizations
A 4.1.1 Lack of knowledge and consciousness about production and market dynamism A 4.1.2 Inadequate efforts and focus towards transforming subsistence farmers to commercial farming A 4.1.3 Limited involvement of private sector A 4.1.4 Higher production cost A 4.1.5 Inadequate regulations (e.g. price and subsidy related) to encourage participation of the private sector A 4.1.6 Inadequate incentive for market-oriented production system A 4.1.7 Less developed market (insufficient market infrastructure and facilities) A 4.1.8 Poor mechanisms for quality control (e.g. import of poor quality fertilizers; sanitary and phyto-sanitary).	B 4.1.1 Focus on market extension initiatives (education, training, skill development, knowledge transfer) B 4.1.2 Group farming/cooperative arrangement for transfer of subsistence agriculture to a commercial scale B 4.1.3 Promotion of the adoption of agro-processing technologies B 4.1.4 Pocket area development for location specific comparative advantage based specialized crops (e.g. one village one product) B 4.1.5 Capacity development of farm enterprises in production, processing and marketing B 4.1.6 Promotion of export of high / unique agricultural products (e.g. yak cheese, apple, medicinal herbs, garlic, honey and NTFPs) B 4.1.7 Encourage involvement of cooperatives in production, processing, marketing and delivery of services B 4.1.8 Support off-season high value crops with inputs, credit and marketing B 4.1.9 Develop value chain approach (production, processing, storage and marketing, access to finance) with active participation of all stakeholders B 4.1.10 Minimize post- harvest loss through research B 4.1.11 Remove restrictive legislations / regulations inhibiting participation of private sector B 4.1.12 Improve trade efficiency B 4.1.13 Harmonize quality standards to survive competition in the international market B 4.1.14 Disseminate demand and price related information B 4.1.15 Promote market linkages B 4.1.16 Formulate Marketing Act	CSIDB, DoA, DCSI, DLS, DoC, DFTQC
A 4.2: Unfavourable price	B 4.2: Prices made supportive for both inputs and outputs	Responsible Organizations
A 4.2.1 Frequent fluctuations in the market price	B 4.2.1 Guarantee input and output price with the control of occasional	DoA (ABPMDD),

<p>A 4.2.2 Artificial hoarding and supply scarcities</p> <p>A 4.2.3 Open border competition with highly subsidized Indian agriculture (For example, Nepalese subsidy is available only for about 100 thousand mt. of fertilizers per year against the annual demand of 450 thousand mt.)</p> <p>A 4.2.4 Insufficient price support policies causing higher price of input against the lower price of output</p> <p>A 4.2.5 Market distortions (caused by monopolies, cartels, local taxes and occasional bandas)</p> <p>A 4.2.6 High interest rates on agriculture loans (compared to non-agriculture loans)</p>	<p>fluctuations</p> <p>B 4.2.2 Strict monitoring of artificial hoarding and supply gaps (inputs and outputs)</p> <p>B 4.2.3 Implement supply responsive policies, acts and regulations</p> <p>B 4.2.4 Coordinate the role of Government, private sector and cooperatives for a fair play in the market</p> <p>B 4.2.5 Intervene through value chain approach</p> <p>B 4.2.6 Provide price incentives (linking with supply response)</p> <p>B 4.2.7 Promote "One Village One Product" value chains</p> <p>B 4.2.8 Develop market information system</p> <p>B 4.2.9 Establish Price Commission (to control market price distortions; recommendation of incentives; arrangement of minimum support price; coordinated marketing for better price etc.)</p> <p>B 4.2.10 Address anomalous interest differentials between the agricultural and non-agricultural loans</p> <p>B 4.2.11 Implement non-price measures (e.g. improved transportation facilities)</p> <p>B 4.2.12 Promote trade fair</p>	<p>DLS (LMPD), MoAC, MoCS, MoF</p>
A 4.3: Poor institutional services for market development	B 4.3: Institutional support services for marketing of inputs and outputs enhanced	Responsible Organizations
<p>A 4.3.1 Limited information about market price and demand of products</p> <p>A 4.3.2 Insufficient processing, grading and packaging facilities as well as practices</p> <p>A 4.3.3 Lack of coordinated functions among the producers, processors and traders</p> <p>A 4.3.4 Haphazard application of local taxes</p> <p>A 4.3.5 Frequent bandas affecting market services</p> <p>A 4.3.6 Limited facilities to protect perishable products (e.g. cold chain facilities for fluid milk and cold storage facilities for the vegetables)</p> <p>A 4.3.7 Sporadic market related acts and regulations</p> <p>A 4.3.8 Inadequate infrastructure service for market linkages</p>	<p>B 4.3.1 Promote native breed products (e.g. floriculture, aquaculture, apiculture etc.)</p> <p>B 4.3.2 Develop marketing infrastructures (e.g. rural roads, marketing sheds, cooperatives and power supply facilities)</p> <p>B 4.3.3 Consolidate scattered marketing acts under one umbrella act</p> <p>B 4.3.4 Standardize products with grading</p> <p>B 4.3.5 Discourage haphazard collection of taxes</p> <p>B 4.3.6 Promote affordable technology</p> <p>B 4.3.7 introduce low cost communication technology for market information (mobile phones, FMs, MP3 etc)</p> <p>B 4.3.8 Develop market support infrastructure (gravity ropeway, cold store, chilling vans and cycle vans etc)</p>	<p>DoA, DLS, Local Government Bodies (DDC/Municipality/VDC), MoF, NARC</p>
A 4.4: Import/export obstructions in the cross-border trade	B 4.4: Cross boarder import and export promoted through control of trans-boundary diseases and barriers to trade	Responsible Organizations
<p>A 4.4.1 Risk of trans-boundary communication of disease in</p>	<p>B 4.4.1 Remove import and export trade barriers for selected commodities</p>	<p>DLS, DFTQC, DoA</p>

plants and animals A 4.4.2 Poor institutional capacity to comply with World Trade Organization (WTO) provisions A 4.4.3 Less controlled open border informal trade with India	B 4.4.2 Establish drug residue monitoring system (in milk, meat, honey, tea and coffee) B 4.4.3 Make plant and animal quarantine services effective B 4.4.4 Deploy Agricultural Attaché at major locations of trade B 4.4.5 Arrange equivalence and mutual accreditation systems B 4.4.6 Introduce quality control certification system	
PRIORITY 5: SUSTAINING NATURAL RESOURCE CONSERVATION AND UTILIZATION		
A 5.1: Depleting bio-diversities	B 5.1: Conservation and utilization of bio-diversities sustained	Responsible Organizations
A 5.1.1 Over exploitation/inappropriate management of natural resources A 5.1.2 Invasion and colonization of alien species A 5.1.3 Poverty pressure preventing people from conservation and management of bio-diversities	B 5.1.1 Renewable management of natural resources B 5.1.2 Conservation of native species and breeds B 5.1.3 Operation of gene bank (through NARC) B 5.1.4 Control invasion and colonization of alien species B 5.1.5 Promotion of environment-friendly technologies (e.g. bio-technologies) B 5.1.6 Capacity building and institutional strengthening	MoAC, MoEnv, MoFSC, MLD
A 5.2: Deteriorating watershed services	B 5.2: Watershed services revived for sustainable use	Responsible Organizations
A 5.2.1 Lack of awareness among people about the benefits of sustainable management of natural resources A 5.2.2 Increasing deforestation and degradation of forest A 5.2.3 More pressure on the watershed services (due to overexploitation of water, land and forest resources)	B 5.2.1 Implement watershed conservation strategies (e.g. in Churiya Hills) B 5.2.2 Enforce environmental quality standards B 5.2.3 Encourage voluntary compliance to conservation (on-farm and off-farm) with incentive provisions B 5.2.4 Implement scientific forest management guidelines B 5.2.5 Monitor environmental effects of natural resources use B 5.2.6 Assess and plan sustainable forest use potential at the field level	MoAC, MoEnv, MoFSC, MLD, MoIrr
A 5.3: Unsustainable land use practices	B 5.3: Land management practices improved for sustainable use in a conflict-free environment	Responsible Organizations
A 5.3.1 Lack of effort to establish land use policy A 5.3.2 Agricultural land fragmentation system A 5.3.3 Land tenure conflicts (large number of cases in the court) A 5.3.4 Limited availability of information on land ownership and use A 5.3.5 Absence of maps on contemporary land use A 5.3.6 Degradation of farm land specially in the hills and	B 5.3.1 Develop production-friendly land use policy (a precondition) B 5.3.2 Reform land use measures (to attract investment in agriculture and cultivate the fallow land) B 5.3.3 Update database on the land use B 5.3.4 Utilize Land Information Service (LIS) for improved land administration practices (e.g. one land owner one certificate; computerized land use records at the district level; distribution of	MoLRM, MoAC, MoFSC, CBS

mountains	<p>land title certificate to the right owner etc.)</p> <p>B 5.3.5 Adopt scientific land reform measures (e.g. distribution of surplus land; leasing fallow land to the landless for contract farming etc.)</p> <p>B 5.3.6 Implement recommendations of High Level Land Reform Commission</p> <p>B 5.3.7 Reclaim encroached land areas</p> <p>B 5.3.8 Develop sustainable land use policy</p> <p>B 5.3.9 Train human resources (for conducting survey, mapping of land use and land administration)</p>	
A 5.4: Increased conversion of forest land for other uses	B 5.4: Sustainable management of forest resources for income generation and food security	Responsible Organizations
<p>A 5.4.1 Limited availability of employment opportunities for economically active youths</p> <p>A 5.4.2 Poor access of land among the marginalized groups (Kamaiyas, Baadis, Haliyas, Squatters, Deukis etc.)</p> <p>A 5.4.3 Low productivity of existing agricultural land</p> <p>A 5.4.4 Poor enforcement of forest laws</p> <p>A 5.4.5 Increasing land grabbing trends</p>	<p>B 5.4.1 Sustain conservation and utilization of land, water and bio-diversity resources</p> <p>B 5.4.2 Promote leasehold forestry activities (for livelihoods, poverty reduction and food security of the marginalized groups including landless people)</p> <p>B 5.4.3 Restore encroached areas</p> <p>B 5.4.4 Develop nurseries for seedlings production</p> <p>B 5.4.5 Develop federation of the leasehold forestry groups</p> <p>B 5.4.6 Promote cultivation of NTFPs and MAPs on private, CF and LF land areas</p> <p>B 5.4.7 Develop private investment friendly policies (for NTFP industries)</p> <p>B 5.4.8 Conduct action research on sustainable management and utilization of forest resources for agriculture</p> <p>B 5.4.9 Protect forest from further encroachment</p> <p>B 5.4.10 Promote conservation agriculture</p>	MoAC, MoFSC, NTNC
A 5.5: Adverse effects of climate change variability in agriculture and forestry	B 5.5: Climate change risks adapted with enhanced counteracting capacities of the local communities	Responsible Organizations
<p>A 5.5.1 Rising/fluctuating temperature</p> <p>A 5.5.2 Uncertainly moving precipitation calendar (affecting timely cultivation of land)</p> <p>A 5.5.3 Unpredictable monsoon floods and occurrence of natural hazards</p> <p>A 5.5.4 Increasing cold waves (destroying crops)</p> <p>A 5.5.5 Droughts (causing widespread agricultural damages in Terai and mid-hills)</p>	<p>B 5.5.1 Assessment and monitoring of climate change risks</p> <p>B 5.5.2 Estimation of vulnerabilities</p> <p>B 5.5.3 Implementation of early warning system targeting agriculture</p> <p>B 5.5.4 Conduct research on the production systems suitable to the adaptation to climate change effects</p> <p>B 5.5.5 Promotion of environment-friendly production practices (i.e. adoption of stress tolerant varieties and supportive technologies; shifting cropping patterns of etc.)</p>	Department of Hydrology and Meteorology, DoA, DLS, MoAC, MoEnv, MoFSC

<p>A 5.5.6 Lack of early warning system (especially for agriculture)</p> <p>A 5.5.7 Lack of awareness about possible climate change risks and their remedies (insufficient preparedness against the adverse effect possibilities)</p>	<p>B 5.5.6 Awareness raising on climate change effects and the ways to cope with the situation</p> <p>B 5.5.7 Strengthen disaster response preparedness capacity</p> <p>B 5.5.8 Introduce incentives for adaptation initiatives to climate change effects</p> <p>B 5.5.9 Scale up rain water harvest system</p> <p>B 5.5.10 Implement activities for disaster risk reduction through bio-engineering (i.e. through plantation to bind the soil for stopping erosion)</p> <p>B 5.5.11 Utilize National Adaptation Programme of Action (NAPA) as a coordination guide for Government, non-state actors and international community related activities</p> <p>B 5.5.12 Replicate results of piloted climate change adaptations and disaster management in the risk-prone districts (Re: FAO's piloted experience)</p> <p>B 5.5.13 Strengthen technical capacity of MoAC, DoA and DLS (to pro-actively address climate risks in agriculture)</p> <p>B 5.5.14 Introduce Disaster Risk Management (DRM) component in the agriculture and rural development planning activities of MoAC</p>	
PRIORITY 6: DEVELOPING INFRASTRUCTURE SUPPORT FACILITIES		
A 6.1: Inadequate availability of irrigation services	B 6.1: Irrigation infrastructures expanded with enhanced water management efficiency	Responsible Organizations
<p>A 6.1.1 Limited coverage of existing irrigation systems</p> <p>A 6.1.2 Poor maintenance</p> <p>A 6.1.3 Inadequate investment in command area expansion</p> <p>A 6.1.4 Limited know how about efficient management of water</p> <p>A 6.1.5 Limited utilization of alternative water management technologies (including rain water harvesting, drip and sprinkle systems etc.</p> <p>A 6.1.6 Inefficient water use practices</p>	<p>B 6.1.1 Rehabilitate existing irrigation infrastructures and improve system's efficiency</p> <p>B 6.1.2 Develop new irrigation infrastructures with on-farm water management efficiency</p> <p>B 6.1.3 Promote maintenance of traditional systems</p> <p>B 6.1.4 Adopt rain water harvesting system (apply conventional/non-conventional technologies, as appropriate)</p> <p>B 6.1.5 Strengthen user's groups/cooperatives/ organization for judicious use of available water</p> <p>B 6.1.6 Improve information base (maintain accuracy and disseminate)</p>	<p>Molrr, MoAC, MLD, WECS, NPC and MoF – overarching institutions</p>

A 6.2: Poor transport network connecting the major pocket areas of production with markets	B 6.2: Rural roads constructed and maintained for enhanced access to the major market centres	Responsible Organizations
<p>A 6.2.1 Low density of all weather road (only around 30 percent rural population have access to all weather road)</p> <p>A 6.2.2 Poor road network in the mid-hills and highland areas (more than 60 percent of the road network falls in the lowland area)</p> <p>A 6.2.3 Limited road access to production pockets (causing higher cost of farm inputs and less competitive price of outputs)</p> <p>A 6.2.4 5 out of 75 districts without road connection</p> <p>A 6.2.5 Poor road network between north-south corridor of the country</p> <p>A 6.2.6 Limited sense of road construction and repair ownership among the local population</p>	<p>B 6.2.1 Increase investment in construction and maintenance of rural roads (including feeder and agriculture roads)</p> <p>B 6.2.2 Develop other means of transportation in high/mid hill areas (e.g. rope way, cable car, suspension bridge, packs animal trails, waterways etc.)</p> <p>B 6.2.3 Improve connection of production pocket areas with market</p> <p>B 6.2.4 Enhance community ownership with participation of local population/beneficiaries in road construction and repair activities</p> <p>B 6.2.5 Improve farm to market access</p>	<p>DOLIDAR, MoAC, MoPPW, MLD, WECS</p>
A 6.3: Increased work burden and poor return to labour due to limited application of alternate power / energy systems in the agricultural value chain operations	B 6.3: Rural energy promoted for the production and processing value chain operations	Responsible Organizations
<p>A 6.3.1 Limited connection of farm enterprises to the electricity services</p> <p>A 6.3.2 Frequent power cut in the transmission line connected areas</p> <p>A 6.3.3 Suboptimal use of the potential of the bio-gas sector</p> <p>A 6.3.4 Limited use of draught animal power due to difficulties in raising cattle/buffalo</p> <p>A 6.3.5 Limited knowledge and skills of local population about the power-based technologies</p>	<p>B 6.3.1 Expand rural energy network (micro hydropower schemes, biogas, solar, draught power and shallow tube wells)</p> <p>B 6.3.2 Explore possibility of bio-fuel (e.g. jatropha)</p> <p>B 6.3.3 Delivery of field based training on the use of power-based technologies</p>	<p>MoAC, MoE, MoEnv, Ministry of Science and Technology</p>
A 6.4: Limited infrastructural facilities (e.g. laboratories, processing units etc.)	B 6.4: Rural infrastructures for processing, quality test of products and marketing facilities improved	Responsible Organizations
<p>A 6.4.1 Inadequate investment in creation of laboratory facilities, processing, storage and small rural marketing infrastructures</p> <p>A 6.4.2 Insufficient lab-test facilities for quality certification</p>	<p>B 6.4.1 Development of new market centres (closer to the major production pocket areas and vice versa)</p> <p>B 6.4.2 Promote of production corridor and micro enterprises</p> <p>B 6.4.3 Increase investment for improvement and expansion of lab facilities</p> <p>B 6.4.4 Develop conducive policy to attract private sector investment and</p>	<p>Cooperatives, CSIDB, DCSI, MoAC</p>

A 6.4.3 Huge wastage during stocking of products due to improper storage facility A 6.4.4 Inadequate market centres closer to the production pocket areas	public – private partnership.	
PRIORITY 7: ENHANCING INTEGRATION OF GENDER IN AGRICULTURE		
A 7.1: Limited integration of gender in productive agriculture development process	B 7.1: Integration of gender improved in productive spheres of the agricultural development activities	Responsible Organizations
A 7.1.1 Limited access/involvement of women in training (related to modern / appropriate practices and mechanized technologies, decision making, production process and marketing) A 7.1.2 Shift of agricultural work burden on women/girl children (due to increasing migration of male members for foreign employment) A 7.1.3 Use of traditional farming skills subjecting women to higher food insecurity A 7.1.4 Lack of exploration and access to drudgery reducing gender sensitive technology	B 7.1.1 Delivery of gender-responsive services (e.g. training, extension and credit services) B 7.1.2 Develop women's capacity in the commodity value chains (e.g. production, processing, storage and marketing) B 7.1.3 Promote adoption of women-friendly agricultural practices and modern / appropriate technologies B 7.1.4 Develop and apply agro-gender database in planning and implementation of agricultural activities B 7.1.5 Strengthen women's financing groups/ cooperatives to lend for micro-enterprises B 7.1.6 Encourage women's participation in agriculture commercialization process with access to information B 7.1.7 Develop comprehensive training package on women's entrepreneurship development (by coordinating agriculture and interdependent natural resources management activities) B 7.1.8 Provide safe drinking water facilities at the nearest point to the settlement areas (to reduce drudgery of fetching water) B 7.1.9 Introduce fodder and forage grasses in nearby private and community land	MoWCSW, MoAC, National Woman Commission
A 7.2: Discrimination of women against their equal development rights	B 7.2: Women empowered for equal development opportunities	Responsible Organizations
A 7.2.1 Inadequate legal rights provisions to women (e.g. land holding) A 7.2.2 Application of discriminatory wage rates (for the female workers) A 7.2.3 Inadequate participation opportunities for women (due to	B 7.2.1 Increase land ownership of women B 7.2.2 Ensure equal wage rates B 7.2.3 Maintain gender friendly environment for women's participation (e.g. flexible working hours under special conditions) B 7.2.4 Take affirmative actions for women's recruitment (as facilitators,	MoAC, MoWCS, National Woman Commission

<p>various familial/social restrictions)</p> <p>A 7.2.4 Limited recognition and application of women's traditional knowledge and practices</p>	<p>extension workers, social mobilizers etc)</p> <p>B 7.2.5 Sensitize male counterparts about gender rights (promote the practice of mainstreaming gender as a culture to be followed)</p> <p>B 7.2.6 Acknowledge women's knowledge and put them into practice</p> <p>B 7.2.7 Mentor women's leadership development</p> <p>B 7.2.8 Organize women's network to discuss gender issues and concerns in agriculture</p>	
PRIORITY 8: MANAGING THE EFFECTS OF MIGRATION OF AGRICULTURAL LABOUR		
A 8.1: Increasing shortage of agricultural labour due to out-migration from rural areas	B 8.1: Migration minimized with promotion of more employment opportunities at the local level	Responsible Organizations
<p><i>(i) Push factors of migration:</i></p> <p>A 8.1.1 Prolonged insecurity due to conflict and feeling of insecure future (criminal activities, mixing with rebel groups, drug use etc)</p> <p>A 8.1.2 Fear of abduction</p> <p>A 8.1.3 Insufficient year-round employment opportunity in the subsistence farm (due to the dependence on rain-fed cultivation)</p> <p>A 8.1.4 Majority of food deficit (deficit for 6 - 8 months in a year) farm families in the rural and remote areas</p> <p><i>(ii) Pull factors of migration:</i></p> <p>A 8.1.5 Migration due to food better earning possibilities elsewhere</p> <p>A 8.1.6 Increasing feminization of agriculture (due to the migration of male youths in foreign jobs – about 90 percent male as compared to female 10 percent female)</p>	<p>B 8.1.1 Reduce 'push factors' of migration (map out the heavy out- migration areas and provide support services and incentives for engagement in the agricultural work)</p> <p>B 8.1.2 Adopt mechanized technologies (to reduce drudgery on women farmers)</p> <p>B 8.1.3 Provide training on the production of medicinal plants (Yarchagumba).</p> <p>B 8.1.4 Promote technical education and vocational training</p> <p>B 8.1.5 Provide micro-credit / rural finance services</p> <p>B 8.1.6 Reconstruct and rehabilitate rural infrastructure destroyed during the conflict period.</p> <p>B 8.1.7 Create economic environment for the return of Internally Displaced Persons to their original place.</p>	<p>MoAC, MoLTM, National Human Rights Commission</p>
A 8.2: Decreasing attraction of rural youths towards agriculture	B 8.2: Agricultural occupation made more lucrative for the attraction of youths	Responsible Organizations
<p>A 8.2.1 Income inequalities between urban, rural and remote areas (e.g. there are 22 percent poor in the rural areas as compared to 8 percent in the urban areas)</p> <p>A 8.2.1 Inter-generational gap (between old and new generations)</p>	<p>(create conditions to reduce the pull factors)</p> <p>B 8.2.1 Promote value chain activities based agricultural enterprises (to expand employment opportunities)</p>	<p>ADB/N and other Banks, Cooperatives, MoAC; MoEd, MoFA, MoLTM, MoWCSW, MoLJ</p>

<p>of agricultural knowledge</p> <p>A 8.2.1 Declining involvement of youths in agriculture (due to its less lucrative nature as compared to non-agricultural activities)</p> <p>A 8.2.1 Nature of education system alienating educated youths from agriculture</p> <p>A 8.2.1 Non agricultural jobs considered more respectful than the agricultural jobs</p> <p>A 8.2.1 Limited public sector investment in rural areas (e.g. at least 40 - 60% of credit to be directed towards rural areas, but it is not the case)</p>	<p>B 8.2.2 Make agricultural investment environment more favourable for the utilization of remitted money (currently, around 30 percent households receive a remittance of around NRs 65,755.- in average per year; of this, only one percent is invested in agriculture)</p> <p>B 8.2.3 Introduce financial management literacy skills (to the migrants and their family members at home)</p> <p>B 8.2.4 Generate youths-friendly employment opportunities</p> <p>B 8.2.5 Apply contract farming systems</p> <p>B 8.2.6 Promote agro-based activities for self-employment in groups</p> <p>B 8.2.7 Create conducive conditions for private investment in rural areas.</p> <p>B 8.2.8 Promote socially inclusive policies</p> <p>B 8.2.9 Redirect investment to remote and marginal areas.</p> <p>B 8.2.10 Reduce interest rates for credit extended in connection with rural activities.</p> <p>B 8.2.11 Increase easy access to rural credit</p> <p>B 8.2.12 Minimize transaction costs of borrowing</p>	
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