Nepal: Project for Raising Incomes of Small and Medium Farmers
(Co-financed by the Swiss Agency for Development and Coordination)

Prepared by
ANZDEC Limited

For the Government of Nepal's Ministry of Agriculture and Cooperatives and the Asian Development Bank (ADB)

This consultant's report does not necessarily reflect the views of ADB or the Government concerned, and ADB and the Government cannot be held liable for its contents. (For project preparatory technical assistance: All the views expressed herein may not be incorporated into the proposed project's design.)
CURRENCY EQUIVALENTS
(As at 7 June 2010)

Currency Unit – Nepalese Rupees (NPR)

1$ = NPR 74.1420
1 NPR = $ 0.01299

ABBREVIATIONS

ADBL – Agricultural Development Bank Limited
AEC – Agro Enterprise Center
AMIS – Agricultural Marketing Information System
APP – Agriculture Perspective Plan
ASP – Advisory Service Provider
CA – Constituent Assembly
CASC – Community Agricultural Service Center
CASM – Community Agricultural and Social Mobilizer
CDCP – Crop Diversification Project
CDP – Crop Diversification Project
CEAT – Controlled Environment Agricultural Technology
CIP – Community Irrigation Project
DADO – District Agriculture Development Office
DAG – Disadvantaged Groups
DCCI – District Chamber of Commerce and Industry
DDC – District Development Committee
DFID – (UK) Department for International Development
DFTQC – Department of Food technology and Quality Control
DOA – Department of Agriculture
DOC – Department of Cooperatives
DOLS – Department of Livestock Services
DRILP II – Decentralized Rural Infrastructure and Livelihood Project
EAM – Environmental Assessment and Measures
FAO – Food and Agricultural Organization of the United Nations
FNCCI – Federation of Nepal Chambers of Commerce and Industry
FWDR – Far West Development Region
FY – Fiscal Year (16 July -15 July)
GAP – Gender Action Plan
GEED – Gender, Equity, Environment Division (of MOAC)
ha – hectares
HIMALI – Highland Mountain Agribusiness and Livelihood Improvement Project
HVAP – High Value Agricultural Project in Hill and Mountain Areas
HVC – High Value Commodities
IAP – Independent Appraisal Panel
IFAD – The International Fund for Agricultural Development
ILO – International Labor Organization
IPAM – Indigenous Peoples Assessment and Measures
IRAM – Involuntary Resettlement Assessment and Measures
LDC – Least Developed Country
MAPs – Medicinal and Aromatics Plants
MOAC – Ministry of Agriculture and Cooperatives’
MWDR – Mid West Development Region
NAP – National Agricultural Plan
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>NARDF</td>
<td>National Agricultural Research and Development Fund</td>
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<td>NGO</td>
<td>Non Government Organization</td>
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<tr>
<td>NPR</td>
<td>Nepalese Rupees</td>
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<td>NRM</td>
<td>(ADB) Nepal Resident Mission</td>
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<td>NSC</td>
<td>National Seed Company Ltd</td>
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<tr>
<td>OPEC</td>
<td>Organization of Petroleum Exporting Countries</td>
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<tr>
<td>OVOP</td>
<td>One Village One Product (Program)</td>
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<tr>
<td>PACT</td>
<td>Project for Agricultural Commercialization and Trade</td>
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<tr>
<td>PIUs</td>
<td>Project Implementation Units</td>
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<tr>
<td>PLO</td>
<td>Project Liaison Office</td>
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<tr>
<td>PMU</td>
<td>Project Management Unit</td>
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<tr>
<td>PPA</td>
<td>Production Pocket Areas</td>
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<td>PPP</td>
<td>Public Private Partnership</td>
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<td>PPTA</td>
<td>Project Preparatory Technical Assistance</td>
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<tr>
<td>PRISM</td>
<td>Project for Raising Incomes of Small and Medium Farmers</td>
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<tr>
<td>PSC</td>
<td>Project Steering Committee</td>
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<tr>
<td>RRP</td>
<td>Report and Recommendation to the President of the Board of Directors (of ADB)</td>
</tr>
<tr>
<td>SAARC</td>
<td>South Asian Association for Regional Cooperation (SAARC)</td>
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<td>SDC</td>
<td>Swiss Agency for Development and Cooperation</td>
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<tr>
<td>SKBB</td>
<td>Sana Kisan Bikas Bank (Small Farmers Development Bank)</td>
</tr>
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<td>SNV</td>
<td>Netherlands Development Agency</td>
</tr>
<tr>
<td>SPRSS</td>
<td>Summary of Poverty Reduction and Social Strategy</td>
</tr>
<tr>
<td>TYIP</td>
<td>Three Year Interim Plan, FY 2008-FY2010</td>
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<tr>
<td>VDC</td>
<td>Village Development Committee</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
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</tbody>
</table>

**NOTE(S)**

In this report

The Project refers to the Project for Raising Incomes of Small and Medium Farmers (PRISM)

Government refers to the Government of the Republic of Nepal

$ refers to US dollars
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Agricultural Marketing Analysis, March 2010
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- Agricultural Marketing Specialist
- Rural Infrastructure Specialist
- Social Development Specialist
- Gender Specialist
- Environment Specialist
- Financial Management / Procurement Specialist
EXECUTIVE SUMMARY

This Final Report (FR) presents the Consultant’s design of the proposed Project for Raising Incomes of Small and Medium Farmers (PRISM).\(^1\) It is recommended that ADB provides the Government of Nepal with a grant of $20.1 million from the Asian Development Fund (ADF) representing 75.1% of the total Project cost of $26.76 million, in order to implement the PRISM. The proposed Project is summarized as follows:

**Project Classification:** PRISM is provisionally classified as follows:

**Sector (sub-sectors):** Agriculture and natural resources (agricultural production and markets)

**Themes (sub-themes):** (i) Economic growth - widening access to markets and opportunities; (ii) Effective gender mainstreaming; and (iii) Climate change adaptation.

**Targeting Classification:** General intervention

**Location impact:** (i) Rural: - high, (ii) Urban: – low, (iii) National: low, (iv) Regional - high

**Safeguards:** (i) Environment – B, (ii) Resettlement – C, (iii) Indigenous People – B

**Project Description:** Nepal is a small country, situated in South Asia, 885 km in length from east to west, with a non uniform width of 193 km from north to south and covering an area of 147,181 sq km. The country is bounded by the Himalayan mountain range to the north and the Ganges plains to the South, and has borders with China to the North and India to the south, east and west. The country has three different ecological zones based on climate and topography, viz, mountains, hill areas and the terai (plains), and experiences a variety of climate within its major zones, including tropical, meso and micro-thermal, taiga and tundra types. Administratively, the country is divided into five development regions, viz, Eastern, Central, Western, Mid Western and Far Western, and further, into 75 districts with each district comprising lower administrative units, viz, municipalities, village development committees (VDCs) and wards.

Nepal's population is 23.1 million, based on the 2001 census, and grew at an annual rate of 2.25% from 1991 to 2001, which is the highest growth rate in South Asia. The population is unevenly distributed throughout the country, with 7.3% in the mountain area, 44.3% in the hill area, and 48.4% in the terai.

The PRISM will build on the ADB assisted Crop Diversification Project (CDP) which ran from 2001 to 2007 and which substantially raised the incomes of small and medium farmers in the mid west (MWDR) and far west (FWDR) development regions of Nepal. The proposed Project has an overall aim to increase on-farm incomes of small and medium farmers in, initially, 13 districts, with the possible addition of a further four districts in the MWDR and FWDR, contingent upon an assessment of Project progress during the first year of implementation and against established criteria for inclusion.\(^2\) The Project area includes some of the country's poorest people and least economically developed areas. The Project will assist in the economic development of the MWDR and FWDR and provide increased employment opportunities for the landless, marginal farmers, including women and members of disadvantaged groups (DAGs) and indigenous peoples (IPs).

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\(^1\) The Crop Diversification and Commercialization Project (CDCP) was renamed the Project for Raising Incomes of Small and Medium Farmers (PRISM) at a meeting of the Project Steering Committee held on 14 May 2010, and subsequently confirmed in the minutes thereof.

\(^2\) Details of the districts included in the Project area are provided under section III.C (paras 87-88)
The Project will be market demand driven and will increase the income of small and medium farmers from high value commodities (HVCs). HVCs are defined as agricultural crops and other non livestock farm based commodities, e.g. honey and farmed fish, which will give a higher rate of return to the farmer per unit of land, than the production of staple crops such as cereals. HVC enterprises identified during Project design include the production and commercialization of temperate and tropical fruits and vegetables, spices, oilseeds, legumes, vegetable and cereal seeds, honey and farmed fish. Whilst the Project will not support the production of staple food crops, such as cereals, it will not compromise food security and will contribute to the greater availability and affordability of a wider range of healthy and nutritious foodstuffs through enabling the increase of disposable cash incomes amongst rural households. The Project will foster greater commercialization of agriculture in the MWDR and FWDR of Nepal through investments that will promote diversification into HVC production, value addition and marketing. The Project will have three components: (i) Enhancing Production of High Value Commodities (HVC); (ii) Strengthening Farmer Participation in the High Value Commodities (HVC) Value Chain; and (iii) Project Management.

Small and medium farmers, including women and DADs/IPS, will be encouraged to join or form Farmers' Groups, which can be developed into larger groups with critical mass and legal status to enable joint sales, greater HVC commercialization possibilities and improved market efficiency.

Under Component 1 the Project will (i) improve farmers' awareness, knowledge and skills of HVC production through field based training, demonstration plots, and study tours; (ii) enhance agricultural service delivery through improving the capacity of District Agricultural Development Offices (DADOs), increasing the capacity of DOA HVC program directorates and field resource centers, supporting the establishment and operation of community agricultural service centers (CASCs), enabling the establishment of farmer group nurseries to improve the availability of good quality planting materials, providing community agricultural and social mobilizers (CASMs), and supporting demand driven research into HVCs; and (iii) increasing access to improved farm technology such as rain water retention tanks, micro irrigation, controlled environment agricultural technology (CEAT, e.g., greenhouses and cloches), and farm mechanization.

Under Component 2 the Project will strengthen farmer participation in the HVC value chain through (i) building farmer awareness, knowledge and skills in post harvest handling, value addition and marketing; (ii) increase market linkages for farmers by adding value to the presentation of their products thus enabling access to new, more profitable markets; (iii) the provision of an enhanced and improved marketing information system (AMIS); and (iv) technical and financial assistance to the provision of post harvest value chain investments such as collection and marketing centers, low cost, small scale agro processing units, cold stores, and alternative energy units such as solar panels.

The mainstreaming of women in the agricultural sector, and the inclusion of disadvantaged groups and indigenous peoples as Project beneficiaries are cross cutting issues to all the Project’s investments and activities. Furthermore, investments to promote environmental sustainability and adaptation by farmers to the negative effects of climate change are incorporated in all Project outputs.

Rationale: Nepal is one of the poorest and least developed countries in the world, ranked 145th out of 179 countries in terms of the human development index estimated by the UN Human Development Report 2008. It is also the poorest country in South Asia with a per capita gross domestic product (GDP), in 2000 prices, estimated at $243 in 2007. Over the

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3 UN, Human Development Report - 2008
last decade, economic growth has been adversely affected by political instability caused by the 10-year conflict, erratic weather conditions, power, water and fuel shortages, and labor tensions. Whilst poverty is widespread throughout the country, it is particularly high in rural areas amongst farming households. Furthermore, there is an east–west divide in the incidence of poverty with the proposed Project area of the MWDR and FWDR recording a poverty headcount ratios that are 10% to 14% higher than the overall average for the rest of the country.

Land is Nepal's most basic resource and its cultivation is the mainstay of the country's primarily agrarian economy with over 80% of the rural population directly or indirectly engaged in agriculture. However, there has been long-term declining trend in growth and output in the agriculture sector evidenced by the fall in its contribution to GDP from 39% in 1995 to around 33% currently, which is partially accounted for by the disruptions during the 10-year conflict, slow growth in the post-conflict period, urbanization, the migration overseas of rural population, and the impact of climate change on crop production. Nepal is highly vulnerable to climate change and its impacts have been noticed particularly in the agriculture and water resources sectors due to an overall increase in temperatures and unforeseen changes in weather patterns.

Within the agriculture sector, rice is the dominant crop contributing most to self-sufficiency in food grains and hence food security. However, the emphasis placed on rice and other cereal production has resulted in increased dependency on imported foodstuffs, particularly fruit which remains unaffordable to many poor consumers. Therefore the increase in HVC production, including fruit, is of critical importance in reducing imports and enhancing affordable and varied nutritious diets for the poor. The Project seeks to build on the achievements of the CDP which ended in 2007, which, whilst considered an overall success, identified the need for further support to its beneficiaries in the MWDR and FWDR, both in terms of support to areas still requiring basic help in crop diversification, and to those farmers that now require assistance in developing the commercial aspects of their enterprises such as improving product quality, value addition and market access.

The Government of Nepal's (GON) Three-Year Interim Plan (TYIP), FY2008–FY2010 includes the key elements of the National Agriculture Policy (NAP), 2004, and sets out the long-term vision for the agricultural sector as "bringing about improvements in the standard of living through sustainable agricultural development by transforming the current system of subsistence oriented farming systems into a commercial and competitive farming system". The Government has given the development of the agriculture sector the highest priority in addressing poverty and its rapid alleviation and NAP outlines policies and strategies to foster agriculture sector growth that include: (i) increasing crop yield, (ii) providing broad-based policy support, (iii) diversifying into high value crops and commodities, (iv) intensifying agricultural extension, research and technology generation, (v) disseminating technology among farmers, (vi) improving agricultural marketing systems, (vii) promoting agro-processing activities, (viii) adopting climate change adaptive technologies, and (ix) fostering public private partnerships (PPP). PRISM is in line with GON's priority policies and strategies for the agriculture sector.

Project Impact and Outcome: The expected impact of the Project is that on-farm incomes of small and medium farmers in the project area are increased. The expected outcome of the Project is that income from high value commodities (HVCs) of small and medium farmers in the project area is increased.

**Project Investment Plan:** A grant not exceeding $20.1 million equivalent will be provided from Asian Development Fund (ADF) resources to finance 75.1% of the Project cost. The proposed investment and finance plan is as follows:

### Investment Plan by Project Component

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount ($ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Base Cost</strong></td>
<td></td>
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<tr>
<td>1. Enhancing Production of High Value Commodities (HVCs)</td>
<td>10.56</td>
</tr>
<tr>
<td>2. Strengthening Farmer Participation in HVC Value Chains</td>
<td>8.11</td>
</tr>
<tr>
<td>3. Supporting Project Implementation</td>
<td>4.61</td>
</tr>
<tr>
<td><strong>Subtotal A</strong></td>
<td><strong>23.27</strong></td>
</tr>
<tr>
<td><strong>B. Contingencies</strong></td>
<td>3.48</td>
</tr>
<tr>
<td><strong>TOTAL (A+B)</strong></td>
<td><strong>26.76</strong></td>
</tr>
</tbody>
</table>

### Financing Plan

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount ($ millions)</th>
<th>Share of total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian Development Bank</td>
<td>20.10</td>
<td>75.1</td>
</tr>
<tr>
<td>Government</td>
<td>1.32</td>
<td>4.90</td>
</tr>
<tr>
<td>Beneficiaries</td>
<td>5.34</td>
<td>19.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>26.76</strong></td>
<td>100</td>
</tr>
</tbody>
</table>

**Estimated Project Completion Date:** By June 2017.

**Executing Agencies:** The Department of Agriculture (DOA) of the Ministry of Agriculture and Cooperatives (MOAC).

**Implementing Arrangements:** A Project Steering Committee (PSC), to be chaired by the Secretary, MOAC, and comprising members from both the public and private sectors, will oversee the implementation of the Project. A public-private partnership (PPP) approach to project implementation is proposed. The Project will be implemented jointly, by public, private, NGO, and Agricultural Cooperative service providers who will organize the value chain participants, assist in strengthening linkages, and provide advisory services to beneficiaries. The Government, through memorandums of understanding (MOUs) will define each party's responsibilities and duties, and define the mutual benefits of the PPP arrangements. More specifically, the DOA will act as implementing agency of Component 3 (Project Management Support) and as the lead implementing agency of Component 1 (Enhancing Production of HVCs) supported by advisory service providers (ASPs). The Agro Enterprise Center (AEC) of the Federation of Nepal Chambers of Commerce and Industry (FNCCI) will act as lead implementing agency of Component 2 (Strengthening Farmer Participation in HVCs Value Chain), supported by ASPs. The ASPs will be recruited from both qualified Government and non-government agencies. An Independent Appraisal Panel (IAP), chaired by the regional DOA directors (RDs) and comprising both Government and private sector members, will evaluate applicants for appointment as ASPs and proposals for financial support from the Project’s research, value chain investment, and market research funds. The MOAC will establish: (i) a Project Management Unit (PMU) at Nepalgunj in the MWDR; (ii) two regional Project Implementation Units (PIUs) based at Ghorahi and
Dadeldhura in the MWDR and FWDR, respectively; and (iii) a small Project liaison office at the center in the DOA’s Kathmandu premises.

**Procurement:** Goods, related services, and civil works will be procured in accordance with ADB’s *Procurement Guidelines* (2007), as amended from time to time.

**Consultancy Services:** The selection and engagement of all consulting services will be in accordance with *ADB’s Guidelines on the Use of Consultants* (2007), as amended from time to time and other arrangements satisfactory to ADB for engaging international and national consultants. The consultants, comprising six person-months of international and 104 person-months of national consultants will be recruited by the PMU through a firm using the quality and cost-based selection (QCBS) method.

**Project Benefits and Beneficiaries:** The Project will raise the incomes of small and medium farmers in the Project area and increase the productivity and profitability of their land by diversification into HVC production and commercialization. It will also increase employment opportunities for very poor groups, including the landless, marginal farmers, DAGs and IPs in farm and off farm enterprises. PRISM will make an indirect contribution to food security by increasing the disposable incomes of rural households. Furthermore, the Project will foster overall economic growth in the MWDR and FWDR, enabling private sector agribusiness entrepreneurs to benefit indirectly from Project investments by increasing business opportunities through direct linkages with farmers and their groups. Women’s participation in the agriculture sector will be mainstreamed, and DAGs and IPs will be benefited by inclusion and access to Project investments.
MAP OF PROJECT AREA
I. INTRODUCTION

A. Background

1. This Final report is the third and final milestone document required under the terms of reference (TOR) of the Project Preparation Technical Assistance (PPTA) for the Project for Raising Incomes of Small and Medium Farmers (PRISM). The PPTA started on 27 November 2009 with duration of six months. Inception, Interim and Draft Final reports were submitted to the Government and ADB in December 2009, March, and May 2010, respectively.

2. The proposed Project will develop and build on the lessons learned from implementation of the previous ADB financed Crop Diversification Project (CDP) which was implemented from July 2001 to December 2007.

3. The Project will target the mid west (MWDR) and far west (FWDR) development regions of Nepal with the objective of addressing the low level of rural household incomes in the Project area. The Project will increase farmers' and rural household incomes and employment opportunities by fostering the production and commercialization of high value commodities (HVC). The expected impact of the Project is that farm incomes of small and medium farmers in the Project area are increased. The expected outcome of the Project is that Income from HVCs for small and medium farmers, including women and disadvantaged groups (DAG) and indigenous peoples (IP) in the Project area are increased.

B. Definitions of terms used in this report

4. High value commodities (HVC) are defined as agricultural crops and other non livestock farm based commodities, e.g. honey and farmed fish, which will give a higher rate of return to the farmer per hectare (ha), than the production of staple crops such as cereals.

5. Production pocket areas (PPA) are defined as areas with good production and marketing potential and connectivity, of up to 150 hectares (ha) for fruits and about 100 ha for vegetables in the terai, and about 70 ha for fruits and 40 ha for vegetables in the hill areas of the country. The PPA approach to agricultural development was originally established by the Agriculture Perspective Plan (APP), formulated in 1995, and remains a cornerstone of Government policy for the agriculture sector.

6. Small and medium farmers: The following classification of farmers, according to size, has been used throughout this report: (i) small (up to 0.5 ha in hills and 1 ha in the terai), (ii) medium (up to 1 ha in hills and 3 ha in terai), and (iii) large (above 1 ha in hills and 3 ha in the terai).

7. Food security has been defined by the FAO as a condition that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life.

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5 The Crop Diversification and Commercialization Project was renamed Project for Raising Incomes of Small and Medium Farmers (PRISM), to better reflect the Project outcome, at a meeting of the Project Steering Committee held on 14 May 2010, and confirmed in the minutes thereof.
6 See the development problem addressed in the problem tree, reference Appendix 2 (Sector Analysis), section11, and figure 2.
7 See the Design and Monitoring Framework (DMF) in Appendix 1.
8 Source: ADB, 2004: Community Managed Irrigated Agriculture Sector Project Nepal (CMIAS), document prepared for ADB, page 49, 27 October, 2004
healthy life. Household food security is the application of this concept at the family level, with individuals within households as the focus of concern.

8. **Agribusiness and the commercialization of agriculture** may be broadly defined as involving a wide range of complex, interlinked and market led activities including inputs, related to the commercial production of agricultural commodities, their transformation into products, and their marketing and distribution. The above definition encompasses four major activities:

(i) Agricultural farm inputs, e.g., planting material, fertilizers, pesticides and herbicides, farm services and supply,

(ii) Commercial farm production – planting, husbandry, harvesting and post harvest on-farm activity;

(iii) Primary and secondary production – storage, transport, logistics, processing, marketing, wholesaling and retailing, and exporting, and

(iv) Services – research and development, extension, technology demonstration, transfer and outreach, education, banking and finance, investment, and technical assistance.

9. The **value chain approach** to agricultural development is defined as follows: The integration of the value chain, enabling forward and backward linkages between farmer and consumer, is an important tool in the improvement of marketing efficiency to the benefit of farmers. Basically, the value chain is a connected string of companies, groups and other actors, including farmers, working together to satisfy market demand for a particular product or group of products. Analysis of the value chain will also indicate the various price determination points along the chain and the extent to which the value added represents actual transaction costs and profit. It should be noted that an integral component of the value chain is the agricultural supply chain, and in the literature on this subject the terms “value chain” and “supply chain” (and “marketing chain”) are often used interchangeably, as they are closely related.9

10. Commercial agriculture and agribusiness activity differs from traditional farming systems in that it is, by definition, commercially and market demand oriented and implies organized linkages among different stakeholders in the value chain. Therefore, subsistence level agriculture would not fall within this definition. Furthermore, commercial agriculture and agribusiness, as defined, implies close coordination between both the public and private sector; and particularly the different public sector institutions, such as government ministries, departments, and statutory bodies, involved with agriculture and rural development, commerce and trade, and industry. Finally, it is widely acknowledged worldwide that the development of the commercialization of agriculture and agribusiness must be led by the private sector in order to succeed.

11. **Public Private Partnerships (PPP):** The definition of PPP for the purposes of the proposed Project is a model under which Project implementation will be undertaken jointly, by public, private, NGO and Agricultural Cooperative service providers who will organize the value chain participants, assist in strengthening linkages, and provide advisory services to beneficiaries.10 The Government, through an MOU, will define each party’s responsibilities and duties, and define the mutual benefits of the PPP arrangements.

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9 Source: DFID, Renewable Natural Resources Research Strategy (RNRRS) - 2007
II. THE PROPOSAL

12. This report and recommendation on a proposed grant to Nepal for the Project for Raising Incomes for Small and Medium Farmers (PRISM) is submitted to the ADB and the Ministry of Agriculture and Cooperatives (MOAC) for consideration.

III. THE PROJECT

A. Rationale

1. Performance Indicators and Analysis

13. Nepal is a small country, situated in South Asia, 885 km in length from east to west, with a non uniform width of 193 km from north to south and covering an area of 147,181 sq km. The country is bounded by the Himalayan mountain range to the north and the Ganges plains to the South, and has borders with China to the North and India to the south, east and west. The country has three different ecological zones based on climate and topography, viz, mountains, hill areas and the terai (plains), and experiences a variety of climate within its major zones, including tropical, meso and micro-thermal, taiga and tundra types. Administratively, the country is divided into five development regions, viz, Eastern, Central, Western, Mid Western and Far Western, and further, into 75 districts with each district comprising lower administrative units, viz, municipalities, district development committees (DDCs) village development committees (VDCs) and wards.

14. Nepal's population is 23.1 million, based on the 2001 census, and grew at an annual rate of 2.25% from 1991 to 2001, which is the highest growth rate in South Asia over a comparable period. The population is unevenly distributed throughout the country, with 7.3 % in the mountain area, 44.3% in the hill area, and 48.4 % in the terai.

15. Nepal is one of the poorest and least developed countries (LDCs) in the world, ranked 145\textsuperscript{th} out of 179 countries in terms of the human development index estimated by the UN Human Development Report 2008.\textsuperscript{11} It is also the poorest country in South Asia with a per capita gross domestic product (GDP), in 2000 prices, estimated at $243 in 2007, compared to $439 for Bangladesh, $600 for Pakistan, $686 for India, $1,144 for Sri Lanka and $1,227 for Bhutan.\textsuperscript{12} Poverty is widespread and according to the Central Bureau of Statistics (CBS), 31% of the population was living below the poverty line in 2005. The incidence of poverty tends to be higher in rural farming areas than in urban centers with significant regional inequality between the MWDR and FWDR and the rest of the country. The western regions record a poverty headcount ratio of 45% in the MWDR and 41% in the FWDR, which are 10% to 14% higher than the overall country poverty incidence of 31%, with the incidence of poverty in urban areas at 10%.\textsuperscript{13} There is also poverty incidence disparity between ecological zones with 28% in the terai compared to 35% in the hills. Furthermore, the livelihoods of the people living in Nepal’s western regions also suffered particularly badly during the recent 10 year conflict period which officially ended in 2006. Poverty incidence is also higher amongst lower caste groups, ethnic minorities and tribal groups. Poverty incidence is also gender biased with women headed households in rural areas suffering a greater degree of poverty than male headed households. Although there has been a shift in population towards urban centers, 83% of the population is located in rural areas.\textsuperscript{14} About 80% of the rural population above the age of 15 is engaged in smallholder agriculture which accounted for around two-thirds of total employment in 2001. Furthermore, household coping

\textsuperscript{11} UN, Human Development Report - 2008
\textsuperscript{13} CBS (NLSS, 2003-4)
\textsuperscript{14} In 1990, only 9% of the population lived in urban areas, compared with 17% in 2007.
strategies have caused many of the most productive people to leave the villages for the urban centers or migrate overseas to seek employment.\textsuperscript{15}

16. Over the last decade, economic growth has been adversely affected by erratic weather conditions, power, water and fuel shortages, and political instability and labor tensions. Annual growth in real GDP fluctuated widely between 2001 and 2008, from only 0.1\% in 2002 to 5.3\% in 2008. Growth in real GDP per capita remained at 1\% per year over the period 2005-2007, but reached 3\% in 2008. In 2008, GDP per capita was $1,165 in terms of purchasing power parity, the lowest in South Asia.\textsuperscript{16} The value of imports is equal to around 32\% of GDP, which is on a par with other South Asian countries. However, the value of exports equates to only 12\% of GDP, which is well below comparable rates in the region (the next lowest level in South Asia is that of Bangladesh at 20\%). Annual growth in exports was negative in real terms over the period 2006-2008, while real annual growth in imports was between 6\% and 7\%. There has also been a major shift in the patterns of trade. In 1990, 15\% of exports went to other Asian countries, with 60\% to Europe and 24\% to North America. By 2008, Asia accounted for 77\% of exports, while exports to Europe and North America had fallen to only 11\% and 9\%, respectively, of total exports. A major contribution to the economy derives from overseas remittances. These have grown dramatically from $147 million in 2001 to $2,735 million in 2008, equivalent to an annual average growth rate of 52\%. In 2001, remittances were equivalent to 2.4\% of GDP, and in 2008 to 23.2\%.

17. Economic growth is constrained by the limited volume of domestic trade and trade relations with other countries. The limited volume of marketable surplus available for trade is generally carried out in local markets and is subject to gluts and price crashes. Trade, particularly in the terai belt, is often interrupted by strikes and conflicts due to continuing political and social tensions. About 95\% of Nepal's agricultural trade is with India and other member countries of the South Asian Association for Regional Cooperation (SAARC). A key challenge currently facing Nepal is the increasing trade deficit with India and the growth in the import of agricultural products particularly fruit and vegetables. The volume of agricultural exports, however, has been constrained by the domestic and trade policies of importing countries that tend to occasionally tighten and, or relax quarantine, phytosanitary, and quality requirements to protect specific domestic sectors in local surplus and shortage situations.

18. The agriculture and forestry sector accounted for 32.35\% of GDP in 2008-09 compared to the 67.65\% share of GDP by the non agriculture sector, which comprises services and industry. In addition to its importance for rural livelihoods, agriculture makes a significant contribution to the economy in general. The growth rate and contribution of the agriculture sector to GDP has declined only slightly from 33.09\% in 2005-06, due mainly to unfavorable weather conditions. However, in 1995, agriculture contributed 39\% of GDP which by 2001 had fallen to 37\% and by 2008 to under 33\%. Preliminary estimates for 2008-09 indicate that the rate of growth in agriculture fell back to 2.1\%, significantly below the average for non-agriculture sectors which is estimated at 4.8\%. Therefore there is a long term declining trend in growth and output in the agriculture sector which is partially accounted for by the disruptions during the 10 year conflict, slow growth in the post-conflict period, urbanization, the migration overseas of rural population, and the impact of climate change on crop production.\textsuperscript{17}

\textsuperscript{15} Further details regarding poverty and gender inequity in Nepal are provided in Appendixes 11 (Summary of Poverty Reduction and Social Strategy – SPRSS), Appendix 12 (Gender Action Plan - GAP), and Appendix 15 (Indigenous Peoples Assessment and Measures - IPAM)

\textsuperscript{16} ADB. 2009. \textit{Key Indicators for Asia and The Pacific 2009}. 40\textsuperscript{th} Edition Manila

\textsuperscript{17} Government of Nepal, National Planning Secretariat, CBS, 2008, \textit{Statistical Pocket Book – statistics for 2008/09 are preliminary.}
19. Land and its cultivation is the mainstay of the country's primarily agrarian economy with around 85% of the population directly or indirectly engaged in agriculture. According to Ministry of Agriculture and Cooperatives (MOAC) data, of Nepal’s total area of 14.7 million ha, 21% is classified as cultivated agricultural land, 7% as uncultivated agricultural land, 40% as forest, 12% as grass land and pasture, and 20% as water and others.  

20. Cereals, particularly paddy, wheat and maize, are the dominant agricultural crops contributing most towards self sufficiency in food grains and hence food security. There has been steady annual growth in the area under the major cereal crops over recent years. Between 1994-95 and 2007-08, the areas of paddy, wheat, and maize each increased by around 13%, equivalent to an average annual increase of 1%. Paddy accounts for 45% of the area under cereals and 35% of the total area under crops.

21. With the exception of oilseeds, there has been a steady increase in the area under the main cash crops, particularly potatoes, pulses (lentils and beans), spices (ginger, turmeric, cardamom and chillies), fruits and vegetables. The total area under fruits increased from 58,989 ha in 1994-95 to 100,099 ha in 2007-08, or a 70% increase. Nepalese fruit production comprises mainly citrus (principally orange, mandarin, lemon, lime), deciduous (winter) fruit (pear, apple, peach, plum, walnut, etc), and tropical (summer) fruit (mango, guava, banana, litchi, papaya, pineapple, etc). Vegetables have grown in importance in recent years, with the area cultivated increasing by almost 50% (from 140,500 ha to 208,108 ha) since 1994-95, equivalent to an average annual growth of over 3%.

22. Most of the cash crops mentioned above are considered as high value commodities (HVC) as defined in this report. The further increased production and commercialization of HVC is of critical importance in reducing imports and reducing the large trade deficit with India, and in enhancing the availability of affordable and varied nutritious diets for poor people and urban consumers. HVC production, value addition and efficient marketing practices are acknowledged as key drivers in increasing the incomes of small and medium farmers and will contribute to improved livelihoods, and food security. Furthermore, recent and active projects in the sector have illustrated that HVC commercialization leads to higher returns to labor and unit of land and hence better incomes for farmers than those resulting from the production of traditional cereal crops. The development of the HVC sub sector is not expected to have a negative impact on the maintenance of overall food security as greater household cash surpluses to purchase food will be generated. Furthermore, the production of cereals will continue to be the dominant crop farming activity in Nepal as a whole, as not all areas are suitable for sustainable competitive HVC production and commercialization. The production of HVC is not at the expense of staple crops as in general, HVCs are produced as a secondary crop and land is not diverted from cereals to HVCs.

23. The Project seeks to build on the achievements of the CDP which ended in 2007, which, whilst considered an overall success, requires further support to its beneficiaries, both in terms of support to areas still requiring basic help in crop diversification, and those farmers that now require assistance in developing the commercial aspects of their enterprises such as improved product quality, value addition and market access.

24. The Project’s objectives are consistent with the Government’s development strategy for reducing rural poverty where the lack of agricultural diversification and commercialization is acknowledged as one of the country's major constraints to growth and rural development.

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19 Reference Section I.B.
20 Reference: ADB Crop Diversification and Commercialization Project (CDP) and Commercial Agricultural Development Project (CADP)
Current Government policy is enshrined in the Three-Year Interim Plan (TYIP) and is further discussed under section III.A.3 hereunder.

25. The Project is in conformity with ADB’s draft Country Partnership Strategy for Nepal (CPS) 2010-2012.\(^{21}\) The Project is also consistent with the ADB’s draft operational plan for sustainable food security (2009) The operational plan identifies ADB’s role and contributions in addressing the three binding constraints to achieving the goal of sustainable food security, which are: (i) stagnating food productivity and production; (ii) lack of access to rural finance, infrastructure, technology, markets, and nonfarm income opportunities; and (iii) threat of climate change and volatility of food prices. In addressing these constraints, the operational plan focuses on three areas of influence—productivity, connectivity, and resilience, to climate change impacts and price fluctuations.\(^{22}\)

2. Analysis of Key Problems and Opportunities

26. The PPTA has determined the key challenges and major issues facing the agriculture sector in general, and the HVC sub sector in the MWDR and FWDR in particular, through extensive stakeholder consultation and participation in participatory workshops and focus group discussions. Additionally, representative surveys\(^{23}\) on (i) agricultural marketing and (ii) socioeconomic and gender issues were conducted in the Project area, viz, two hill districts (Dadeldhura and Kalikot) and two in the terai (Dang and Kailali). In consultation with stakeholders, the development problem to be addressed by the Project has been determined as the low level of rural household incomes in the project area. This primarily came out of the problem and objective tree analysis\(^{24}\) from which the Project design and monitoring framework (DMF) has been developed.\(^{25}\)

27. The problem tree analysis identifies the main causes of the development problem as low employment opportunities, and low returns to farming. Low employment opportunities are a consequence of the slow development in the agriculture sector which provides the bulk of economic activity in the MWDR and FWDR. The low returns to farmers from their agricultural enterprises results from low farm productivity, and (ii) limited market orientation.

28. Low farm productivity is mainly attributed to the following key factors: low soil fertility; fragmented land holdings; inadequate supplies of inputs, particularly due to the limited access by farmers to finance; the lack of improved technology and poor husbandry, particularly irrigation; and inadequate research and extension services. Traditional and conservative farming systems and knowledge gaps have led to the low participation of women, DAGs and IPs in farming enterprises.\(^{26}\)

29. The strong tendency for farming to be production-oriented (as opposed to being market driven) has arisen from a number of factors, including poor rural infrastructure such as roads and market places due to inadequate levels of investment; agricultural production not being planned on a competitive basis which leads to low quality of agricultural products; and low levels of value addition due to the lack of adequate investments in on-farm and post harvest facilities, and knowledge gaps particularly due to an inadequate agricultural marketing information systems (AMIS) that are not geared to farmers’ needs.

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\(^{22}\) ADB, December 2009, Operational Plan for Sustainable Food Security, Manila

\(^{23}\) Consolidated Management Services (Pty) Ltd, March 2010, (i) Agricultural Marketing Analysis; and (ii) Socio-economic and Gender Analysis, surveys carried out during the PPTA (reports available on request as supplementary appendixes).

\(^{24}\) Provided in Appendix 2 (Sector Analysis), section B.11, Figures 2 and 3.

\(^{25}\) Provided under Appendix 1.

\(^{26}\) Reference - see the constraints listed under Section III.A.2.a
30. The main effects of the development problem are described in the problem tree and may be summarized as (i) low purchasing power resulting in (a) reduced access to education (b) low quality of housing and low personal assets, and (ii) out-migration from the agriculture sector and rural areas leading to a decline in the rural labor force and social unrest.

31. The main findings on the agriculture sector’s key problems and opportunities, as indicated in the problem and objectives trees and from the various assessments and analyses undertaken during the PPTA have been summarized hereunder and are discussed in more detail in Appendix 2 (Sector Analysis).

   a. Constraints to Agricultural Development

32. The problem tree analysis shows that one of the two main causes of the development problem to be addressed by the Project is low returns from farming, the other main cause being lack of employment opportunities in rural areas. Low returns from farming are a consequence of low farm productivity and limited market orientation of production activity. The reasons for low farm productivity may be summarized as follows:

33. **Low soil fertility leading to stagnant or declining farm productivity**: Crop production growth, particularly cereal output, is stagnant in many areas due, mainly, to the intensification of farming, limited application of improved crop production technologies including poor crop rotation practices, and lack of available cultivable land. The insufficient application of organic animal manure and compost and the over tillage of the soil are also contributing to the gradual loss of fertility in the field. However, it should be noted that fruit and vegetable yields are rising due to improved plant varieties and enhanced knowledge of good farming practices in HVC production and this situation should not exacerbate the problem of low overall fertility. However, this fact does not alter the general situation of overall declining productivity. This issue has been identified in the National Agricultural Policy (NAP), 2004, which stresses the need to promote organic farming and other good agricultural practices such as crop rotation and the controlled use of agricultural chemicals.

34. **Fragmented land holdings as a consequence of structural changes towards smaller farm units**: Farm ownership is characterized by small and fragmented land holdings with some 70% of the total farm land holdings being under 2.0 ha. The average size of farms has declined from 1.11 ha in 1961/62 to 0.8 ha in 2001/02, and the trend is towards greater fragmentation and subdivision, and thus smaller individual farm units. This trend applies throughout rural Nepal, including the two Project regions of MWDR and FWDR. The socioeconomic survey carried out during the PPTA indicated an overall average size of an operational land holding in the surveyed areas of 0.886 ha. The structural trend in the size of individual farm holdings has some implications for the development of HVC production. While the growing demand for HVCs is evident from available statistical data, land potentially available for increasing HVC production tends to be owned by medium and large farm households. Small farmers have only limited potential for allocating land to HVC production, due to the necessity of meeting the demand for rice paddy, the staple food of Nepal. Consequently, the changing pattern in farm holdings over time is an important factor in determining the development potential of introducing HVC, but is not considered a serious constraining factor to growth. However, by encouraging small farmers to join larger groups for joint HVC marketing purposes, even small landholdings already devoted to staples, may devote some of their production to HVCs without endangering their food security, and will allow smaller farmers to realize the benefits of diversification into HVC. It should also be noted that HVC production requires less land than that needed for staples, such as cereal crops, and is more profitable per unit of land used. In this context the economic and financial

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analysis of the Project indicates that small farmers will benefit from substantially increased incomes by diversifying into HVC production, although not to the same extent as medium farmers (section V.A, paras. 232-235).

35. **Inadequate input supply:** Farmers were concerned, during workshops and focus group meetings in the field, regarding (i) the inadequate number of accessible nurseries and the lack of good quality planting materials and the limited access to improved varieties, and (ii) the lack of other inputs such as good quality fertilizers, pesticides and herbicides. This issue was confirmed as a key constraint by the findings of the surveys. Input suppliers referred to limited demand for inputs for HVCs and the inadequate and low quality of locally produced planting materials compared with imports from, primarily, India. Without quality and appropriate agricultural inputs farmers will be unable to successfully develop HVC production. Furthermore, the sector’s emphasis in this context has tended to be on the specific inputs geared to cereal cultivation, whereas HVC require a different level and composition of fertilizer. There is a need, expressed during meetings with farmers’ groups, for improving the quality of DOA resource centers, supplying HVC planting materials and training, and promoting farmer group owned and operated nurseries. The NAP places a high focus on this issue and stresses the need to develop and strengthen resource centers in the field.

36. **Limited access to rural finance:** The lack of available rural credit in many areas of the MWDR and FWDR is a severe constraint to the development of the commercialization of agriculture, particularly for small and medium farmers and smaller FG’s. Prior to the conflict period, microfinance institutions (MFIs) were extending their coverage of rural areas and targeting agribusinesses and farming households. During the conflict period many banks and MFIs withdrew from the more seriously affected areas, and have not returned since. This issue was identified during focus group discussions with farmers, as a key constraint to their moving from subsistence farming to cash crop production. This problem was particularly evident in the more remote hill areas. The NAP and the Nepal Rastra Bank gives a high policy priority to the flow of agricultural credit needed for the promotion of agricultural production and farming enterprises.

37. **Lack of improved farm technology:** Irrigation facilities are still inadequate and ineffective, due to the unavailability of suitable technology and material support. Furthermore, there is limited farmer knowledge of improved production technologies and good agricultural practices. Farmers interviewed during the surveys indicated that yields of HVCs could be increased by up to 20% through the availability of adequate micro-irrigation. A concern was also expressed by stakeholders during workshops and focus group meetings that there is a lack of knowledge and access to the latest farm technology including, for example, mechanized tilling and harvesting equipment, and controlled environment agricultural technology (e.g., greenhouse and cloches). The production and timing of the planting and harvest of HVC would greatly benefit from improved farm technology and operating knowledge, in terms of timing plantings and timing sales to take advantage of seasonal marketing opportunities.

38. **Poor husbandry practices as a consequence of inadequate research and extension services:** During the surveys, farmers reported poor extension services and weak outreach, due to the Department of Agriculture’s declining capacity to provide adequate extension services, particularly in the area of promoting the value of HVC diversification and commercialization. Government and private sector service providers referred to an inadequate number of extension workers and their lack of knowledge and skills with regard to HVCs, lack of incentives for field workers, poor facilities and working conditions, and weak coordination between service providers. Representatives of research institutes stressed the low priority and support accorded to HVC research, the inadequate number of qualified researchers in HVCs, the lack of incentives for long-term research and weak coordination
between research and extension. The NAP has identified the need to strengthen extension through a production pocket area (PPA) approach and to promote the involvement of FGs and Cooperatives in the delivery of extension services. In this context, the NAP document states that development of a commercial and competitive farming system should be promoted through, inter alia, (i) encouragement of the private sector to manage and operate farms and collection centers on contract and, or lease agreements, and (ii) FGs providing on-farm extension services on agricultural technology and food nutrition. In addition, the greater use of information technology and mass communication should be promoted in agricultural extension.

39. **Traditional farming practices:** Traditional farming practices and the conservative nature of many farmers have tended to exclude the full participation of women, DAGs and IPs in HVC production and agricultural enterprises, and thus lead to the under utilization of available human resources for agricultural development.

40. **Lack of awareness of negative impact of climate change on farming systems:** Crop agriculture ranks highest in terms of vulnerability to negative climate change impacts and whose effects on the agriculture sector are already evident. The limitation of existing, or non existence, of adaptation strategies will increase the vulnerability of rural livelihoods and lead to food insecurity. Therefore, when considering HVC diversification and commercialization, suitable climate change adaptation technologies must be identified, tested and disseminated to farmers in the Project areas. The negative impact of climate change, particularly through increasing erratic weather patterns, and droughts has been evident in farming communities over the past few years.

41. Another major cause of low returns from farming is the limited marketing orientation of crop production and its contributing factors are summarized below.

42. **Poor rural infrastructure:** Findings from the agricultural marketing survey indicated that in the MWDR and FWDR, particularly in the hill areas, farmers suffer from a lack of rural infrastructure with poor road access in most production areas, and unreliable power and water supplies. Without adequate rural infrastructure farmers are constrained in their ability to invest in functioning on-farm value addition facilities and access markets. The improvement of rural infrastructure is a key focal area of Government policy under the NAP and is also being addressed by a number of other donor projects. However investment in this regard is still low and inadequate.

43. **Crop production is not sufficiently competitive:** Low production volumes, product quality, packaging and presentation, results in a lack of ability to compete with competition from imports, primarily from India and China, evidence by Nepal’s growing agricultural trade deficit with those countries.

44. **Low value addition:** Deficient post harvest handling practices and facilities at farm level such as washing, drying, sorting, grading, and storage, contribute towards high levels of losses at field level, contribute to poor quality crop production, and hence restricted marketing access and options. The agricultural marketing survey findings indicated that there is a strong demand in both the terai and the hill areas for low cost, easily maintained, on-farm post harvest facilities, in which there is a current low level of investment. According

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28 Reference section I.B. above (para. 5) for definition of PPA (production pocket areas)
29 Reference section III.A.3
30 See section III.A.5 and Appendix 3 (Development Coordination) for further details.
31 See section III.A.1 above, and Appendix 2 (Sector Analysis)
32 Appendix 20 (Photo Gallery) presents some graphic images of the poor state of post-harvest practices in the Project districts visited during the PPTA.
to farmers interviewed, there is an inadequate number of collection and marketing centers located in the HVC production areas.

45. **Lack of knowledge of post harvest handling, value addition and marketing:** Farmers lack knowledge in these areas of farming activity, due, in part, to lack of capacity and knowledge within Government and non Government agency service providers.

46. **Inefficient and underdeveloped marketing systems:** Market access is a difficult hurdle for small and medium farmers in Nepal to overcome with the majority of them selling their surplus produce to traders at the farm gate, or nearby roadside markets, if available. Therefore, in economic terms they are "price takers" with little to influence over the prices they receive, with farm gate level prices being variable and comparatively low. Prices for agricultural commodities always tend to fluctuate widely on a seasonal basis, particularly in the case of HVCs such as horticultural products, which have a high level of perishability. The long value chain between farmer and final consumer, with a plethora of actors performing economically inefficient functions within the chain, results in the farmer receiving a lower percentage of the end price than is considered acceptable and equitable. However, unless farmers form groups to take advantage of, inter alia, economies of scale and the bulking of commodity volumes, and assume some of the economic functions being performed by traders and intermediaries, it is difficult to break the traditional long value chain that exists in Nepal. There is lack of meaningful agricultural marketing information available to farmers, including quality price data and analysis, and weather forecasting. Accurate and timely and marketing information and analysis, relevant to farmers, is essential to enable them to take (i) informed and optimal pre-season decisions on what crop to plant based on market knowledge and trends in production and consumer preferences, and (ii) informed and optimal decisions on the timing of crop planting and harvesting in order to spread sales based on knowledge of seasonal price trends. The respondents of the survey cited the lack of relevant and timely marketing information as a serious constraint. The NAP stresses that quality data collection, analysis and forecasting is required for sector planning, policy formulation, monitoring and evaluation.

47. **Inefficient institutional arrangements:** As an overall comment, related to constraints to agricultural development and commercialization, the rationalization of sector institutional framework needs to be considered. Fewer MOAC line agencies and statutory bodies and less centralization, more field level staff, and a reduction of staff at central level to improve efficiency and cut costs should be considered. The MOAC’s line agencies are under resourced and lack the ability to sustain Project activities following completion. This is a lesson learned from the CDP following which MOAC’s budgetary constraints and lack of overall capacity has not sustained HVC promotion in the MWDR and FWDR. The leading MOAC line agency implementing agricultural projects is the DOA and its mandate and capacity need to be broadened to improve its extension services to include effective post harvest handling at farm level. The rationalization of the MOAC is outside the scope of the Project, but is suggested for consideration by the Government, particularly in view of current decentralization policy and the impending constitutional changes possibly involving federalism.

33 The Commercial Agricultural Development Project (CADP) in the Eastern Development Region (EDR) is addressing the issue of market access for farmers and any interventions under the Project will build on, and, or expand on the CADP experience.

34 See section III.A.3 under which the NAP is discussed.


36 This issue is discussed further in Appendix 2 (Sector Analysis), section A.3 and figure 1.
b. Project Opportunities and New Initiatives

48. Although Nepal's agriculture sector is still relatively undeveloped particularly with regard to commercialization, agribusiness and the involvement of the private sector, a number of opportunities currently exist which the Project could address and which are described below.

49. **Increased rural incomes through commercialization of HVCs**: The low level of rural incomes has been identified as a development problem, and raising rural household incomes through the fostering of HVC production and commercialization represents a development opportunity. Income studies of households during the CDP showed that production and commercialization of HVCs can provide a much higher return per hectare to farmers than traditional crops such as cereals. Furthermore, HVCs are labor intensive and offer the potential for greater employment opportunities for the rural poor, particularly women, youth, DAGs, IPs and the landless. The proposed Project has the opportunity to raise rural incomes, encourage the mainstreaming of women in agricultural enterprises, create opportunities for rural youth and discourage out-migration and urbanization, and contribute to the economic growth of the MWDR and FWDR. Furthermore, economic development in the Project area would assist in bringing stability during the post conflict period.\(^{37}\)

50. **A wide range of potential marketing opportunities**: Nepal possesses a significant and growing domestic consumption base, with an emerging urban middle class demanding a wider range of safe and nutritious food, both fresh and processed. With regard to export markets the Indian states bordering Nepal represent an easily accessible market for HVC products, given normal trade relations with that country. The Project has an opportunity through raising competitiveness and improving production volumes, quality, and presentation in order to access a wider range of profitable HVC markets for farmers.

51. **Improved market efficiency and value chain integration**: The current dominant agricultural marketing system in Nepal may be described as traditional with the vast majority of small and medium farmers selling their produce at the farm gate, and traders and wholesalers operating as buyers and sellers in established market places. Whilst the existing traditional marketing system is well established, has its merits and is widely accepted, there is a need to introduce greater forward and backward linkages between producers and consumers enabling a more direct sales system. The traditional system has an economic role and serves its purpose, however, access to a wider range of sales opportunities for producers, and buying opportunities for retailers and exporters is desirable. In this context sector stakeholders, and in particular private sector agribusiness entrepreneurs, and to a lesser extent larger NGOs, are examining and implementing new marketing system innovations which will diversify trading opportunities and enhance market efficiency to the benefit of all, including farmers. For the most part, these innovations adopt the value chain approach, and involve greater quality, standards and grading and packaging control close to production areas. Seasonal and longer term contract farming is also being investigated and introduced in a limited number of HVC, albeit slowly. In this context, the Seed Entrepreneurs Association of Nepal (SEAN), a member of the AEC, is currently producing, annually, on a contract farming basis, around 100 tonnes of treated vegetable seeds in the Baitadi, Dadeldhura, Doti, Surkhet, and Dailekh districts of the MWDR and FWDR. Initially, contracts are established between individual farmers and local agricultural cooperatives for annual vegetable seed supply. Based on production forecasts, the cooperatives then contract with the Seed Service Center Ltd (SEAN). The SEAN Seed Service Center Ltd. (SSSC), established in 1999 under the Companies Act 1996, initiated production of vegetable seeds on a contract farming basis from its outset. SDC’s Vegetable Seed Project, implemented by

\(^{37}\) See section V.E.6 (Safeguards – Post Conflict Sensitive Approach) and Appendix 16 (Peace Filter Matrix)
CEAPRED, a NGO, is promoting contract farming systems of vegetable seed production in the MWDR and FWDR. Furthermore, the Netherlands Development Agency (SNV) is initiating and supporting the contract farming of vegetable seeds in the Jumla District of the MWDR. The Project can address these opportunities through fostering value chain integration and new marketing initiatives.

52. **Agroprocessing and value addition:** HVCs such as fruit and vegetables and spices lend themselves to further processing and value addition thus raising the potential for higher farm incomes through wider market access to agro processors. Opportunities also exist for low cost, small scale processing of fruits, vegetables, oilseeds and medicinal and aromatic plants such as lemongrass at farm level. The Project has the opportunity to support investment proposals from farmers’ groups and cooperatives for value addition, including agroprocessing.

53. **Import substitution:** Nepal has become increasingly dependent on non foodgrain imports, particularly fruits. Increased HVC production will cut imports and save foreign exchange.

54. **Lending to the agriculture sector:** Some banks have expressed a desire to expand their loan portfolios but they lack knowledge of farmers and their communities and have difficulty in making small agricultural loans. Micro finance institutions (MFIs) and the formal financial sector have this knowledge and, prior to the conflict period, demonstrated that they are able to make and recover small loans made to farmers. There is, thus, the opportunity for the proposed Project to facilitate, through working partnership with banks and MFIs in the Project area, the provision of credit to small scale farmers.

55. **Fostering public private partnerships (PPP) in agricultural development:** The one village one product (OVOP) program provides an example of how PPP can provide opportunities for agribusiness development. The OVOP program was first launched in Japan in 1979, and the model has since been replicated in Thailand, Malaysia, China, Cambodia and, in 2006, Nepal. The programs focuses on three key principles, viz (i) think globally and act locally, (ii) self reliance and creativity, and (iii) fostering human resources, and is geared towards improving the self dignity of local communities and, stemming out-migration from rural areas, particularly of youth. In Nepal, the MOAC and the FNCCI launched the OVOP program in 2006, as a PPP program on a pilot basis for five years. The overall objective of the program is to alleviate poverty in local rural communities, and benefit local people through entrepreneurship development. The program covers seven products, including oranges, bee keeping and fish farming, in seven districts, including Bardiya in the FWDR. In this PPP model the public sector (MOAC line agencies) are responsible for commodity production and the private sector through the AEC of the FNCCI, and DCCIs, are responsible for market promotion.

56. The development opportunities presented above were analyzed and alternatives to addressing the development problem examined. Given its finite resources, in terms of financial and human capital, the Project will not be able to directly address all the issues enshrined in the NAP 2004 vision for the sector, viz; transforming the current system of subsistence oriented farming systems into a commercial and competitive farming system. For example, whilst the Project does not propose to address food security production issues directly, it will contribute to food security by raising rural household disposable incomes enabling the purchase of nutritious foodstuffs such as fruit, vegetable and fish products. In order to address the sector’s problems and take advantage of its opportunities and new

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38 Reference Appendix 2 (Sector Analysis), section B.8.h
39 (i) DOA’s Fruit, Post Harvest Management and Fisheries Development Directorates, (ii) Fisheries Development Division of NARC, (iii) Food Technology and Quality Control Department, and (iv) DADOs
initiatives, which cover a wide spectrum of investments and activities, the project proposes to focus its activities on the production, value addition and marketing of HVC through its two key components, viz, (i) enhancing the production of HVCs, and (ii) strengthening farmer participation in the HVC value chain.

3. Government Policies and Programs

57. After suffering from a decade long violent insurgency that claimed over 13,000 lives and displaced thousands more, a comprehensive peace agreement was signed between the Unified Communist Party of Nepal (Maoist) and seven mainstream political parties in November 2006 that ended the conflict and set the scene for a peace process to commence. Notable milestones since then have included an agreement on a common minimum program by all key political parties, successful elections to the Constituent Assembly (CA) in April 2008, and the declaration of the country as a republic, abolishing the centuries-old monarchy.

58. The three key components of the peace process are: (i) the writing of the new constitution, (ii) restructuring of the state, and (iii) rehabilitation and, or integration of the former Unified Communist Party of Nepal (Maoist) combatants. With regard to a new constitution, the CA’s Committee on State Reconstruction and Power has proposed two separate federal unit models and indicate the number, boundaries, names and capitals of federal units of administration, viz, (i) a federal structure comprising 14 administrative units based on peoples’ identity and include factors such as ethnicity, community, cultural and distribution, geographical and regional proximity and historical continuity, and (ii) a federal structure comprised of six administrative units based on functional capacity in terms of economic relations, and administrative capability, the current condition and possibility of infrastructure development, availability of natural resources, and administrative accessibility. These issues are still under discussion by the CA and little progress is apparent at the time of writing this report. The deadline of end May 2010 fixed for settling the constitutional issues has passed, and the CA has been extended. The final decision regarding the structure and administrative boundaries of a federal state, if that is to be the decision of the CA, will affect the implementation of the Project, particularly if the 14 units model is adopted, as the current MWDR and FWDR will be dispersed over, possibly, six new states.

59. The Government’s Three-Year Interim Plan (TYIP), FY2008–FY2010 is essentially an extension of the Tenth Development Plan, FY2003–FY2007, which embodies the national poverty reduction strategy. The TYIP focuses on peace building; reconstruction, rehabilitation and reintegration; and a tangible peace dividend in the form of effective public services and development benefits. It also gives continuity to the long-term objectives of poverty reduction and addressing the root causes of the conflict, which are, primarily, deep-seated social exclusion and inequality. The TYIP expires in July 2010 and the Government is preparing a new national development plan to cover the period to the end of the transition (to peace) period, viz, FY 2011-FY2013. Notwithstanding recent political changes and upheavals, Nepal's long-term development needs have been clearly identified and its priorities can be expected to remain for the foreseeable future. The overall aim of Government policy is poverty reduction, in which agricultural development will play a key role, addressing widening social, economic and regional disparities, and establishing lasting peace and stability.

60. The Agriculture Perspective Plan (APP) prepared in 1995, outlines the Government’s 20 year vision of sustainable agricultural development as the “engine of growth” and remains a key policy document relating to the sector. The APP focused on the need to diversify agricultural production on the basis of geographical location and the commercialization of agricultural products. Policy relating specifically to the agriculture sector is enshrined in the National Agriculture Policy (NAP), 2004, which sets out a long term vision for the sector of “bringing about improvements in the standard of living through sustainable agricultural
development by transforming the current system of subsistence oriented farming into a commercial and competitive farming system”.

61. The key objectives of the policy are to contribute towards ensuring food security and poverty alleviation by achieving high and sustainable economic growth through a commercial and competitive farming system. The key policies to achieve the NAP’s objectives are as follows:

(i) increasing agricultural production and productivity by, inter alia, (a) developing and expanding irrigation facilities, agricultural roads, rural electrification, and appropriate agricultural technologies, (b) devolving responsibility from the center to plan, implement and monitor agricultural programs consistent to local needs and priorities, (c) using farmers’ groups as a means to provide on farm extension services on agricultural technology transfer and food nutrition, (d) using information technology and mass communication in agricultural extension, (e) developing quality resource centers for the production and sale of local seeds, seedlings, and planting materials, (f) improving farmers access to rural credit and training, and (g) raising women’ participation in agriculture to 50%,

(ii) special facilities for target groups will be provided for Dalits and other disadvantaged groups, landless and marginal farmers, tenants, agricultural laborers, as well as those farmers owning less than 0.5 ha of un-irrigated and low quality land,

(iii) commercial and competitive farming systems will be developed through, inter alia, (a) a focus on demand driven commodities with comparative advantage, (b) the promotion of organic farming will be promoted, (c) the promotion of private sector participation in agriculture and agribusiness, and (d) the promotion of farmers groups and cooperatives, and

(iv) the conservation, promotion and sustainable utilization of natural resources, environment and biodiversity.

62. Devolution of agricultural service delivery: In order to deliver extension services to needy farmers quickly and effectively and narrow the service gap in a sustainable way, the Government has initiated the concept of community agriculture (and livestock) service centers (CALSC). A CALSC is defined as a registered autonomous center owned and led by a community of individuals for the purpose of providing agriculture and livestock development and extension services and inputs in a sustainable manner. This policy, involving public and private sector partnerships and cooperation, is reflected in the TYIP, 2007-2010. Other policy documents, such as the APP, NAP and National Agriculture Strategy (NAS) 2006 also support this concept and initiative. Management of community infrastructure by the beneficiaries themselves is also in line with the working strategy of the Poverty Alleviation Fund (PAF). The public sector will provide (i) technical support (ii) partial financial support and (iii) the provision of agricultural marketing information. Issues regarding Government policy in this context are further discussed in Appendix 2 (Sector Analysis).

4. ADB Policies and Support

63. Based on Nepal’s fundamental long-term development needs, and on the Government priorities, the ADB CPS 2010 -2012 has four pillars of support to Nepal, viz, (i) broad-based and inclusive economic growth; (i) inclusive social development; (i) governance and capacity building; and (iv) climate change adaptation and environmental sustainability. ADB’s assistance under the CPS will focus on six sectors, viz, (i) agriculture and natural resources; (ii) education; (iii) energy; (iv) finance; (v) transport and information communication technology; and (vi) water supply and other municipal infrastructure and services. The CPS also has six thematic priorities, viz, (i) gender equity; (ii) governance; (iii)
environmental sustainability; (iv) regional cooperation and integration; (v) private sector development; and (vi) engaging civil society and nongovernment organizations (NGOs).

64. ADB has been the main development partner in the sector, and agriculture has been the largest component of ADB assistance to Nepal. The ADB Independent Evaluation Department's sector assistance program evaluation (SAPE) on agriculture and natural resources has recommended: (i) concentrating assistance to achieve optimal efficiency in resource allocation and use, and (ii) increasing investments in rural infrastructure such as irrigation, rural roads, and market infrastructure. Areas planned for future investments include rural roads, irrigation, and agricultural research, income generation for marginalized rural areas, information technologies, market support, and extension services.

65. Major projects included in ADB's indicative assistance pipeline for agriculture and rural development during the period 2010-2012 are included under section III.A.5 below and in Appendix 4 (Development Coordination).

5. Development Coordination

66. ADB, the Department for International Development of the United Kingdom (DFID), and the World Bank worked together and held stakeholder consultations whilst preparing their current prepare their respective country strategies. CPS preparation also involved joint sector and thematic assessments with various development partners in conflict resolution and peace building, gender, development constraints, governance, disaster risk management, and climate change. ADB will continue to coordinate closely with development partners to improve development effectiveness and aid harmonization, enhance operational collaboration, and build Government capacity.

67. There is a wide range of projects that have recently supported, are actively supporting, or planning to support the agriculture sector and rural development in Nepal. Full details are provided in Appendix 4 (Development Coordination). Some of the most relevant projects to the PRISM design to the Project are summarized below.

68. ADB Crop Diversification Project (CDP), 2001 to 2007: The CDP was designed to address the need to accelerate crop production diversification and marketing of higher value commercial crops in the MWDR and FWDR. The project was implemented through the following components: (i) extension services to farmer groups; (ii) promotion of private extension services; (iii) promotion of client oriented research; and (iv) support to project implementation. The project was rated by ADB as an overall success in terms of its relevance, effectiveness, efficiency and sustainability indicators. The lessons learned from the implementation of the CDP have been incorporated into the PRISM design.

69. ADB Commercial Agriculture Development Project (CADP) 2007 to 2012: CADP's expected impact is the reduction of poverty in 11 districts of the Eastern Development Region of Nepal. Project support is provided by local NGOs and through district farmer production and marketing groups. Investment in local infrastructure in the form of, access to market information and agribusiness, and product improvement technology is being undertaken. The project's outputs are being delivered through 5 components, viz, (i) commercial agricultural investment and management; (ii) inclusive development of stakeholders through community-based market infrastructure investments; (iii) market information dissemination; (iv) project partners' capacity enhancement; and (v) project implementation support. The project has introduced an innovative implementation

arrangement through the Commercial Agricultural Alliance, a not-for-profit company that has been established for the implementation of Component 1 of the project.

70. **ADB Local Government and Community Development Program (LGCDP):** The LGCDP, being implemented through the Ministry of Local Government, is a block grant to village development committees (VDCs) and District Development Committees (DDCs). The bulk of this project’s support fund is being allocated to the construction of rural roads; however, financial support is also being given to the salaries of social mobilizers at VDC level.  

71. **World Bank (WB) Project for Agricultural Commercialization and Trade (PACT), 2009 to 2015:** The objective of PACT is to improve the competitiveness of smallholder farmers and the agribusiness sector in selected commodity chains in the 25 districts supported by the project in the Central (CDR), Western (WDR), Mid Western (MWDR), and Far Western (FWDR) development regions of Nepal, including Banke, Bardiya, Dang, Surkhet, Kailali, and Kanchanpur in the MWDR and FWDR. Its main components are: (i) agriculture and rural business development; (ii) support for sanitary and phytosanitary facilities and food quality management; and (iii) project management and monitoring and evaluation. Its focus is on the development of market-oriented production and value chain development, together with a sanitary and phytosanitary and food quality component.

72. **International Fund for Agricultural Development (IFAD) High Value Agriculture Project in Hill and Mountain Areas (HVAP):** The overall goal of the project is the reduction of poverty and vulnerability of women and men in hill and mountain areas of the MWDR, and the project’s purpose is that the rural poor, especially women and marginal groups, are integrated in high value agriculture and NTFP/MAP value chains and markets thus improving incomes and employment opportunities. The project approach focuses on one dominant intervention which is the development of pro-poor value chains. This will be implemented through the following components: (i) pro-poor value chain development; (ii) inclusion and support for value chain initiatives; and (iii) project management. With regard to the capability to provide effective support to value chain development the project has considered that the AEC and national NGOs are stronger service institutions than Government agencies. In this context, a team from the Netherlands Development Organization (SNV) have been appointed as mentors to the project’s private sector and NGO implementers.

73. **Swiss Agency for Development and Cooperation (SDC) Vegetable Seed Program (VSP) and Sustainable Soil Management Project (SSMP):** These ongoing programs have synergies with the proposed PRISM, particularly in the delivery of extension services to farmers and outreach, and the Project will be able to learn valuable lessons from the SDC experience.

74. **The SSMP has the objective of promoting sustainable soil management practices through building their awareness and capacity. The SSMP has initiated a demand driven Farmer to Farmer (FtF) diffusion approach for the faster dissemination of sustainable soil management technologies in remote areas. Currently the FtF diffusion approach has been implemented by SSMP in 10 districts (Baglung, Baitadi, Dolkha, Doti, Kavre, Sindhupalchok, Surkhet, and Syangja). The VSP seeks to close the large gap between the demand and supply of quality seed in which is likely to widen as an increasing area comes under vegetable cultivation and demand for fresh produce grows. The project supports commercial vegetable seed production to address poverty and equity issues, especially in remote areas.**

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42 Conversation with VDC officials during a field trip to Banke in January 2010
43 Non-tropical forest products (NTFPs) and medicinal and aromatic plants (MAPs)
The project works in Baitadi, Dadeldhura, Dailekh, Jajarkot, Surkhet, Salyan, Kabhre and Dolakha districts and focuses, particularly, on income generation for disadvantaged people, victims of conflict, women headed households and underprivileged groups such as Dalits in remote areas.

75. The SDC co-financed the PPTA through the provision of an agricultural economist. During the course of the PPTA discussions were initiated by the ADB regarding the participation of the SDC in the proposed Project through the provision of co-financing of up to $6 million over its duration, and a role in the implementation of the Project implementation. Discussions held with SDC focused on their playing an implementation role under Component 1 – (Enhancing Production of HV C), and more specifically in the following activities:

- Improving HVC awareness and farmer skills – farmer training / farm demonstration plots / farm field days, and
- Enhancing Agricultural Service Delivery – support to farmer group nurseries / overall supervision and support to ASPs (including DADOs) and CASMs.

76. SDC have long and extensive experience in agricultural extension, in Nepal, particularly through their ongoing SSMP and VSP activity, some of which is in the PRISM districts. Their lead farmer (ELF) and Farmer-to-Farmer diffusion approach to extension is proving to be successful, and conforms to Government policy in this regard. They are also active through VSP in supporting HVC seed production, which will be a key activity in PRISM. It is recommended that discussions regarding the possible participation of SDC in Project Implementation, and which remain inconclusive, are continued between ADB and SDC, and should also involve MOAC.

77. FAO Enhancement of Food Security and Poverty Alleviation, 2006 to 2008: The project has conducted a series of training programs for agricultural cooperative leaders, NGOs and officials from government and cooperative organizations on enterprise development. It has also produced training-of-trainers (TOT) toolkits.

78. FAO Market Management and Capacity Building Project, 2008 to 2010: This project, which has recently been completed, conducted a series of training programs for agricultural extension workers, and officials from government and cooperative organizations on market management. It has also produced a series of training materials for the use of extension workers.

79. Netherlands Development Agency (SNV): Towards the end of the PPTA discussions were initiated by SNV with ADB regarding their possible involvement in PRISM implementation. SNV, under a (draft) MOU with MOAC, have the following role in IFAD’s HVAP and will be responsible (i) for overseeing, with AEC, the implementation of component 1 (pro-poor value chain development) (ii) helping coordinate activities in component 2 (inclusion and support for value chain initiatives) and (iii) supporting knowledge management. The SNV team will be part of the PMU, based in the project offices. The senior SNV expert will be the senior technical and management expert in the PMU and the chief advisor to the Project Manager. PRISM proposes AEC as the lead implementer of its component 2 (strengthening farmer participation in the HVC value chain) who will need some capacity building in value chain integration. Therefore, given SNV’s known expertise in value chain issues and the synergies between HVAP and PRISM it is recommended that ADB, with the participation of MOAC, continue discussions in this regard with SNV.

80. The following proposed ADB projects, which are under preparation or in the CPS pipeline, will have particular synergies with the Project in the following area so its
investments (i) value chain integration, (ii) the provision of micro irrigation, and (iii) the facilitation of access to rural credit for farmers and their groups.

81. **High Mountain Agribusiness and Livelihood Improvement Project (HIMALI):** The project, which is under preparation, will seek to improve value chain integration and reduce losses, contributing to increased incomes, employment, and reduced poverty in high mountain agricultural products in 10 high mountain districts. The districts identified for inclusion to date are Jumla, Mustang, Solukhumbu, Dolpa, Rasuwa and Shankhuwasabha. The products involved include (i) meat products, (ii) yak cheese and dairy products, (iii) sheep and goat wool, (iv) horticultural products, (v) vegetable and forage seeds, and (vi) medicinal and aromatic plant products (MAPs).

82. **Community Irrigation Project (CIP):** The Project, which has recently completed its preparation stage, will promote improved economic growth in command areas of less than 25 ha in the hills and less than 200 ha in the terai. The project will construct new, and rehabilitate old irrigation systems, targeting communities with high proportions of poor and socially excluded people. The project will also support surface water and, or canal systems, shallow tube wells, and micro-irrigation technologies, such as drip, sprinkler, and treadle pumps, together with agricultural extension services and institutional strengthening of water users associations.

83. **Decentralized Rural Infrastructure and Livelihood Project II (DRILP II):** The project will seek to reduce rural poverty in participating districts. Some 10 districts have been tentatively identified, including one in the MWDR and three in the FWDR. The Government have requested the addition of further districts if cofinancing can be secured. In this context, discussions have been initiated with the Organization of Petroleum Exporting Countries (OPEC) Development Fund. The project will identify the prerequisites to support the Government's sector-wide approach initiative in the rural transport subsector. Rural infrastructure and services to be studied will include (i) rural roads, (ii) trail bridges, and (iii) motorable bridges. The TA will include assistance to capacity development for local bodies in participating districts.

84. **Rural Finance Sector Development Cluster Program (subprogram 2):** The project will seek to promote economic growth and poverty reduction in rural areas through better rural financial intermediation and easier access to affordable rural finance services.

6. **Lessons learned**

85. The design of the PRISM takes into consideration the following lessons learned from previous ADB projects in the agricultural sector, particularly the CDP, and in rural development generally. Similar donor funded projects have also been taken into consideration.

(i) There is inadequate user participation and low Government budget allocation for operation and maintenance (O & M) in the irrigation and rural roads sub sector. User participation needs to be ensured during the identification, planning and implementation with an adequate Government budget allocation.

(ii) A lack of coordination between agriculture, irrigation, and rural roads sub sectors is evident and projects need to be implemented in a coordinated manner to optimize results and achieve objectives.

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(iii) There is weak monitoring and reporting of field programs by central, regional and district Government officials, and supervision, monitoring and evaluation needs to be strengthened through well designed Project Performance Monitoring Systems (PPMS).

(iv) Externally assisted agricultural projects and programs have tended to be supply driven and have focused more on the transfer of crop production technology than developing the skills needed by farmers to link them to a range of markets and move successfully into commercial agriculture. Viewing agricultural development mainly from the perspective of crop production tends to prevent value addition objectives from being achieved. The PRISM design is market demand driven and has a strong focus on value addition, value chain integration and marketing and includes interventions to address demand driven development opportunities.

(v) Project partnerships with NGOs and other private sector service providers have proved to be of limited success, particularly in the CDP and other similar donor supported projects. However, models involving non Government agencies and the private sector can be adopted and improved. The Project design proposes an improved methodology of working with a wide range of advisory service providers (ASPs) throughout the Project’s activities. Government and non Government agencies, including NGOs, Cooperatives and private sector agribusinesses will be eligible to apply for appointment as ASPs to the Project.

(vi) More cooperation between the public and private sector is necessary to ensure progress towards the commercialization of agriculture. MOAC line agencies have technical expertise, but they currently lack the knowledge, background, or capacity to foster forward and backward linkages along the value chain, or the understanding to work effectively with the private sector. Projects involving value chain integration and the promotion of agribusiness need to be led by the private sector, which can involve PPP models where the public sector has a clearly defined role and contribution to make. The need for the Government to accept the lead role of the private sector in the development of agribusiness is discussed under section I.B (paras 8, 10 and 11).

(vii) Project planning and implementation should involve local stakeholders at grassroots level and a top-down approach should be avoided, which has generally been the case with project implementation units and decision making being located at the center, rather in the Project area, as was the case with the CDP.

(viii) The CDP proved that that social mobilization is the key to successful project implementation and that farmer training should be followed up by improved extension services on an ongoing basis. Social mobilizers were particularly effective in coping with the adverse security situation during the conflict. The Project design includes financial assistance for the provision of community agricultural and social mobilizers (CASMs) to enable outreach to farmers and their mobilization for group formation.

B. Impact and Outcome

86. PRISM will target the mid west (MWDR) and far west (FWDR) development regions of Nepal with the objective of addressing the low level of rural household incomes in the Project area. The expected impact of the Project is that farm incomes of small and medium farmers in the project area are increased. The expected outcome of the Project is that income from HVCs for small and medium farmers, including women and DAGs and IPs, in

45 See section III.F.f (paras. 186-190)
46 An example of a PPP model in Nepal is the MOU signed between MOAC, AEC and SNV in December 2009, with regard to the implementation of the IFAD HVAP – reference section III.A.5 (para. 79), and Appendix 4 (Development Coordination)
the project area is increased. The Project will raise the incomes of small and medium farmers in the Project area and increase the productivity and profitability of their land by diversification into HVCs production and commercialization. It will also increase employment opportunities for very poor groups, including the landless, marginal farmers, DAGs and IPs in farm and off farm enterprises. PRISM will make an indirect contribution to food security by increasing the disposable incomes of rural households. Furthermore, the Project will foster overall economic growth in the MWDR and FWDR, enabling private sector agribusiness entrepreneurs to benefit indirectly from Project investments by increasing business opportunities through direct linkages with farmers and their groups. Women’s participation in the agriculture sector will be mainstreamed, and DAGs and IPs benefited by inclusion and access to Project investments.

C. Outputs

87. The Project area, based on the PPA approach will include the following 13 districts:

(i) MWDR: Banke, Dang, Pyuthan, Rolpa, Kalikot, and Rukum
(ii) FWDR: Bajhang, Bajura, Baitadi, Dadeldhura, Doti, Darchula.

88. The following four districts, viz, Surkhet and Dailekh in the MWDR, and Accham, Dailekh, and Kanchanpur in the FWDR, will be considered for inclusion in the Project area, by the Project Steering Committee (PSC), on the recommendation of the Project Management Unit (PMU), and after year 1 of Project implementation, against the following criteria:

(i) accessibility (roads - actual and planned / communications / connectivity between beneficiaries and markets / proximity of project implementation units),
(ii) rural infrastructure status (power, water, market infrastructure),
(iii) current HVC production potential,
(iv) status of development of agricultural institutions (farmer groups, agricultural cooperatives, agrovets, government agencies),
(v) presence of local service providers (NGOs, etc), implementation of PACT (WB) and HVAP (IFAD) - preference will be given to districts where these projects are not being implemented,
(vi) extent of support provided under the CDP project area, and
(vii) potential for effective linkages with PACT, HVAP and SDC (SSMP and VSP) projects.

89. The Project will promote the production of a range of HVC, but in particular, focus will be given to the following that have a proven market demand and potential for commercialization, which was established during the CDP and is being maintained:

<table>
<thead>
<tr>
<th>Vegetables</th>
<th>Fruits</th>
<th>Spices</th>
<th>Other Crops</th>
<th>Other HVC enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cabbage</td>
<td>Citrus</td>
<td>Ginger</td>
<td>Mustard seed</td>
<td>Fish farming</td>
</tr>
<tr>
<td>Carrots</td>
<td>Apples</td>
<td>Garlic</td>
<td>Lentils</td>
<td>Apiculture</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>Mango</td>
<td>Chillies</td>
<td>Mushrooms</td>
<td>Vegetable, and cereal seeds</td>
</tr>
<tr>
<td>Peas and beans</td>
<td></td>
<td>Turmeric</td>
<td>Medicinal and aromatic plants</td>
<td></td>
</tr>
<tr>
<td>Potatoes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salad crops, Tomato</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: PPTA Team Specialists and DADO Field Staff

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47 See the design and monitoring framework (DMF) under Appendix 1.
48 The PPA approach is defined under section 1.B (para. 5).
90. The above list is only a guide and other HVCs may be introduced during Project implementation, provided they meet the key criteria of farmer acceptance and need, suitability to the location, enhanced profitability per ha through yield potential, price and market demand. The Project should not promote too large a range of HVC in any one PPA. It is proposed that the Project adopts a lead HVC to be promoted in each PPA49 determined by the most acceptable and potentially profitable product.

91. Safeguards regarding (i) women, disadvantaged groups (DAG), and indigenous people’s awareness development; (ii) awareness of environmentally sustainable farming and post harvest practices, including the effects of climate change on farming systems; and (iii) post conflict peace issues, are incorporated in all components and reflected in the DMF.

92. The Project outputs include (i) the production of market oriented HVCs improved by farmer awareness, knowledge and skills improvement, agricultural service delivery enhancement, and increased access to farm technology for farmers; (ii) farmers participation in the HVC value chain strengthened through awareness building and training in post harvest technology, value addition and marketing, increasing HVC linkages and value addition, establishing an operational AMIS, establishing post harvest value chain investments; and (iii) support to Project management.

93. Project outputs will be delivered through three main components, viz:

Component 1: Enhancing Production of High Value Commodities (HVC)

Component 2: Strengthening Farmer Participation in the High Value Commodities (HVC) Value Chain

Component 3: Project Management Support

1. Component 1: Enhancing Production of HVCs

94. The objective of Component 1 is that market-oriented HVC production is improved in the Project area. The component’s investments are summarized in Table 2 below.

Table 2: Enhancing Production of HVC – Summary of Investments

<table>
<thead>
<tr>
<th><strong>Farmer Awareness, Knowledge and Skills in HVC Production Improved</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultancy Services (2 national HVC production specialists),</td>
</tr>
<tr>
<td>Farmer training and farm demonstration plots, including separate training for women headed farm households,</td>
</tr>
<tr>
<td>Farmer field days and farmer study tours.</td>
</tr>
</tbody>
</table>

**Agricultural Service Delivery Improved and Enhanced**

- Assistance to District Agricultural Development Offices (DADOs),
- Assistance to Community Agricultural Service Centers (CASCs),
- Assistance to DOA program directorates and resource centers,
- Assistance to farmer group nurseries,
- Assistance to engaging Project community agricultural and social mobilizers (CASMIs),
- Assistance to demand driven research.

**Farm Technology Access Increased for Project Area Farmers**

- Consultancy services (1 national farm technology specialist),
- Farm technology development,
- Farm technology investments.
95. Investments under Component 1 are described in detail hereunder.\textsuperscript{50}

\hspace{1cm} a. Farmer Awareness, Knowledge and Skills in HVC Production Improved

96. Consultancy Services: Two National consultants in HVC production with, specific expertise in fruit and vegetables, spices, medicinal and aromatic plants (MAP), apiculture and fish farming, will be engaged to work with the PMU and ASPs\textsuperscript{51} on disseminating knowledge to farmers on diversification into new market driven commodities.

97. Farm Training: Small and medium farmers will participate in the Project's HVC training programs which will be delivered by ASPs and subject matter specialists of the DADOs, who will be assisted by CASMs\textsuperscript{52}. Both men and women farmers, preferably without segregation, will be trained in HVC production through field based training courses in HVC production using the curriculum, training materials and methods established at the Project's training of trainers (TOT) courses, to be implemented under component 3 (Project Management Support). Each training session will be organized for a maximum of 25 farmers, including 50% women, and 10% DAG/IP participants, with duration of at least one full day for one single HVC. In accordance with the gender action plan (GAP)\textsuperscript{53} separate training for women headed farm households will be provided.

98. Farm Demonstration Plots: Ongoing field demonstrations on specific HVCs (e.g. a newly introduced variety, or a crop management practice) will be undertaken using a roadside demonstration plot provided by a lead farmer and selected by CASMs. Guidelines for conducting demonstrations will be developed during the vocational training for ASPs, which includes the design and preparation of training manuals and materials The Project will provide the lead farmer for the demonstrations, with a stock of agricultural equipment including irrigation, mechanized and other farm tools and implements, controlled environment agricultural technology (CEAT) such as cloches and greenhouses, and an annual supply of agricultural inputs including seeds and planting materials, fertilizers, herbicides, pesticides, plant and labor. It is proposed that the Project pays the lead farmer a nominal annual fee to compensate for the use of his/her land for demonstration purposes. The fee should be decided by the regional PIUs, but is recommended at NPR 5000 per lead farmer per plot.

99. Farmer Field Days and Farmer Study Tours: Regular field days will be organized at critical times, such as harvest, for groups of about 20 farmers, linked to the demonstration plots described above. Farmers wishing to learn from examples of growing or improving HVC production will be selected by CASMs, who will establish criteria for participation on tours to neighboring locations, which will include nearby PPAs and adjacent districts.

\hspace{1cm} b. Agricultural Service Delivery Improved and Enhanced

100. Assistance to District Agricultural Development Offices (DADOs): The implementation of component 1 involves the appointment of ASPs from both Government and non Government agencies, including the private sector, to support the lead implementer, the DOA. The PPTA has assessed whether the DADO's ASCs should be supported by the Project. Under the PRISM's implementation approach, involving public and private sector cooperation and participation, technically, DADOs can be viewed as ASPs, operating and competing alongside other qualified organizations to provide agricultural services to farmers. The severe reduction in the numbers of the DOA’s ASCs in every district of the country,

\textsuperscript{50} Full investment cost details are given in the cost estimates and financing plan under Appendix 5.
\textsuperscript{51} See section III.F.2.g (paras. 186-190) for a definition of ASPs.
\textsuperscript{52} See section III.F.2.h (para 191) for a definition of CASMs.
\textsuperscript{53} Full details of the GAP are provided under Appendix 12.
which currently covers less than 15% of farming households, has resulted in a vacuum in service delivery to farmers. This needs to be filled by ASPs from non-government agencies. However, there are an insufficient number of technically qualified ASPs, with enough performance capacity, existing in the Project area. Therefore, whilst the Project will provide financial and technical assistance to the establishment of CASCs rather than ASCs, it will also support to DADOs on a limited basis, to enable the gap between public and private sector service delivery to be closed and assist in improving their capacity to implement the Project.

101. DADOs will be eligible for Project financial assistance based on the following general criteria:

(i) previous assistance was not received under the CDP and if support was received from CDP, it has been severely damaged during the conflict, or requires refurbishment for valid reasons,

(ii) support is not planned under the PACT, HVAP or any other donor funded Project,

(iii) the request by the DADO for financial assistance has direct relevance to PRISM activities and is not requested in order to perform overall mandated functions, or in connection with another donor funded project being implemented under the DADO.

102. The Project will assist eligible DADOs in (i) building refurbishments (ii) the provision of vehicles and motorcycles to enable communication with farmers and the DADOs linked establishments such as field product resource centers, ASCs and training centers, (iii) the provision of office equipment including laptop computers, printers, scanners and copiers, UPS equipment, LCD projectors, digital cameras, and furniture, and (iv) technical equipment such as soil testing kits. Given the expansion of the use of laptop computers in information communication technology, it is considered reasonable to provide laptop computers, rather than desk top units, for use by DADO officers who travel locally and extensively in the course of fulfilling their duties.

103. Assistance to Community Agricultural Service Centers (CASCs): Given the Project’s finite resources and need to focus and prioritize its interventions in the sector, the Government’s initiative in the development of CASCs, under community management and ownership, will be supported by PRISM. The establishment and development of one pilot CASC will be supported in 1 PPA in up to 17 districts. It should be noted that support to the establishment of a CASC should be demand driven and the Project should have the flexibility to provide assistance to more than 1 CASC in a district providing the overall number does not exceed 17. The Project will (i) support building construction, or refurbishment where an existing suitable structure exists, to the extent of 50% of costs, (ii) provide two motorcycles for the use of community agriculture and social mobilizers (CASMs) based at the CASCs, (iii) office equipment, and (iv) office operation and maintenance costs based on a phased reduction of Project financing, with CASCs bearing the full cost by year 5 of the Project.

104. Assistance to DOA Program Directorates and Resource Centers: In view of their key role in the diversification and commercialization of HVC, through, in particular, the provision of high quality planting material and field based farmer training, the Project will support the DOA’s product directorates and resource centers. The Project will focus its support on those directorates and their field resource centers concerned with fruit, vegetables and farm based fisheries development.

54 Government has stressed that PRISM must not duplicate PACT and HVAP areas and activities
105. Project financial assistance will be provided to the Vegetable Development Directorate, Fruit Development Directorate, and the Fisheries Development Directorate located in Kathmandu in order that they may supervise their field based resource centers in the Project area. Financial assistance will be provided to (i) technical publications and database management; (ii) monitoring of resource center field based activities; and (iii) study tours, including participation in relevant conferences, workshops and seminars, within South and South East Asia for program directorate officers and resource center field staff. Participation in overseas study tours will be under strict criteria which is outlined under section III.F.i (para. 192) and detailed in the Project Administration Manual (PAM).

106. Project financial assistance will be provided to the following resource centers: (i) Warm Temperate Vegetable Seed Production Centre, Rukum; (ii) Vegetable Seed Centre, Dadeldhura; (iii) Dry Fruit Development Center, Satbanj, Baitadi; and (iv) Fisheries Resource Centers, Banke and Kailali.

107. Project financial assistance will be given to the construction and rehabilitation of technical facilities including, irrigation channels and water intake reservoirs, threshing floor construction, seed diagnostic laboratories, mini vegetable seed processing units, farm gates and fencing, net houses, CEAT facilities, cellar stores, and training rooms. Rehabilitation of facilities will only be considered if they have suffered damage during the conflict. Additionally, office equipment, motorcycles to the vegetable and fruit resource centers, and a 4-wheel drive double cab pickup trucks to the fisheries resource centers in Banke and Kailali will be provided to enable monitoring and training of farmers and transport of live fish. Additionally, the two fisheries resource centers will be supported in the updating of laboratory facilities, and fish farm equipment and implements.

108. Assistance to Farmer Group Nurseries: The Project will support the establishment and development of farmer group owned and operated nurseries, which will have the effect of enhancing the supply of good quality, easily available planting material to individual farmers. Two nurseries will be supported in each Project district. It is anticipated that farmer group nurseries will operate as profit centers supplying planting material on a commercial basis to group members and to third party customers.

109. The Project will, on a pilot basis, provide support to interested farmer groups for establishment and development costs of: (i) start up agricultural equipment and inputs including water and irrigation facilities, mechanized tools and implements, fencing, net houses, and CEAT; and (ii) support to operating and maintenance costs, including annual inputs of seeds, fertilizers, pesticides, herbicides, and labor. The viability of such nurseries will be regularly assessed by ASPs supported by DOAs’ product directorates and field resource centers. Project financial assistance will be phased out by year 3 following establishment to encourage the nurseries to be self financing operations and foster long term sustainability.

110. Assistance to Engaging Community Agricultural and Social Mobilizers (CASMs): Social mobilization, using teams of social mobilizers, was identified as a key element in the successful implementation of the CDP. It is considered that a similar approach is essential to providing outreach and HVC training and extension to farmers at grassroots level and hence the successful implementation and completion of the PRISM. CASMs, under advice from ASPs, will also assist famers and FGs on networking and compliance requirements involved in accessing rural credit from MFIs and Banks. The term “social mobilizer” has been replaced by “community agriculture and social mobilizers” (CASMs) to reflect more...
accurately the focus on both technical agricultural advice and social and gender issues to be delivered by the CASMs. The Project will finance the engagement of CASMs in the forecast 300 Project area P PAs, based on 1 CASM per P PA. Additionally, 1 CASM Supervisor for every 20 PPAs will be engaged giving a total of 15. The Project will have a target of including 50% women, and 10% DAGs/IPs in the total number of CASMs and CASM Supervisors engaged. The selection criteria for the appointment of CASMs are provided under section III.F.g hereunder (para. 191).

111. Assistance to Demand Driven Research: The need, stressed by stakeholders during the consultative participation stages of the Project design, for demand driven, focused and adaptive research on HVCs, is recognized in the Project design. The Project will encourage and assist farmers in the identification of production problems, and will support, financially, studies on coping strategies and problem resolution requiring relevant and adaptive research by qualified ASPs. At the outset of Project implementation, the PMU should be given access to the results of all client based research projects commissioned by the National Agricultural Research Fund (NARDF) under the CDP, including those that were not completed at the end of that project in 2007. ASPs will be selected under appropriate eligibility criteria and capacity, and in this context the National Agricultural Research Center (NARC) is considered as a potential ASP.

112. The Project proposes to establish a client based, demand driven fund, administered by the Project Management Unit (PMU), to finance research activities into Project related production problems.

c. Farm Technology Access Increased for Project Area Farmers

113. Consultancy Services: A National Farm Technology Specialist will be engaged to work with the PMU and ASPs. Details of consultancy TORs are provided in Appendix 8.

114. Farm Technology Development: The Project will establish a fund, administered by the PMU, to support the identification and dissemination of new farm technologies through the conduct of studies and trials.

115. Farm Technology Investments: The Project will support farm technology investments for farmer groups and their members. Indicative potential investments include rain water harvesting tanks, micro irrigation, mechanization, and CEAT. The cost of the investment will be partially financed from the Value Chain Investment (VCI) Fund, established under Component 2. Eligibility criteria are provided under section III.F (para. 197).

2. Component 2: Strengthening Farmer Participation in the HVC Value Chain

116. The objective of Component 2 is to strengthen farmer participation in the HVC value chain. The component’s investments are summarized in Table 3:

<table>
<thead>
<tr>
<th>Table 3: Strengthening Farmer Participation in the HVC Value Chain – Summary of Investments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness Building and Training in Post Harvest Technology, Value Addition and Marketing</td>
</tr>
<tr>
<td>• Consulting Services (1 international post harvest and marketing specialist, and 2 national specialist, viz, (i) post harvest and marketing specialist (ii) Agricultural Marketing Information Systems Specialist</td>
</tr>
<tr>
<td>• Assistance to AEC regional centers and field units</td>
</tr>
<tr>
<td>• Awareness building in post harvest and value chain issues for FGs and Cooperatives</td>
</tr>
<tr>
<td>HVC market Linkages and Value Addition Increased</td>
</tr>
<tr>
<td>• Assistance to market linkages and value chain integration, Agricultural Marketing Information System (AMIS) Established and Operational</td>
</tr>
<tr>
<td>• Assistance to improving and enhancing agricultural marketing information systems (AMIS)</td>
</tr>
<tr>
<td>Post Harvest Value Chain Investments Established</td>
</tr>
<tr>
<td>• Assistance to post harvest value chain investments ((i) on farm storage facilities, (ii) agricultural cooperative</td>
</tr>
</tbody>
</table>
117. The investments under Component 2 are described in detail hereunder\(^{56}\).

\( a. \) **Awareness Building and Training in Post Harvest Technology, Value Addition and Marketing**

118. **Consulting Services:** The following consultants will be engaged to work with the PMU and ASPs on disseminating knowledge to farmers on diversification into new commodities:

- One international Post Harvest and Marketing Specialist, and
- One national Post Harvest and Marketing Specialist,

119. **Assistance to AEC Regional Centers and Field Units:** The AEC’s role in implementing this component, and undertaking the supervision specifically of awareness building and training activities under this subcomponent, will involve an expansion of its area of activity and some human resource development and capacity building at field level, specifically related to the Project. Whilst the Project will not provide support to AEC’s central operations in Kathmandu, it will financially assist the AEC regional liaison offices and field units as follows: (i) the AEC regional liaison offices will be provided with (a) one motorcycle for each component implementation office (b) office equipment including laptop computers, printers, copiers and scanners, LCD projectors and furniture, and (c) limited support to office operations and maintenance for the duration of the Project; and (ii) up to 14 AEC field units will be provided with (a) office equipment including desktop computers, printers, copiers and scanners, and furniture; and (b) limited support to office operations and maintenance for the duration of the Project.

120. **Awareness Raising in Post Harvest and Value Chain Issues:** Awareness raising for farmer groups and agricultural cooperatives in value addition options will be supported by the Project through field based training and awareness programs which will be undertaken as follows by ASPs.

\( i. \)** Post Harvest Handling Technology: for delivery, at field locations, to farmer group individual lead farmer group members and committee members. Under this course farmer awareness will be raised in the following areas of farming business endeavor: (a) the importance of quality in the price determination of HVC, (b) pre harvest quality maintenance, and (c) best practice in harvesting and post harvesting techniques including, harvesting equipment, the organization of the harvest, transportation to collection points, washing, sorting, grading, packaging, and on-farm storage.

\( ii. \)** Agricultural Cooperative Management and Administration and Marketing: for delivery to cooperative management staff and committees at local training venues. Under this course participants will be trained on the following: (a) group self analysis to assess group strengths and comparative advantages over other producers and traders, (b) group organization and capacity building including m anagement, ad ministration, bookkeeping, accounts, report writing, to enable transparency within the group, (c) understanding the importance of agricultural marketing information and where to find it, (d) understanding the agricultural value chain and supply chain to demonstrate that different markets have different prices and calculate arbitrage opportunities, (e) understanding the cost of production and transaction costs of HVC and their implication for profit margins and the establishment of price bargaining opportunities.

\(^{56}\) Full investment cost details are given in the cost estimates and financing plan under Appendix 5
(f) the importance of networking, bargaining and negotiation skills in accessing optimum markets, (g) understanding the rights, duties and responsibilities of the respective parties involved in contract farming arrangements, and (h) the importance of establishing a seasonal agriculture plan to establish the right commodities to produce and the best marketing strategies to pursue.

121. Separate courses on the above topics will be supported for officials of women-only farmer groups and cooperatives.

b. HVC Market Linkages and Value Addition Increased

122. The Project will provide technical assistance to farmer groups and agricultural cooperatives in improving market access and efficiency through the adoption of innovative marketing strategies aimed at improving farm HVC prices. Such innovations could include:

(i) seasonal and longer term contracts with large traders, seed merchants, large retailers (e.g., supermarket chains)\(^{57}\), agro processors and exporter buyers,

(ii) contracting as regular suppliers through seasonal out-grower schemes to larger commercial farmer. The signing of seasonal out-grower contracts with large farmers is to take advantage of premium prices offered by larger operators who are able to take advantage of economies of scale,

(iii) selling into the domestic or international organic or niche markets for specific HVC to take advantage of available premium prices, and

(iv) grading, standardizing, branding and packaging of HVC to specific buyer specifications to add value and secure premiums over FAQ (fair average quality) prices through establishing a recognized name in the market.

123. Under this activity, the Project will support (i) studies and trials of innovative marketing methods, involving forward and backward linkages and value chain integration; in this context a fund will be established with access after approval of the proposal by the Independent Assessment Panel (IAP); (ii) the promotion of market networks through workshops for potential investors, and (iii) the preparation, printing, dissemination of Project related market and value chain literature.

c. Agricultural Marketing Information Systems (AMIS) Established and Operational

124. The project will support the current AMIS operated by AEC to improve the quality and depth of data collection, analysis and dissemination and the enhancement of its coverage to make the system more “farmer friendly”. In this context, the Project will support: (i) an AMIS evaluation study through the provision of a specialist consultant in AMIS, (ii) the establishment of AMIS price collection and dissemination centers in each of the Project districts, and in 5 Indian markets that are potential export destinations for Project supported HVC, and provide information on competing produce and assist the development of import substitution, (iii) the establishment and operation of a market information database to be self financing through service fees by the end of the Project, (iv) the establishment and operation of an information delivery service including the use of mobile phone messaging services, to be self financing from service fees by the end of the Project, and (v) the establishment and operation of a district level FM radio broadcast service to be self financing from service fees by the end of the Project.

\(^{57}\) Although in its infancy in Nepal, the so called “supermarket revolution” being experienced in Asian countries such as Bangladesh, India and Sri Lanka should also develop in Nepal, as standards of living rise.
d. **Post Harvest Value Chain Investments Established**

125. A key element in reducing post harvest losses, improving product quality, and increasing value addition at production area level is investment in low cost post harvest facilities. The Project will support post harvest value chain investments (VCIs) which can include:

   (i) farm based rustic cellar stores,
   (ii) on-farm small scale collection and post harvest handling centers,
   (iii) agricultural cooperative collection and marketing centers,
   (iv) small scale, low cost agro processing facilities, with the following indicative investments identified during the PPTA: (a) oilseed (particularly mustard seed) extraction, (b) seed treatment facilities, (c) ginger and turmeric processing, (d) fruit and vegetable processing (e.g., tomato sauce and paste), and (e) MAP processing (e.g., lemongrass), and
   (v) demand in larger, community based VCIs, particularly for cold storage, packaging, and market related transport facilities has also been identified during the PPTA.

126. The Project will provide technical and financial assistance to farmer groups, agricultural cooperatives and private sector agribusinesses, within the Project area seeking support in the design, construction, management and operation of VCIs. Eligibility criteria for access to the VCI are given under section III.F (para. 201).

127. Project financial assistance will be given to approved VCIs on a cost sharing basis in the form of up to 50% in grant and interest free loans. The levels of Project financial support will be determined by the size of the VCI and its type and location. A VCI fund will be established to provide financial support to approved investments. The VCI fund will be administered by the PMU, who will be responsible for disbursement of funds to approved beneficiaries.

128. It is envisaged that the applicants themselves, with technical assistance from the Project's ASPs, will be responsible for the identification, design, construction, management, maintenance and operation of VCIs. The land required for each VCI is expected to be very small and will be provided by farmers in the communities themselves, or placed on community-owned land.

129. **Alternative Energy Sources**: The provision of alternative energy sources in some less connected Project PPAs may play an important role in promoting and operating value chain investments. In this context the Project will pilot solar energy through the provision of up to 30 solar panel units of various types and sizes to approved applicants for VCI funding. Results will be monitored over the lifetime of the Project.

### 3. Component 3: Project Management Support

130. The component's investments are summarized in Table 4:

<table>
<thead>
<tr>
<th>Table 4: Project Implementation Support – Summary of Investments and Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Liaison Office (PLO), Kathmandu</strong></td>
</tr>
<tr>
<td>Support to staff, office equipment and operating costs,</td>
</tr>
<tr>
<td><strong>Project Management Unit (PMU), Nepalgunj</strong></td>
</tr>
<tr>
<td>Consulting services (1 national PPMS Specialist),</td>
</tr>
<tr>
<td>PMU management, and technical administration staff costs</td>
</tr>
<tr>
<td>Vehicles and equipment,</td>
</tr>
<tr>
<td>Office equipment,</td>
</tr>
<tr>
<td>PMU management support,</td>
</tr>
</tbody>
</table>
The investments under Component 3 are described in detail hereunder.\(^{58}\)

**Project Management Offices**

132. In line with the Government’s decentralization policy, the Project will locate its key management units in the MWDR and FWDR with a small liaison office at the center in Kathmandu. The cost of staff and the provision of locations will be the responsibility of Government and forms part of their contribution to the financing of the Project.

133. The Project management offices’ line reporting structure, and their linkages with participating Project implementing agencies, is illustrated in the chart included under Appendix 17. The Project management office staffing details are also given in Appendix 17.

134. The following will be supported by the Project.

135. **Project Liaison Office (PLO), Kathmandu:** The PLO will report to the Project Director, PMU. The PLO will be financially assisted through the provision of: (i) a vehicle, (ii) office equipment, including furniture, desktop computer and software, multipurpose printer, scanner copier, uninterruptable power supply (UPS) and miscellaneous ancillary equipment; and (iii) operating costs including office consumables and equipment.

136. **Project Management Unit (PMU), Nepalgunj:** The PMU will report to the Director General (DG) of the DOA, MOAC which is the Project executing agency. In addition to management and administration staff, the PMU will be provided with the following full time technical staff: (i) Agriculture Planning Specialist, (ii) Agricultural Marketing Officer, (iii) Agricultural Engineer, (iv) Environment and Climate Change Officer, and (v) Monitoring and Evaluation Officer.

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\(^{58}\) Full investment cost details are given in the cost estimates and financing plan under Appendix 5
Evaluation Specialist. The PMU will facilitate and coordinate all PRISM activities and the Project will provide financial support to the following:

(i) **Consultancy services**: One national Project Performance and Monitoring System (PPMS) Specialist will be engaged to support the PMU at the outset of Project implementation, and during the mid-term review and Project completion, and one national Promotion and Public Relations Specialist will provide two months input in the first year of Project implementation to facilitate workshops and awareness campaigns. Details of consultancy TORs are provided in Appendix 8.

(ii) **PMU management, administration and technical staff costs**: This includes travel costs for the Project Director to visit Kathmandu as required.

(iii) **Vehicles and equipment**: Two 4-wheel drive double cab pickup trucks and four motorcycles will be provided.

(iv) **Office maintenance and equipment**: This includes: (a) office refurbishment, (b) office equipment including furniture, desktop computers and software, laptop computers and software, multipurpose printer, scanner copier, uninterruptable power supply (UPS), local area network and software, LCD projector, digital camera, and miscellaneous ancillary equipment, and (c) operating costs including office consumables and equipment.

(v) **PMU management support**: Support will cover: (a) Project planning, monitoring and supervision including the cost of travel and per diems for PMU technical staff to visit the PIUs and Kathmandu, (b) the cost of financial management and audit including external auditing and reporting on PMU accounts and operations, (c) financial support to ADB missions, (d) financial support to mid-term review and revision, and (e) costs of preparing the Project completion report.

137. **Project Implementation Units (PIUs) at Ghorahi and Dadeldhura**: The PIUs will perform a facilitating role in the implementation of Project activities, report directly to the PMU, and liaise with ASPs operating in the field and Project beneficiaries. In addition to management and administration staff, the PIUs will be provided with the following full time technical staff: (i) a Gender and Social Inclusion Specialist, (ii) a Monitoring and Evaluation Specialist.

138. The Project will provide financial support in the following:

(i) **PIU management**: administration and technical staff costs,

(ii) **vehicles and equipment**: Two 4-wheel drive double cab pickup trucks and motorcycles will be provided to each PIU, including vehicle operating costs,

(iii) **office maintenance and equipment**: including (a) office refurbishment, (b) office equipment including furniture, desktop computers and software, laptop computers and software, multipurpose printer, scanner copier, uninterruptable power supply (UPS), local area network and software, LCD projector, digital camera, and miscellaneous ancillary equipment, and (c) operating costs including office consumables and equipment, and

(iv) **PMU management support**: Support will cover: (a) Project planning, monitoring and supervision including the cost of travel and per diems for PMU technical staff to visit the PIUs and Kathmandu, (b) the cost of financial management and audit including external auditing and reporting on PMU accounts and operations, (c) financial support to ADB missions, (d) financial support to mid-term review and revision, and (e) costs of preparing the Project completion report.
b. Project Awareness Building and Review

139. At the start of the Project the PMU will conduct an extensive promotion and awareness campaign covering the Project areas to apprise beneficiaries of the Project’s support interventions for HVC diversification and commercialization. This activity will be followed by regular workshops and agricultural fairs at regional and district level promoting Project supported HVC. This is intended to disseminate information to intended beneficiaries and motivate their participation in various Project interventions.

140. The Project will provide financial support to the following.

(i) project promotion campaign and review: The Project will provide and support: (i) one national Promotion and Public Relations Specialist who will be engaged to support the PMU in the preparation of the promotion campaign and the identification of materials and equipment required; and (ii) the cost of two-day Project review workshops, for 50 participants, at Project start, mid term and completion at regional and district level, and

(ii) agricultural fairs: The Project will support the cost of one agricultural fair in each region in years 3 and 5, and one agricultural fair per district from year 2 of the Project.

c. Capacity Building in Project Implementation and Sustainability

141. A key to successful Project implementation is knowledge and capacity building of trainers and extension workers and in this context, the Project will provide support to (i) the ASPs, (ii) the preparation and dissemination of training manuals and materials, (iii) training of trainers (TOT), (iv) study tours for trainers; (v) Community Agricultural and Social Mobilizers (CASM), and (vi) Formal Training for Sustainable Service Delivery.

142. Trainers and extension specialists, described as ASP staff, include DADO junior technicians (JTs) and junior technical assistants (JTAs), CASMs, subject matter specialists (SMS), lead farmers, CASC staff, and agricultural cooperative staff, and other private sector ASP staff.

143. Agricultural Service Providers (ASPs): Under the Project’s approach of involving both the public and private sector in implementation, lead implementers will engage ASPs to implement specific activities under the Project’s components. Support in this context will be provided as follows:

(i) consultancy services: one national Agricultural Extension Specialist to advise and support ASPs during the first three years of the Project. Details of the consultant’s TORs are provided in Appendix 8,

(ii) vocational training: the costs of the preparation of training manuals and materials for the vocational training courses of ASP staff,

(iii) training of ASP trainers (TOT): courses will be held at regional locations with two courses for ASP subject matter specialists (SMS) and eight courses for ASP field level workers, and 10-month vocational courses, and

(iv) study tours for ASP trainers and lead farmers: ASP technical staff and lead farmers will be supported undertake 10-day study tours to South and South East Asia to improve their knowledge of HVC. Two tours with 12 participants and one tour coordinator per tour, is provided for.

144. Community Agricultural and Social Mobilizers (CASM): will be located at village development committee (VDC) offices and where possible, at CASCs and the remaining DADO agricultural service centers (ASCs). They will provide outreach, facilitate farmer group
formation, participate in field level training programs, and extension activities to farming households. The work of the CASMs will be overseen by CASM supervisors on the basis of one supervisor overseeing 20 CASMs. Support will be provided as follows: (i) a total of 15 CASM supervisors will be trained through 2 two-day courses of 15 participants each, and (ii) one CASM from each PPA will be trained when a PPA is approved for inclusion in the Project area.

145. **Formal Training for Sustainable Service Delivery:** In order to ensure sustainability and a Project exit strategy, it is acknowledged that senior human resource capacity building is necessary within the DOA. Therefore the Project will support formal training in graduate and post graduate studies for DOA staff involved in Project implementation. Eligible courses will include B.Sc, M.Sc and PhD programs, with candidates selected by the DOA on the recommendation of the regional director and the PMU.

d. **Gender and Social Inclusion Awareness Activities**

146. The Project will support activities detailed in the Summary Poverty Reduction and Social Strategy (SPRSS), Gender Action Plan (GAP) and Indigenous Peoples Assessment and Measures, presented as Appendixes 11 and 12, respectively. Areas of Project investment will include:

147. **Consultancy services:** The Project will support the engagement of a national Gender and Social Inclusion Specialist to assist the PMU in its awareness building and monitoring of the mainstreaming of women in HVC production and value addition, and the inclusion of DAGs and indigenous peoples in Project activities. Details of the consultant’s TOR provided in Appendix 8.

148. **Workshops on Gender and Social Inclusion:** The Project will support workshops for building awareness on gender and social inclusion at central level (one workshop) for MOAC and DOA staff, and at regional level (two workshops for DOA Regional Directors (RDs) and senior agricultural district officers (SADOs).

149. **Gender Sensitization:** The Project will support courses in sensitization to gender issues and the mainstreaming of women in agricultural enterprises covering participation by (i) RDs and DADO staff promoting the concept of a gender focal point in DADOs and ASPs, and (ii) farmer group and agricultural cooperative committees and member households. The Project will support the cost of a course in gender issues for one gender focal point person in each Project district, to be located in DADOs.

150. **Gender and Social Inclusion Awareness Raising in PPAs:** The Project will support the cost of one gender awareness raising workshop in each of the 300 Project PPAs.

151. **Training and Studies on Social Inclusion, DAGs and Indigenous Peoples Issues:** The Project will support courses on social inclusion as follows: (i) at central level, one course for MOAC, Gender Equity Division and DOA staff, and (ii) at regional level, two courses for DADO staff and ASPs. The Project will also support: (i) a study, undertaken in each of the Project districts, on the mapping and analysis of the situation of Kamaiya (bonded labor) and Haliya (bonded ploughman); (ii) an analytical study on the situation of DAGs in all 300 Project PPAs; (iii) a needs assessment study on Kamaiya and Haliya groups; (iv) support for farmer group formation by Kamaiyas through two regional courses per annum in the first three years of the Project; and (v) specific support on a pilot basis to five freed Kamiya groups, in each of the three Pilot districts, in years 2 and 3 of the Project.

152. **Support for Women Farmer Groups:** The Project will support courses for: (i) institutional strengthening for women farmer groups and agricultural cooperatives, and (ii)
leadership development training for women farmers in mixed farmer groups and agricultural cooperatives.

e. Environmental Issues

153. The Project will support activities detailed in the environmental assessment and measures provided in Appendix 13, as follows:

154. Consultancy Services: The Project will support the engagement of a national Environment and Climate Change Specialist. Details of consultancy inputs are provided in Appendix 8.

155. Environment and Climate Change Orientation: The Project will support a two-day orientation course for DADO officers.

156. Farmer awareness building: The Project will promote awareness and understanding of environmental issues affecting farming systems and agribusiness enterprises through courses on (i) adaptation to climate change, (ii) pest management and pesticide application and safety, (iii) productive land use and soil management, and (iv) agro processing.

157. Promoting Climate Change Adaptation: The adaptation to climate change and its effects will be promoted through improved agricultural practices, and in this context, (i) two-day district level workshops will be held to promote the efficient use of water, and better agrochemical management, and (ii) demonstration plots will be established in selected Project areas in fragile ecological zones to promote climate change adaptation including (a) cultivation of temperate and drought tolerant HVC varieties, (b) planting of forage plants on terrace risers and bunds, and minimum cultivation on sloping land, and (c) soil management through soil enhancement, composting, green manuring and organic farming.

158. Climate Change Monitoring: Support to the monitoring of climate change issues and effects within the Project area will also be provided.

159. Environmental Management, Assessment and Monitoring: The Project will monitor region wide environmental issues within the MWDR and FWDR.

f. Access to Rural Credit

160. The lack of available rural credit in many areas of the MWDR and FWDR is a severe constraint to the development of the commercialization of agriculture, particularly for small and medium farmers and smaller groups. Prior to the conflict period, which lasted some 10 years and formally finished in 2007, microfinance institutions (MFIs) were extending their coverage of the rural areas of the country and targeting rural areas and farming households. During the conflict period many MFIs withdrew from the more seriously affected areas, and have not returned since. The Project will support farmers to access rural credit through the provision of information and networking.

D. Special Features

161. The Project differentiates itself from previous projects in the sector through the inclusion of the following special features:

162. PPP Implementation Approach: The Project recommends a PPP approach to Project component implementation with the lead implementer of Component 2 proposed to

59 See section I, B (para. 11) for a definition of the PPP approach model used in the Project design.
come from the private sector, viz, the Agro Enterprise Center (AEC) of the Federation of Nepal Chambers of Commerce (FNCCI). It is proposed that the AEC is appointed under an MOU with the MOAC setting out the rights and duties of each party, and detailing the benefits that each will bring to the Project. The PRISM integrates technical and financial services to farmers and fosters a strong partnership between DOA, Government and non-Government agency ASPs, with close working relations in the field on supporting farmers, through liaison with regional Project Implementation Units (PIUs).

163. **Decentralized Project Management Approach:** The Project recommends that the Project Management Unit (PMU) is located in the Project area, at Nepalgunj in the MWDR.

164. **Geographic Targeting:** The Project addresses Nepal’s regional east-west poverty divide by focusing on the MWDR and FWDR, which are the country’s least economically developed areas and contain the highest levels of poverty incidence.

165. **Climate Change Adaptation:** The Project mainstreams climate change adaptation measures through piloted activity to test and disseminate climate resilient cultivars and technology to assist farmers adapt to the negative effects of climate change.

166. **Market Demand Driven and Value Addition:** The Project is market demand driven and focuses on the integration of the value chain from agricultural production, post harvest value addition and marketing activities to wholesale, retail and consumers markets, thus supporting forward and backward linkages. Farmers’ awareness of, and capacity to, undertake value addition options will be enabled. Value chain integration and marketing efficiency will be promoted and led by private sector agribusinesses through service contracts with the Project and, or its beneficiaries.

**E. Investment and Financing Plans**

167. The Project is estimated to cost $26.8 million. The investment plan in summarized in Table 5 below. The basis of project cost estimates is provided in Appendix 5, together with additional summary and detailed cost tables. The Project comprises two main components: (i) Enhancing Production of High Value Commodities (HVCs) at a total cost of $12.2 million, and (ii) Strengthening Farmer Participation in HVC Value Chains at $8.8 million, which account for 46% and 33% of total costs. The third component, Supporting Project Implementation, comprises project management and project facilitation at a combined cost of $5.8 million, equivalent to 21% of total costs.

168. Foreign exchange costs amount to $9.0 million, equivalent to 34% of the total. Local currency costs are estimated at $14.4 million, 54% of the total. Taxes and duties amount to $3.4 million, 13% of the total. Physical and price contingencies are estimated at $1.1 million and $2.4 million, respectively.
Table 5: Project Investment Plan

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Base Cost&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>1. Enhancing Production of High Value Commodities (HVCs)</td>
<td>10.56</td>
</tr>
<tr>
<td>2. Strengthening Farmer Participation in HVC Value Chains</td>
<td>8.11</td>
</tr>
<tr>
<td>3. Supporting Project Implementation</td>
<td>4.61</td>
</tr>
<tr>
<td><strong>Subtotal (A)</strong></td>
<td><strong>23.27</strong></td>
</tr>
<tr>
<td>B. Contingencies&lt;sup&gt;c&lt;/sup&gt;</td>
<td>3.48</td>
</tr>
<tr>
<td><strong>Total (A+B)</strong></td>
<td><strong>26.76</strong></td>
</tr>
</tbody>
</table>

<sup>a</sup> Includes taxes and duties of $3.40 million.

<sup>b</sup> In April 2010 prices.

<sup>c</sup> Physical contingencies have been computed at 5% for all vehicles and equipment and consulting services (except international services for which no contingency has been added), and at 10% for delivery of advisory services, project awareness campaigns, establishment of field-level demonstrations and pilots, training and workshops, surveys and studies, and project management staff and support activities.

Price contingencies have been computed at 0.7% for 2011, 0.0% for 2012 and 0.5% thereafter on foreign exchange costs based on World Bank Manufactures Unit Value projections, and at 6.5% for 2011, 5.5% for 2012 and at 5.0% thereafter on local currency costs based on ADB estimates. This includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

Source: PPTA estimates.

Figures may not sum due to rounding.

169. The Government has requested a grant of $20.1 million from the Asian Development Fund (ADF).<sup>60</sup> The financing plan is summarized in Table 6.

Table 6: Financing Plan

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount ($)</th>
<th>Share of Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian Development Bank</td>
<td>20.10</td>
<td>75.1</td>
</tr>
<tr>
<td>Government</td>
<td>1.32</td>
<td>4.9</td>
</tr>
<tr>
<td>Beneficiaries</td>
<td>5.34</td>
<td>19.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26.76</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: PPTA estimates.

Figures may not sum due to rounding.

170. ADB will finance 75% of the total costs, including contingencies. The Government’s contribution, amounting to $1.3 million equal to 4.9% of total costs, will be in the form of salaries of DOA staff seconded to project management, offices and equipment made available for project use, and land and buildings allocated for project facilities. Contributions by beneficiaries will be in the form of land made available for demonstration farms, nurseries for planting materials, community buildings made available for CASCs, and in equity contributions to the financing of farm technology and post-harvest and agro-processing investments under the Project. In accordance with the Project’s approach that users pay for services to ensure sustainability, project financing of (i) CASC operation and maintenance costs will be phased out over five years, (ii) farmer group nurseries will be phased out over

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<sup>60</sup> A country’s eligibility for ADF grants under the revised grant framework is determined by its risk of debt distress. The latest debt sustainability analysis determined that Nepal had a [high] risk of debt distress and was therefore eligible to receive 100% of its ADF allocation as grants.
three years, and (iii) agricultural market information services will be phased out over 4 years. Financing by beneficiaries will, in principle, replace project financing.61

171. The Project was prepared under technical assistance TA 7331-NEP from a grant provided from TASF-IV, with cofinancing from the Swiss Agency for Development Cooperation from December 2009 to May 2010.

F. Implementation Arrangements

1. Implementation Period and Completion Date

172. The Project will be implemented over 6 years, beginning on 1 January 2011 with a completion date of 30 June 2017.

2. Project Management

173. In accordance with Government policy regarding the decentralization of project managements, the Project recommends that the PMU is located in the Project area, at Nepalgung (MWDR). The proposed management structure is provided in Appendix 17.

a. Executing Agency

174. The executing agency will be the MOAC through its DOA.

b. Project Steering Committee

175. Overall interagency coordination among agencies will be achieved through a Project Steering Committee (PSC) comprising the following:

- Secretary, MOAC (Chairperson),
- Joint Secretary (Planning), MOAC,
- Director General, DOA,
- Representative of Department of Cooperatives (DOC),
- Representative, Ministry of Finance (MOF),
- Representative National Planning Commission (NPC),
- Representative, Department of Food Technology and Quality Control (DFTQC),
- CEO, Agro Enterprise Center (AEC), and
- Project Director, PMU, PRISM (Secretary).

c. Project Implementation Offices

176. Assistance to Project implementation will be undertaken through a PMU, established at Nepalgunj, and PIUs located in Ghorahi in the MWDR and Dadeldhura in the FWDR. The PMU will provide overall management, administration, monitoring and evaluation, and reporting services and will report to the Executing Agency, viz, the DOA of MOAC. The PMU will manage and administer the VCI, HVC research, marketing studies, graduate and post graduate study funds to be established by the Project.

177. The PIUs will report directly to the PMU, providing facilitation services and liaison with ASPs in their respective regions. A small Project Liaison Office (PLO) will be set up at the DOA’s Kathmandu headquarters.

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61 Partial financing of CASCs may in the future be provided by Government and from local community funds. For the purpose of the project financing plan, however, it has been assumed that beneficiaries will take over financing through the payment of service fees.
d. Selection Criteria for Project Management Senior Staff

Project Director (PD)

178. The Project Director will be a Senior Agriculture Officer (Government class I officer) seconded from the MOAC, which should nominate at least two candidates with the following recommended minimum qualifications, experience and commitment:

- at least a Masters degree in agriculture or a related subject,
- three years working experience in a donor funded project,
- at least six years before retirement from the civil service,
- a good understanding of the geographical situation of the Project area,
- substantial knowledge of HVCs and their value chains,
- substantial knowledge of Government and ADB financial management systems, and

179. The candidates nominated by the MOAC for recruitment as PD should be interviewed and appointed in accordance with current regulations in force for the recruitment of senior Government Officers.

Project Implementation Manager (PIM)

180. The Project Implementation Manager will be an Agriculture Officer (senior class III, preferably class II) seconded from the DOA. He or she should possess the following minimum qualifications and commitment:

- at least a Bachelor’s degree in agriculture or a related subject,
- a minimum of one year of work experience in a donor funded project,
- a good understanding of working conditions in the Project area, and
- substantial knowledge of HVCs and their value chains.

e. Independent Appraisal Panel (IAP)

181. An IAP will be established with the purpose of examining, appraising and approving the following: (i) the appointment of A SPs, (ii) applications for support, valued at over $50,000, under the VCI fund, (iii) applications for support under the HVC research fund, and (iv) applications for support under the marketing studies fund. The IAP will comprise the following members:

- Regional Agricultural Directors (RADs) of the MWDR and FWDR (Joint Chairpersons)\(^{62}\),
- Director, PMU (Member – Secretary)
- Representative of the PIU from which the application emanates,
- Representative, AEC, and

\(^{62}\) The relevant RAD will chair meetings of the IAP depending on the region from which the application emanates.
Technical Specialists relevant to the subject matter of the application, on an ad hoc basis, where appropriate.

182. A quorum of three, including a technical specialist, is proposed for the appraisal of VCIs. For other applications, a quorum of two is proposed. The IAP will meet at the premises of the PMU on an ad hoc basis.

f. **Selection Procedures and Eligibility Criteria for the Inclusion of PPAs in the Project Area**

183. Following the project promotion and awareness campaign at the outset of Project implementation, the process for selection of PPAs will be initiated by VDCs, through district level workshops involving lead farmers, women, D AG/IP farmers, FGs, FG Coordinating Committees (FGCCs), Agriculture Cooperatives, locally active NGOs, local traders, agribusiness entrepreneurs, and DADOs, DDCs and DCCIs. The selection of PPAs will be based on consensus reached at the workshops and subject to validation and ratification by the regional PIUs, and confirmation by the PMU. The PA selection criteria will be in accordance with Government strategy for implementation of the APP and in conformance to the following minimum criteria:

- willingness of local communities to participate actively in the development of a PPA by contributing their own financial and human resources,
- willingness of farmers within the PPA to focus on agreed production and marketing of an identified lead HVC, and limited number of secondary focus HVCs,
- agronomic suitability for the production of the identified HVC,
- marketability of the identified HVC and interest from traders and agribusiness enterprises in the PPAs identified HVCs,
- existence of rural infrastructure including rural roads, irrigation facilities, and local markets. The proposed PPA should have existing access or potential access by means of at least an access road in the terai and inner valley, or a suitable track in hill districts (for PPAs not having roads or tracks, potential Project beneficiaries should be prepared to contribute to their construction), and
- existing or potential access to irrigation, e.g. shallow or deep tubewell in the terai, and small scale surface irrigation in the hills. (PPAs without irrigation should prepare an appropriate plan based on the scope and needs of its proposed HVC enterprise diversification and commercialization).

184. Each PPA should include a socioeconomic profile in its application for inclusion in the Project, details required will be provided in the PAM, and will provide base line information for subsequent Project monitoring and evaluation. Additionally each PPA will provide, with its application for Project inclusion, a recommended ASP trusted by and acceptable to them. PPAs will receive agricultural extension, and complementary and related technical support from a single ASP, however, a PPA may apply to the PIU to be assigned another ASP if dissatisfied with the service of the current ASP.

185. DADOs in the Project area will prepare a tentative list of potential PPAs prior to Project implementation. In this context, a report on GIS mapping of agricultural resources and potential PPAs was prepared for the CDP in May 2006. This report will be very helpful in the preliminary identification of PPAs in those districts covered by CDP, and also included in the PRISM. The number of PPAs per district is expected to follow the trend observed in May 2006.
the CDP in which the average number of PPAAs established in each participating district averaged 19 in the terai and 15 in the hills.64

g. Selection Procedure and Eligibility Criteria for the Appointment of ASPs

186. A key feature of Project Implementation is the appointment of ASPs to support the lead implementers of Components 1 and 2 to take responsibility for “hands on” implementation of the Project. ASPs will be appointed from technically suitable and qualified Government and non-Government agencies and may include DADOs, NGOs, government agencies, such as the DOA’s program directorate’s field resource centers, NARC, NARDF, established and competent Agricultural Cooperatives, private sector agribusinesses, DCCIs, and Commodity Associations. ASPs will be appointed with an overall target ratio of 70:30 Government to non-Government agencies.

187. In the first instance applications from potential ASPs will be reviewed by the PIUs and forwarded to the PMU for appraisal by the IAP. Following approval by the IAP the PMU will appoint the ASP on contractual terms to be established under the PAM.

188. ASPs will be eligible to apply for appointment as implementers of all, or part of the activities under Components 1 and 2, in one or more Project selected PPAs. The PMU will appoint ASPs who meet the following criteria:

- proven mutual interest of the relevant PPA communities and the ASP applicant to work together,
- proven experience of not less than three years in the provision of service to clients involved in HVC production, value addition and marketing and have achieved the respect and trust of the communities in which they have worked,
- recommendation of the PPA involved at the time of its application to be included in the Project,65
- have worked with farmers to achieve increased value of production output,
- have a cadre of skilled staff able to carry out the proposed work,
- have a legal status and recognition that allows the service provider to operate as proposed, and
- have the ability to assist clients to carry out technical and financial feasibility studies of beneficiaries proposed investments under Project financial support.

189. With particular regard to Component 2, potential ASPs shall also show that they have been involved in promoting forward and backward value chain linkages, to add value to the agricultural production of farming communities through one or more of the following, or similar, examples:

- the provision of marketing extension services and training to farming communities in post harvest technology and value addition options,
- location and establishment of small scale rustic cellars and collection centers for farmers,

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65 See section III.F.2.f
• establishment of post harvest handling operations, e.g. washing, cleaning, sorting, grading, packaging, and storage including collection and marketing centers, and distribution facilities,
• establishment of HVC marketing projects (pilot or otherwise) with the aim of linking production and value addition at farm level, via value chain management, more directly to end consumers through retailers, such as supermarkets,
• establishment of low cost HVC agro processing ventures including fruit and vegetables, spices, oilseed expelling and seed treatment located in PPAs,
• establishment and operation of cool/cold stores, and
• branding and promotion of agricultural produce for sale to premium markets.

190. It is acknowledged that an appointed ASP may not have the breadth of knowledge and experience to cover all potential services needed by the PPA from production through to post harvest handling, value addition and marketing. To cover this contingency, and with the approval of the PPA, endorsed by the PMU, an ASP may sub contract minor specific activities to technically qualified specialist service providers, e.g., branding and packaging of fruit and vegetables.

h. Selection of CASMs

191. CASMs will provide the Project with the key direct interface with individual farmers and farming communities. One CASM is proposed for each PPA, with a target overall ratio of 50% women. 10% DAG/IPs. CASMs will be identified by ASPs, in close liaison with the PIUs, and local communities. The following basic criteria for appointment of CASMs are proposed as follows (i) residence in the local community, and acceptance by them, and (ii) agricultural and sociological knowledge, with the agricultural oriented CASC qualified to junior technician assistant (JTA) level. CASMs will be located at the VDC secretariat office, or, ideally, at functioning CASCs or the remaining DADO ASCs. CASMs will be appointed by the PIUs and financed by the Project.

i. Selection for Participation in Training and Observational Tours

192. Short term training and observational tours (including participation in relevant conferences, workshops and seminars) to be financed by PRISM will be undertaken with the objective of increasing the efficiency of Project implementation in-country or in the South and South East Asian region only. For overseas training ADB concurrence should be taken prior to planning the tour. Expenditure in any case should not exceed NPR 250,000 per participant. Full details of selection criteria for the participation of Project staff and beneficiaries in training and observational tours will be included in the PAM.

3. Component Implementation

193. Details of component outputs are provided in section III.C above.

194. At the start of the Project, the PMU will conduct an extensive promotion and awareness campaign throughout the Project area to apprise beneficiaries of its support interventions for HVC diversification and commercialization. The Project will adopt a process of promoting commercialization of HVC production, value addition and marketing amongst individual farmers through following group approach:

66 The guidelines have been established with reference to those being followed by the CADP
motivating individual farmers to change through an awareness and promotion campaign undertaken at VDC and community level, within selected P PAs, at the outset of the Project,

- formation of small FGs of about 20-25 households based on community interests, needs and demand,
- formation of FG Coordinating Committees (FGCC), and
- formation of larger groups with legal status, e.g. with membership of around 20 FGs comprising about 400 farming households. With regard to group size the aim will be flexibility on how groups with "critical mass" can move towards group sales, value addition, and improved marketing efficiency. With regard to the legal status of larger FG's, experience gained during the CDP preparation and design and ensuing implementation indicates that farmers and social mobilizers prefer to register an Agricultural Cooperative under the Cooperative Act (1992) rather than an Association registers under the Associations Registration Act (1997). This process will be followed by PRISM.

195. During the Project promotion and awareness campaign, surveys will be undertaken to identify existing community groups that are representative of Project beneficiaries. Additionally, consultation meetings with farming communities will be held to establish farmers' needs and motivation to diversify into HVC production, value addition and marketing through grouping together for joint marketing and other agriculture enterprise related activities.

**Component 1. Enhancing Production of HVC**

196. **Component 1:** This will be undertaken by the DOA, as lead implementing agency, supported by, and in partnership with ASPs. The DOA will work, in the first instance, through the DADOs, who will liaise with the Project Management Unit (PMU).

197. **Eligibility Criteria for Farm Technology Investment Support:** Applications for support for farm technology investments, funded from the VCI fund, will be identified by ASPs, and reviewed by the PIUs who will be authorized by the PMU to approve investments valued at up to $5,000. Applications valued at between $5,000 and $50,000 will be reviewed by the PIU and submitted to the PMU for approval. Investments of over $50,000 will be reviewed by the PMU and submitted to the IAP for approval. Applicants will be evaluated against the following criteria:

- member of a FG or Agricultural Cooperative,
- HVC production experience,
- applicant to operate a farm of less than 2.0 ha,
- attendance at Project HVCs training courses,
- access to actual or potential HVCs markets, and
- rationale and justification of investment proposal to be submitted and approved by FG or Agricultural Cooperative committee.

198. Disbursement of funds to successful applicants will be made by the PMU.

**Component 2. Strengthening Farmer Participation in the HVC Value Chain**

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67 ADB, November 2000, *Project Administration Memorandum, Crop Diversification Project, Loan Number 1778 NEP (SF).*
199. **Component 2**: This will be undertaken by the AEC wing of the FNCCI, as the lead implementing agency, supported by and in partnership with technically qualified ASPs, which may include the DCCIs and Commodity Associations members of the FNCCI. The AEC is considered the appropriate agency to undertake the lead and coordinating role in the implementation of this component in view of its extensive linkages with the private sector whose involvement is essential in the promotion of agribusiness and value chain integration. The AEC will work, in the first instance, through its three regional liaison offices, located at Nepalgunj, Ghorahi, and Dadeldhura, and Project dedicated AEC field units, located in Project districts, who will liaise closely with the PMU and the two PIUs regarding the appointment of partner ASPs, CASMs, and the overall implementation of Component 2 activities.

200. The AEC will report to the PMU.

201. **Eligibility Criteria for Post Harvest Value Chain Investments (VCI)**: Post harvest value chain investments, funded from the VCI fund, will be demand driven, identified by ASPs in consultation with farmers, and reviewed by the PIUs who will be authorized by the PMU to approve investments valued at up to $5,000. Applications valued at between $5,000 and $50,000 will be reviewed by the PIU and submitted to the PMU for approval. Investments of over $50,000 will be submitted to the IAP for approval. Applications for support will be evaluated based on the following basic eligibility criteria:

- existence as a FG for a minimum of one year with the legal status to allow them to enter into contracts with third parties,
- participation of leading members of FGs in the Project’s training courses and awareness programs on HVC production and value addition,
- the investment project must be market driven involving HVCs with proven actual or potential demand, and illustrate backward and forward linkages along the value chain,
- the potential for involvement of women on an equal basis with men, in the investment,
- employment potential for youth, DAGs/IPs in the investment, and
- the investment proposal should not have any negative social and environmental effects, provide proof of knowledge of the comparative benefits and risks, and the potential price premiums that will result from the investment.

202. Disbursement of funds to successful applicants will be made by the PMU.

203. **Eligibility Criteria for HVC Market Linkage and Value Chain Integration Studies**: Applications for financial assistance from the marketing studies fund will be made, in the first instance, to the AEC, and then submitted to the PMU, for approval by the IAP. Applications for support will be evaluated on the following criteria:

- proposed studies must not duplicate existing or current research, and
- applicants must be recognized experts in the field of study proposed.

204. Disbursement of funds to successful applicants will be disbursed by the PMU.

205. **Eligibility Criteria for Graduate and Post Graduate Study**: Applications for financial assistance will be made to the DG, DOA, through the PMU and follow Government procedures in this regard. Proposed courses of study should be in Project related subjects
and undertaken mainly by distance learning and research, based in the Project area, with attendance at a recognized academic institution for short periods of time only. Applicants should be Government employees, seconded to the Project. Disbursement of funds to successful applicants will be made by the PMU.

4. Procurement

206. The PMU will be responsible for the procurement of all goods, related services, and civil works under the Project in accordance with ADB’s Procurement Guidelines (2007), as amended from time to time). Shopping will be used for works of up to than $50,000. For works valued at more than $50,000 but no more than $500,000, civil work contracts will be required and procured by the PMU on the basis of national competitive bidding in accordance with the Government’s procurement procedures acceptable to ADB. Supply contracts for equipment or materials exceeding $500,000 will be procured following international competitive bidding. A procurement plan is provided in Appendix 7. The DOA, through its Procurement Investment Wing, has substantial and proven experience in procurement relating to programs and projects supported by international donors, including the ADB. Its performance has been satisfactory so far. Procurement issues are discussed in detail in Appendix 19 (Risk Assessment and Management Plan).

5. Consulting Services

207. The selection and engagement of all consulting services will be in accordance with ADB’s Guidelines on the Use of Consultants (2007), as amended from time to time) and other arrangements satisfactory to ADB for engaging international and national consultants. The critical areas in Project implementation, where the DOA and AEC need capacity enhancement are in post harvest and marketing, HVCs production and extension, new farm technology innovations, agricultural marketing information systems, results-based monitoring and evaluation, post harvest and value addition extension, gender and social inclusion, and environmental sustainability and climate change adaption.

208. In order to build capacity in these critical areas the project will provide 6 person months of international consulting services, and 104 person months of national consultancy. The consultants will be fielded to address the production, value addition and marketing needs of the beneficiaries through a participatory development approach. The consultants will provide technical services for all the project’s activities under its respective components. Detailed terms of reference are provided in Appendix 8. Consultants will be selected on a quality and cost selection basis (QCBS) through a designated single consultancy firm. The following consultants will be engaged.

Table 7: Consultancy Services

<table>
<thead>
<tr>
<th>Consulting Services Inputs</th>
<th>Input (person months, p-m)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>International</strong></td>
<td></td>
</tr>
<tr>
<td>1. Post harvest and Marketing Specialist (IPMS)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td>6</td>
</tr>
<tr>
<td><strong>National</strong></td>
<td></td>
</tr>
<tr>
<td>1. High Value Commodity Specialist - fruit and vegetables / Team Leader (HVCS)</td>
<td>20</td>
</tr>
<tr>
<td>2. High Value Commodity Specialists - Fish Farming and Bee Keeping (FBS)</td>
<td>6</td>
</tr>
<tr>
<td>3. Farm Technology Specialist (FTS)</td>
<td>6</td>
</tr>
<tr>
<td>4. Post harvest and Marketing Specialist (PHMS)</td>
<td>24</td>
</tr>
<tr>
<td>5. Agricultural Marketing Information Systems (AMIS) Specialist (AMISS)</td>
<td>5</td>
</tr>
<tr>
<td>6. Project Performance Monitoring Specialist (PPMS)</td>
<td>5</td>
</tr>
<tr>
<td>7. Promotion and Public Relations Specialist (PPRS)</td>
<td>2</td>
</tr>
</tbody>
</table>
6. Disbursement Arrangements

209. To ensure effective Project implementation and timely disbursement, immediately after grant effectiveness the Government will establish an imprest account for the PMU for Components 1, 2, and 3. To access imprest account funds, the PMU and will be responsible for preparing disbursement projections, collecting supporting documents, and preparing withdrawal applications, and sending them to ADB in accordance with ADB’s Loan Disbursement Handbook (2007), as amended from time to time. Based on the withdrawal applications, ADB will fund project imprest accounts on a reimbursement basis.

210. The statement of expenditure (SOE) procedure will be adopted to facilitate reimbursement and liquidation. The imprest accounts and SOE procedure will be established, maintained, and audited in accordance with ADB’s Loan Disbursement Handbook. The ceiling of each imprest account will not exceed the estimated expenditures for the following six months, or 10% of concerned component expenditures, whichever is lower. The SOE procedure is applicable for reimbursing eligible expenditures or any individual payment not exceeding $100,000 and liquidating advances provided in the imprest accounts.

7. Accounting, Auditing and Reporting

211. DOA will submit semi-annual and annual project progress reports to ADB. The reports will include information on the Project’s physical progress and component status. Copies of all studies and surveys conducted through the PMU will also be provided to ADB. Within three months of the Project’s substantial physical completion, DOA will submit to ADB a project completion report covering project implementation, cost, project performance management activities, and other information requested by ADB. DOA and AEC will maintain separate project accounts and records to facilitate identification of project related revenues and expenditures. The PMU will be assigned sufficient and qualified accounting staff, including a senior accountant. An independent auditor acceptable to ADB will annually audit all project-related accounts, SOEs, and revenues. In this context the Auditor General is acceptable. The annual audit report will include a separate audit opinion on the use of the imprest accounts and SOE procedure. Audited financial statements and project accounts, together with the report of the auditor, will be submitted within six months of the close of the financial year.

8. Project Performance Monitoring and Evaluation

212. In line with ADB’s project performance management system (PPMS) framework, a participatory benefit monitoring and evaluation program will be carried out following a design that supports data requirements (segregated by gender, DAG and IPs) of a results based management system that is linked to the DMF. Specifically, indicators and targets for all desired project outputs, outcomes, and impacts will be defined for annual and, or episodic points in the project cycle in accordance with the indicators in the DMF. The PPMS will provide a clear indication of Project efficiency (planned outputs against allocated inputs) and effectiveness (achievement of Project outcomes and impacts as a consequence of implementing planned interventions and investments). PPMS activities will be conducted periodically to assess whether project inputs have delivered the expected benefits to the
intended beneficiaries. The PPMS will also detect deviations between the plan and execution of the Project. Any deviations between the plan and achieved results (outputs, outcomes, and impacts) will be recognized by Project management in a timely manner, thereby allowing corrective management actions and decisions to be taken. Within nine months of grant effectiveness, the PMU will conduct a benchmark physical and socioeconomic survey at project districts and PPAs building on data collected during the PPTA. The baseline surveys will be conducted in accordance with the DMF and provide the basis for preparing the benchmark information and target values. Baseline data will include income and expenditure data, livelihoods data, demographic trends, gender issues, and information on indigenous peoples and disadvantaged groups (DAGs) and minority groups where they are identified in the Project area. After the initial survey, the PMU will submit annual benefit monitoring reports to ADB throughout Project implementation. A monitoring team will be established within PMU and the regional PIUs to ensure the operation of the PPMS for all Project component activities.

213. To support mid-term and project final review missions, independent impact evaluation surveys and studies will be undertaken and the reports transmitted to ADB at least 4 weeks before the respective missions. The surveys should complement the benchmark data and measure the degree to which the Project has attained outputs, outcomes, and impacts, closely reflecting the indicators of the DMF.

9. Project Review

214. ADB and the Government will review the Project at least twice a year covering: the performance of DOA, AEC, ASPs; consultants, and contractors; the physical progress of project implementation; inclusion of the poor, DAGs, IPs and women in Project implementation; and compliance with grant assurances. ADB and the Government will undertake a comprehensive mid-term review of the Project 36 months after project effectiveness to identify problems and constraints encountered and suggest corrective measures. Specific items to be reviewed include: (i) Project management and implementation effectiveness; (ii) compliance with safeguard measures, see Appendixes 11 (Summary Poverty Reduction and Social Strategy), 13 (Environmental Assessment and Measures), 14 (Involuntary Assessment and Measures), and 16 (Peace Filter Matrix); (iii) implementation of the Gender Action Plan (Appendix 12); (iv) effectiveness of capacity building of farmers and DOA, and AEC; (v) extent to which HVC diversification and commercialization objectives are being met; (vi) lessons learned, good practices and innovations, and their replicability, and (vii) any other issue agreed upon by the Government and ADB. Technical, budgetary, and design modifications could be considered based on the results of the review.

IV. TECHNICAL ASSISTANCE

215. Technical assistance to support Project implementation will be provided by a team of consultants comprising 6 p-m of international and 104 p-m of national consulting inputs. The consultants will be fielded to support DOA in addressing the production, value addition and marketing needs of the beneficiaries through a participatory development approach and in overall project implementation.

216. The PPTA has in additional identified potential technical assistance (TA) requirements in the following areas: (i) alternative energy, and (ii) adaptation to climate change. Concept proposals are set out in Appendix 21.

217. Alternative Energy TA. The sustained development of certain Project PPAs will be restricted by a lack of access to viable energy supplies. During the PPTA, preliminary steps
were taken to address this issue by including a small equipment budget line to allow the demonstration of alternative energy solutions encompassing the following:

- solar drying,
- solar water heating (for micro-processing, e.g., tomato ketchup, etc.),
- solar PV (lighting, low lift irrigation, micro-processing (milling), communications etc.),
- water powered mills,
- evaporative cooling for hill area on-farm and cellar storage (solar powered fan and solar low lift water cooler/sprinkler), and
- (experimental) wind power for electricity generation and water lifting.

218. The objective of these investments is to establish viable demonstrations of sustainable alternative energy technologies which can subsequently be extended to other PPAs within the project area. The effectiveness of these pilot demonstrations will be greatly enhanced with the provision of a specialist TA in alternative energy, training and workshops. The target groups will be Farmer Groups, Agricultural Cooperatives, private sector entrepreneurs, DOA officers, ASPs and Project management staff.

219. It is anticipated that the Alternative Energy TA will make an initial impact on approximately 20 PPAs in the Project area. Alternative energy demonstration units will be set up in four PPAs where field visits will be made by entrepreneurs, micro-finance institutions, farmer groups and cooperatives. Applicable technology components will then be extended to the remaining 16 PPAs through commercial borrowing. Overall, fossil fuel power savings approximate 0.3 million kWhr per annum with a corresponding reduction in climate change gas emissions.

220. The TA is estimated to cost US$43,000.

221. **TA on Mitigation of Negative Effects of Climate Change.** Nepal is highly vulnerable to climate change and the impacts of climate change have already been noticed in agriculture sector. ADB, together with the World Bank, is supporting the $70 million Pilot Programme for Climate Resilience (PPCR) in Nepal, and agriculture, water resources, GLOF, forestry and health have been identified as the major sectors for the PPCR program. The Ministry of Environment is responsible for the PPCR; however, the MOAC has specific responsibility for identifying and implementing projects in the agriculture sector. It should be noted that the implementation of the PPCR is in its embryonic stage and sub projects are still in the process of being identified.

222. Nepal needs to develop its climate resilience activities to minimize the impacts of climate change on people and resources, however it is widely recognized that Nepal lacks the technical and managerial capacity and financial resources to reduce threats in this context. PRISM has mainstreamed environmental sustainability and the mitigation of the effects of climate change on farming systems throughout its interventions. Discussions have been held with the MOAC with regard to the potential for external funding under a TA to enable PRISM to partially implement sub projects under consideration by the PPCR. The following sub projects, which link to PRISM activities in the MWDR and FWDR, have been identified during discussions with MOAC. The partial implementation of the sub projects, in the MWDR and FWDR, by PRISM are identified as suitable for a TA to be externally funded by PPCR. It is recommended that the proposed Project during its ensuing stages continues discussions with MOAC in this context.

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68 See section V.C.5, and Appendix 13 (Environmental Assessment and Measures)
223. **TA for Sustainable Land Use Practices and Soil Enhancement and Rebuilding.** The proposed TA will help MOAC to introduce appropriate arable land use policy and implementable activities, developing sustainable land use systems and soil enhancement and rebuilding practices, terrace improvement, promoting productive perennial crops including fruit trees, legumes and medicinal and aromatic plants replacing cultivation of annual crops on sloping uplands, and implementing activities in vulnerable areas. This will also include awareness and capacity building of farming communities as well as restructuring and capacity building of environment division at MOAC and its organizations; with trained staff and appropriate working facilities.

224. The estimated cost of the sub project is about US$20 million, however it is anticipated that a PRISM TA will only involve a fraction of the costs as the sub project will cover the whole of Nepal and not just the terai and hill areas of MWDR and FWDR.

225. **TA on Adaptive Agriculture Practices in Areas Vulnerable to Climate Change.** The proposed TA will help MOAC to develop and implement appropriate adaptive agricultural practices both in terai plains and hills. This will include program formulation on small-scale farm irrigation facility such as shallow tube-wells in plain areas, sprinkle irrigation, drip irrigation system in hills, rain water harvest, water use efficiency, fertiliser mix and its application, use of IPM/IPNMS practices, bio-pesticides, minimum tillage, and cultivating crop cultivar or vegetable or fruit plant species or medicinal and aromatic plants which can cope with extreme climatic condition. This will also include adaptability studies and production assessment of cultivars or indigenous plant species tolerant to moisture and temperature stress as well as awareness and capacity building of farming communities for implementing adaptive agricultural practices.

226. The TA is estimated to cost about US$15 million, however it is anticipated that a PRISM TA will only involve a fraction of the costs as the sub project will cover the whole of Nepal and not just the terai and hill areas of MWDR and FWDR.

V. **DUE DILIGENCE**

A. **Economic and Financial**

227. The main beneficiaries of the Project will be small and medium farmers through increases in farm incomes resulting from improved access to farm inputs, notably improved quality seeds and planting material, and advisory services. Under CDP an average of 290 farmers were covered in each of the 205 PPAs. The proposed Project will be implemented in 300 PPAs. Based on the same average number of farmers per PPA, Project beneficiaries are expected to number 87,000. Based on lessons learned from CDP and the greater focus afforded to delivery of advisory services to farmers through CASMs, the Project is expected to have greater outreach and promote greater farmer participation. The estimate of 87,000 beneficiaries may, therefore, be considered conservative. The distribution of beneficiaries between MWDR and FWDR is expected to be approximately equal.

228. As a result of participating in the Project, farmers are expected to diversify into HVC and operate at higher levels of intensity with greater usage of inputs (fertilizers, plant protection, mechanization, hired labor, etc). Farmers operating small and medium scale farms in both the terai and hills are expected to cultivate a larger number of crops, have a higher cropping intensity ranging from 170% to 186%, make greater use of hired labor, and devote more of their own time to cropping activities. Net farm incomes range from NPR48,300 for a small farm in the hills to NPR144,200 for a medium farmer in the terai.

69 Reference CDP and the DOA sources.
However, because they devote more family labor to the farm, net income per family day is not significantly higher than that on typical farms of the same size and zone. With project farms’ net income per family day range from NPR1,380 for a small farmer in the hills, to NPR3,600 for a small farmer in the terai. Incremental farm incomes resulting from participation in the Project are significant. The increases in farm income for small farmers in the terai and hills are NPR40,500 (a 127% increase) and NPR34,900 (a 260% increase) respectively. For medium farmers, increases are more significant resulting from a greater area being devoted to HVCs. In the terai medium-scale farm income is projected to increase by NPR107,700, and in the hills by NPR72,100. Both represent an increase of around three times the level of without-project incomes.

229. Economic returns from farmers' participation in the Project vary according to the cropping pattern employed and incremental yields resulting from improved farm technology and farmer skills. Budgets for key cereal crops (paddy, wheat and maize) indicate that incremental gross margins per ha are higher in economic terms than in financial terms. The extent to which the individual farms analyzed are assumed to diversify away from cereal crops to HVCs has a considerable impact upon economic farm incomes. Overall, average economic incremental returns per farm and per ha are lower than financial returns. This implies that diversification away from cereal crops to HVCs is not as sound in economic terms as it is in financial terms, with financial returns per ha being around 12% higher. However, incremental economic returns remain significant, at an average of NPR164,856 per ha. At the individual household level, the decision to diversify will be made on the basis of perceived financial returns, rather than economic. The Project will support a variety of farm technology and post harvest value chain investments (VCIs). The benefits of farm technology investments will accrue from increases in farm productivity and incomes. Benefits from post-harvest VCIs accrue to both investors who establish the activities and farmers through improved access to storage facilities, alternative market outlets, etc. The latter is again incorporated in improved farm incomes. Benefits to VCI investors (who may also be farmers, farmer groups, and cooperatives, as well as entrepreneurs and agribusinesses) derive from incomes received from VCI activities. A number of VCIs have been analyzed including on-farm and roadside storage and collection and marketing centers, micro agro-processing units, and larger scale cool stores. Financial and economic analysis indicates that all such VCIs are financially and economically viable. FIRRs range from 12.4% to 29.9% compared with an estimated weighted average cost of capital of 4.7%. Sensitivity analysis indicates that, with the exception of certain micro agro-processing units, all investments are robust with respect to adverse changes in revenue and cost variables. With the exception of the investment in on-farm storage, EIRRs range from 21.4% to 37.5% compared with an assumed opportunity cost of capital of 12%. The EIRR of on-farm storage is 13.3% indicating that its economic viability is more marginal. It is also more sensitive to assumed revenue and costs. All VCIs will be subjected to detailed review and analysis prior to approval of project funding which will help to mitigate any risks associated with the assumptions in the current financial and economic analysis.

230. Diversification and intensification of farm production leads to an increase in the demand for both family and hired labor across the four farms covered by the analysis, resulting from the switch to HVCs that are more labor-intensive than cereal crops. On a per ha basis, the average increase in family labor is expected to be 73 days per year, and for hired labor 103 days per year. Assuming the same average area covered per PPA under the CDP70 and 300 PPAs expected to participate in the Project, a total of 38,100 ha would be covered by the Project, and a total incremental demand for labor of around 22,500 person-years per year will be generated. The employment impact of VCIs is not significant. Based

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70 CDP covered 25,935 ha in 205 pocket production areas (PPAs) at an average of 127 ha per PPA, resulting in incremental employment of 14,963 person-years.
on the indicative numbers of each investment, total employment is expected to be around 500 persons per year.

B. Governance

231. ADB’s *Anticorruption Policy* (1998 as amended to date) was explained to and discussed with the Government and the MOAC’s DOA. Consistent with its commitment to good governance, accountability, and transparency, ADB reserves the right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive, or coercive practices relating to the Project. To support these efforts, relevant provisions of ADB’s *Anticorruption Policy* will be included in the grant regulations and the bidding documents for the Project. In particular, all contracts financed by ADB in connection with the Project shall include provisions specifying the right of ADB to audit and examine the records and accounts of DOA, and all contractors, suppliers, consultants, and other service providers as they relate to the Project. A Risk Assessment and Management Plan is provided under Appendix 19.

232. Financial management assessment and due diligence has been done on the proposed executing agency and participating implementing agencies. Appendix 18 (Financial Management Assessment) includes the Financial Management Assessment Questionnaire completed by the DOA. Project specific measures to enhance governance and prevent corruption during implementation will include (i) establishing transparent procedures for financial transactions; (ii) setting out clear criteria for the participation of implementing agencies, and ASPs; and (iii) the requirement for PMU and PIUs to follow government rules and procedures for all expense and revenue items including cash and the proper and accurate maintenance of financial records.

233. Project services will be described by the PMU, with the Consultants’ assistance, in pamphlets to be distributed among local government committees, rural communities, farmers, ASPs, and CASMs. At the completion of each training course and study tour, trainees will be asked to complete an evaluation of the course. These evaluations will follow a format agreed upon by ADB and will be kept on file and made available for inspection. All reporting, including surveys and reviews required by the Government and ADB will follow formats agreed in advance by the Project Steering Committee. The provision of reports will be recorded in a diary showing dates of their completion and names and signatures of recipients of the reports. A report distribution list will specify reports to be distributed to the districts, VDC representatives, and private sector parties.

C. Safeguards

1. Poverty Reduction and Social Development

234. The proposed Project supports the growth of the agriculture sector and links to Nepal’s poverty reduction strategy by contributing to poverty alleviation and raising the incomes of poor small and medium farmers in the mid west (MWDR) and far west (FWDR) development regions. The Project estimates that its key beneficiaries will comprise around 87,000 farm households in the MWDR and FWDR where the highest incidence of poverty in the country is found. The head count incidence of poverty in the MWDR and FWDR is 45% and 41% respectively against a national average of 31%. However, the incidence of poverty also varies by ecological regions and social groups with the terai (plains) recording the lowest poverty rate at 28%, compared to 33% in the High Mountains and 35% in the hills. Poverty profiles recorded in the Nepal Living Standards Survey (NLSS), 2003-04 indicated that households headed by agricultural wage laborers are the poorest in Nepal (54%),

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71 The data used in this paragraph is taken from Central Bureau of Statistics’ (CBS) (NLSS Nepal Living Standards Survey), 2003-04
followed by households headed by the self-employed in agriculture (33%). The same survey also shows that poverty is highest among hill and terai Dalits (46%) and amongst the Hill area indigenous Janajatis peoples (44%). Despite the substantial reduction of the incidence of poverty (11%) over the 8-year period surveyed by the NLSS (1995-96 to 2003-2004), inequality has increased as evidenced by the Gini coefficient having increased from 34.2% to 41.4%.

235. The Project aims to raise incomes of small and medium farmers by fostering the production, value addition and marketing of HVC, which give a greater return per unit of land than staple crops. The Project includes pro-poor design features which promotes the inclusion in Project activities and benefits of women, and disadvantaged groups (DAG) such as marginalized and small indigenous farmers. In this context, a gender action plan (GAP), indigenous peoples assessment and measures (IPAM) and a poverty reduction and social strategy plan have been included in the Project design and are discussed in sections V.C.2 (Gender Issues) and V.C.3 (IPAM) hereunder, and provided in more detail in Appendixes 12 (GAP) and 15 (IPAM). Incremental farm incomes resulting from participation in the Project are expected to be significant. Incremental farm incomes resulting from participation in the Project are expected to be significant. Farm incomes for small farmers in the terai and hills are expected to increase by 127% and 260% respectively, and by about three times the level of without project incomes for medium farmers in the terai and hills. Increases are more significant for medium farmers resulting from the expectation that they will devote a greater area to HVCs than small farmers.

236. A recent socioeconomic survey undertaken in the MWDR and FWDR73 has indicated that a majority of farm households (65%) were food deficient from their own production and had insufficient land to increase production of staple crops. In this context the Project, by raising farmers’ disposable cash incomes, will contribute to ensuring food security by enhancing the ability of farmers to purchase a greater variety of nutritious foodstuffs. Furthermore, the Project will through fostering regional economic growth will create employment opportunities particularly for the landless, marginal farmers, disadvantaged groups (DAG) and indigenous peoples.

237. A summary of the poverty reduction and social strategy (SPRSS) is provided in Appendix 11.

2. Gender Issues

238. A significant number of women participate in the agriculture sector including the High Value Commodity (HVC) sub sector; however, the contribution of women often remains unrecognized. In rural Nepal institutional and structural barriers exist to exclude women from playing a full and equitable role in the agricultural sector and in society in general. Women are subjected to the dominance of patriarchal values including the denial of rights to landed property, despite the 2007 Interim Constitution and the amended law of 2006 which gave women equal rights over ancestral lands. A socio-economic survey conducted for the PRISM preparation and design indicated that only 11% of women had their land registered in their own names. Therefore, rural women have difficulty in accessing loans from formal banking institutions that require pledging land as security. The division of labor by gender within households is also inequitable as women typically shoulder more responsibility than men, particularly regarding household chores, looking after children, and on-farm and off-farm activities.

- See section V.A above.
- ADB, March 2010, Socio-economic and Gender Analysis Report, Consolidated and Management Services Nepal (P) Ltd
239. Participation in public sphere activities is traditionally controlled and monopolized by men and women remain largely excluded, particularly as they are often barred from leaving the home. Another consequence of confining women to the home is that they are unable to participate in the capacity-building exercises and other training courses organized and offered by development organizations.

240. Major household decisions are made principally by men, and this is the case in the proposed Project area, as elsewhere of rural Nepal. The socio-economic survey conducted for PRISM indicated that the majority of decisions on the purchase of agricultural inputs and on the sale of the agricultural products are made exclusively by men, and the income accrued from the sale of agricultural and livestock products are also controlled by men. Furthermore, discrimination by buyers has been reported for agricultural products offered for sale directly by women. The mainstream participation of women in HVC production, value addition and marketing is limited for the reasons mentioned above, and this situation is exacerbated by the lack of women extension agents who can work more effectively with women farmers.

241. The Project will have a positive impact on gender equity and contribute to mainstreaming women’s participation in all Project activities through the comprehensive activities included in the gender action plan (GAP) provided under Appendix 12. Women will improve their knowledge and capacity to undertake HVC production, post harvest value addition and marketing activities through institutional and field based training courses. Lead women farmers will be trained by the Project in agribusiness entrepreneurship and women members of women-only and mixed farmer groups and agricultural cooperatives will develop their capacity and skills for resource mobilization, finance, bookkeeping, office management, and negotiating and bargaining with potential HVC buyers. The Project will facilitate women's participation in the decision-making activities of groups and cooperatives. Some 100 women cooperative staff will be trained during the implementation of the Project, and 7,500 women farmers will be trained in leadership. The number of women community agricultural and social mobilizers (CASMs) will be increased to at least 50% of the total employed to facilitate the gender mainstreaming activities of the project under the GAP.

242. The GAP takes into account the lessons on gender mainstreaming learned from the CDP, 2001-2007. The goal of the GAP is to increase women's effective participation in the HVC sub sector and thereby contribute towards their mainstreaming in agricultural enterprises, and promote their economic and social empowerment.

3. Indigenous Peoples Assessment and Measures

243. Two major ethnic indigenous peoples inhabit the project area, viz (i) the Tharus in the terai (plains) districts, and (ii) Magars in the hill districts, and constituting nearly 30% of the total population in the MWDR and 18.34% in the FWDR, respectively. Magars are numerically predominant in the selected project districts in MWDR whereas Tharus are present in the terai districts of both the MWDR and FWDR.

244. The project preparation and design, through meaningful consultation and informed participation with indigenous peoples, has assessed their situation and included measures to ensure their involvement in Project interventions and activities. Appendix 15 provides details of the Indigenous Peoples Assessment and Measures (IPAM). The ongoing consultation and participation of indigenous peoples and the monitoring of their inclusion in the Project is envisaged during implementation.

245. The PMU will establish a grievance redress mechanism through each Project district DADO to provide a forum for indigenous farmers to ensure their meaningful inclusion in Project activities. This will be available to poor and marginalized farmers such as the freed Kamiayas (bonded laborers) in the terai who will have an opportunity to be included in
Project activities. DADOs, with the support of indigenous peoples’ organizations, will ensure that the indigenous poor farmers have also been mobilized and their participation in the project is consistently encouraged during implementation. Capacity building and awareness raising on indigenous peoples’ rights and their social inclusion will be provided by the Project to Government staff at central, regional and district level, and to advisory service providers (ASPs).

4. **Involuntary Resettlement Assessment and Measures**

246. The Project will support value chain investment (VCI) interventions which include some infrastructure development and construction, mainly collection centers, agro-processing units and cold stores. These are not expected to entail adverse social and resettlement impacts. The Project will work with farmers applying for VCI technical and financial assistance on their own or leased land. Although small scale construction may take place, it will mostly be on Government land, with existing rights of way, or lands owned by the beneficiaries themselves. However in some cases limited land acquisition may be necessary. On the finalization of a survey for VCI infrastructure support, a detailed social impact assessment for possible private land acquisition including a census survey will have to be carried out to provide results that are disaggregated by gender, vulnerability, and other social groupings. Although not expected to be significant, if appropriate, a short resettlement and land acquisition plan will be prepared and implemented in close consultation with the stakeholders. The consultation process will involve focus group discussions and group meetings involving those most likely to be affected. A grievances redress committee (GRC) will be constituted for each VCI proposal involving resettlement. Resettlement and land acquisition, if necessary, will be implemented in accordance with ADB’s policy on involuntary resettlement and the GON’s Land Acquisition and Resettlement Policy. Involuntary Resettlement Assessment and Measures are provided in Appendix 14.

5. **Environmental Assessment and Measures**

247. The proposed PRISM will fund a wide range of activities that are likely to have some environmental implications. About 300 PPAs will be selected in the Project area covering about 7,500 ha in the terai and Inner valley and 22,500 ha in the hills. It is estimated that about 13,500 ha, or 60% of the total farming area in the hills are on sloping land, which could be ecologically hazardous due to increasing levels of soil erosion and top soil removal.

248. The major environmental concerns during Project implementation will be climate change, devegetation and forest depletion, declining soil fertility, soil erosion and top soil removal, and agricultural pollutants through injudicious use of pesticides, fertilizers and other agro-chemicals. More intense “cold waves” and dense fog have affected winter vegetables in the terai plains and inner valleys. Similarly, increasing temperatures in early spring have affected wheat crops while the shift in rainfall patterns and the decrease in the number of rainy days has caused delay in planting summer crops in rain-fed areas. There are possibilities of adverse environmental impacts, if the wide range of Project activities and investments are not properly planned and implemented. In general, the environmental impacts of most individual activities will be reversible and small, but the cumulative impact of Project activities in certain areas could be significant. The major impacts identified are (i) effects of pesticides on physical and biological resources, (ii) soil degradation and productivity decline due to intensive farming and cropping on sloping/ecologically hazardous land, (iii) reduced germination, plant growth and crop production due to seed contamination and low quality seeds, (iv) extermination of local adapted, hardy and drought tolerant species due to negligence and the introduction of new exotic species, (v) the increased possibility of water borne diseases due to stagnant water in pond fisheries, effects of post harvest handling centres: washing, sorting, grading and packaging facilities, cool/dry storage facilities, (vi) pressure on forest resources for firewood used for processing and packaging
materials, and (vii) pollution due to agricultural wastes generated during production, post harvest handling, processing and marketing.

249. The following mitigation measures are recommended.

   a. Environmental Screening and Categorization

250. All Project investments to be financed under PRISM will be screened against the set environmental criteria, which will determine the appropriate extent and type of environmental assessment required. Proposals will be categorized into four different groups according to the nature and magnitude of impacts. Category A’ proposals will be rejected, Category B’ would require an environmental impact (EIA) study, Category C’ would require an initial environmental examination (IEE) and Category D’ proposals will not require any environmental assessment but “good practices” will be adopted during their implementation.

   b. Environment Assessment and Review Procedure

251. Environmental assessment will follow the GON’s Environment Protection Act (EPA) and Environment Protection Regulations (EPR), 1997 which authorizes the MOAC to issue the environmental clearance for IEE projects. MOAC has to review and revise the threshold for IEE proposals and the work schedule format for the IEE report.

   c. Climate Change Measures

252. Measures recommended include adaptive agricultural practices, cultivation of drought and temperature tolerant cultivars, sustainable land use practices particularly on hill slopes and terraces, soil enhancement and rebuilding and farmer’s awareness on increased frequency and severity of adverse weather events and their effect on crops.

   d. General Mitigation Measures

253. Appropriate mitigation measures will be implemented which will reduce potential adverse impacts due to the implementation of the proposed project’s subcomponents and their activities on physical and biological environment at acceptable level.

   e. Environmental Awareness and Capacity Building

254. The Project will support environmental awareness and the capacity building of participating farmers and other stakeholders in the potential PPAs, as well as environmental and climate change orientation and capacity building of organizations responsible for project implementation.

   f. Environmental Monitoring

255. A monitoring plan will be developed and will include the types of monitoring, the parameters to be monitored, indicators, methods to be used, and schedules for monitoring activities.

256. Further details regarding Environmental Assessment and Measures are provided in Appendix 13, and in the supplementary appendixes which are available on request.

6. Post Conflict Sensitive Approach

257. Although the 10-year conflict ended in 2006, the country has still not recovered from the disruption to normal life and economic development remains low, with continuing social pressures and instability, particularly in the rural areas. Therefore new projects need to take
a sensitive approach to security, formal decision making and implementation structures, informal peace building structures, socio-economic issues, and geographic issues. In this context a post conflict sensitive approach and opportunities peace filter matrix, in line with the latest ADB guidelines, for the Project is provided in Appendix 16.

7. **Sustainability**

258. The Project will add impetus to the number of farmers growing a range of HVCs and with an increase in crop area, attract more and better quality input service providers and generate more commercial interest and involvement in HVCs. This will have significant multiplier effects post project in terms of input supplies, adoption of more advanced technologies, higher production levels, and broader processing and marketing opportunities. The establishment of demonstration plots and the holding of farmer field days will also influence and benefit other farmers who are not direct trainees or recipients of financial support under the Project thus adding further stimulus to HVC area expansion. The higher farm incomes generated by HVCs will ensure they continue to be grown. Growing consumer demand will ensure satisfactory prices in the face of increased production. It is recommended that the Government's exit strategy includes both adequate budgetary support to the Project and the charging of fees to beneficiaries of extension and marketing information services. The Project's financing plan adopts, as a principle, the scaling down of financial support, over the lifetime of the Project, to beneficiaries particularly in the context of value chain investments to ensure that agribusiness enterprises become self financing.

D. **Risks and Monitoring Measures**

259. A key assumption is that post conflict political stability continues with a constitutional settlement achieved that is acceptable to the majority of the country’s population.

260. Another key assumption is that the Government will continue to support agriculture development, and allocate an adequate budget to the DOA to allow effective capacity and operation in the Project area development regions. It is assumed that Government will maintain and improve the enabling environment, regarding the essential involvement of the private sector in agricultural commercialization. In this context, the Project's proposed engagement of the Agro Enterprise Center (AEC) of the Federation of Nepal Chambers of Commerce (FNCCI) as a lead implementing agency of Component 2, and the proposed use of advisory service providers (ASPs) will enhance private sector participation.

261. Another assumption is that rural infrastructure in the MWDR and FWDR will be developed, improved and sustained to support HVC production and market access. The NAP gives special priority to developing north–south highways and feeder roads to develop pockets of high value agricultural products. This policy should be maintained as it will contribute greatly to opening markets and social access for farmers in the MWDR and the FWDR. ADB is continuing to support rural infrastructure development through its (i) Rural Reconstruction and Rehabilitation Sector Development Project, (ii) Decentralized Rural Infrastructure and Livelihood Project, and (iii) Community Managed Irrigated Agriculture Sector Project.

262. Natural disasters and the overall impact of climate change are a major risk and based on the present level of studies, Nepal has identified agriculture, water resources including GLOF (Glacier Lake Outbursts Floods), forestry and health as the sectors that will likely be affected by climate change. In view of this, Nepal urgently needs to expand climate resilience activities to minimize the impacts of climate change on people and resources. In this context,

74 ADB has included a second stage to this project in its CPS 2010 -2012
Nepal is participating in the Pilot Programme for Climate Resilience (PPCR) program launched by the World Bank (with ADB as one of its partners) which is an opportunity to take early actions to address the ongoing and emerging impacts of climate change.

263. It is assumed that food security in staple crops for small and medium farm households in the Project area will be maintained and improved. ADB has included the Increasing Food Productivity and Supply Project in its indicative support pipeline in CPS 2010–2012.

264. Delays to the start of project implementation have been common in Nepal. A specific risk for project implementation is the lack of expediency in document processing and approval between line agencies. To minimize such risk in implementation, the Project will best utilize the in-house resources of line agencies to stimulate early ownership of the Project and to make efficient decisions to deliver support to farmers. Furthermore, the Project recommends the early appointment of the consultancy team, before Project implementation commences.

265. A risk assessment and management plan is provided under Appendix 19. 

VI. ASSURANCES AND CONDITIONS

A. Specific Assurances

In addition to the standard assurances, the Government will be requested to give the following assurances, which will be incorporated in the legal documents:

(i) The Government will ensure that throughout the Project implementation, the PMU and PIUs are adequately staffed with competent full time personnel, according to the staffing schedule agreed with the ADB.

(ii) The Government will establish the PSC to be chaired by the Secretary, MOAC. The PSC will comprise representatives from Government and the private sector.

(iii) The Government will ensure that adequate financing is made available in DOA's annual budget for the operation of the PMU, PIUs, DOA's field resource centers, and participating DADOs and ASPs throughout project implementation.

(iv) The Government will not plan or grant any debt amnesty, or forgive loan repayment obligations of borrowers under the Project's investment funds.

(v) The Government will ensure that the double cabin pickup trucks to be funded by the Project are under the control of the DADOs and used exclusively for PPA field activities.

(vi) The Government will ensure the implementation of the Project's gender action plan (GAP) throughout the Project area.

(vii) The Government will ensure the implementation of the Project's indigenous people's assessment and measures and involuntary resettlement assessment and measures.

B. Conditions for Grant Effectiveness

266. Prior to grant effectiveness, the following conditions need to be met: (i) the Project Director will have been appointed, and (ii) the PMU and the two PIUs will have been set up and made operational in a manner satisfactory to the ADB.

C. Conditions of Disbursement

267. Withdrawals will not be made from the imprest account for the fund support component of the Project until the Independent Appraisal Panel (IAP) for the selection of the
participating ASPs, and approval of fund applications has been established with five members, approved by ADB.
## DESIGN AND MONITORING FRAMEWORK

### Design Summary

<table>
<thead>
<tr>
<th>Impact</th>
<th>Performance Targets and Indicators with Baselines</th>
<th>Data Sources and Reporting Mechanisms</th>
<th>Assumptions and Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm incomes of small and medium farmers in the project area increased</td>
<td>• Farm incomes of small and medium farmers increased by at least 20% in real terms by 2017 over 2011 baseline level</td>
<td>• Project performance monitoring system (PPMS) &lt;br&gt; • Project completion review (PCR) &lt;br&gt; • CBS surveys on: (i) Nepal living standards, (ii) Poverty trends in Nepal, &amp; (iii) population by caste, ethnic group and sex &lt;br&gt; • CBS annual Statistical Pocket Books</td>
<td>• Political stability continues &lt;br&gt; • Government continues to support agriculture development in Project area development regions through sufficient budget allocation to MOAC line agencies &lt;br&gt; • Government continues support to improving rural infrastructure in Project area</td>
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### Outcome

Income from high value commodities (HVCs) for small and medium farmers, including women and DAG/IPs, in the project area increased

<table>
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<tr>
<th>Performance Indicators with Baselines</th>
<th>Data Sources and Reporting Mechanisms</th>
<th>Assumptions and Risks</th>
</tr>
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<tbody>
<tr>
<td>Income from HVC production and marketing of small and medium farmers, comprising 50% women and 10% DAG/IPs, increased by at least 20% in real terms, against over 2011 baseline level, by 2017</td>
<td>• PPA socio-economic profile submitted with application for project support &lt;br&gt; • Government statistics on agricultural production and productivity, trade and household incomes; &lt;br&gt; • Annual surveys of PPAs &lt;br&gt; • PPMS &lt;br&gt; • PCR</td>
<td>• Government will continue to promote a private sector friendly, enabling environment to allow effective private sector agribusiness development and participation in Project implementation</td>
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### Outputs

1. Production of market oriented high value commodities (HVC) improved

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<thead>
<tr>
<th>Performance Indicators with Baselines</th>
<th>Data Sources and Reporting Mechanisms</th>
<th>Assumptions and Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 75% of farmers in the Project area PPAs, of whom 50% are women and 10% are DAG/IPs, producing HVCs by 2016, against the baseline &lt;br&gt; • Returns per unit of land from HVC production increased by 30% in 2015 from the baseline</td>
<td>• PPA socio-economic profile submitted with application for project support &lt;br&gt; • Government statistics on agricultural production and productivity, trade and household incomes; &lt;br&gt; • Annual surveys of PPAs &lt;br&gt; • PPMS &lt;br&gt; • PCR &lt;br&gt; • CBS annual statistical data &lt;br&gt; • MOAC Agribusiness and Statistics Division &lt;br&gt; • Information on Nepalese agriculture</td>
<td>• Food security in staple crops for small and medium farm households is maintained and improved</td>
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1.1. Farmer awareness, knowledge and skills in HVC production improved

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<td>• Farmers, including 50% women and 10% DAG/IPs, oriented and trained through 100 farm demonstrations, 1,800 farmer field days, and 150 study tours conducted by 2014 &lt;br&gt; • Lead farmers trained through 60 lead farmer training programs, of which 17 courses are for women headed households, by 2014</td>
<td>• Reports of ASPs and CASMs on the operation of farm demonstrations and training activities, disaggregated by gender</td>
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<tr>
<td>Design Summary</td>
<td>Performance Targets and Indicators with Baselines</td>
<td>Data Sources and Reporting Mechanisms</td>
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| **1.2. Agricultural service delivery improved and enhanced** | - Number of ASPs engaged from government and non-government agencies in the ratio of 70:30  
  - 300 CASMs and 15 CASM supervisors, comprising 50% women and 10% DAG/IPs, recruited, trained and mobilized  
  - 17 CASCs established and 17 DADOs enabled to deliver agricultural services to the Project area PPAs | - Applications of FGs for Project support  
  - Project personnel data  
  - PPMS | Assumptions |
| **1.3. Farm technology access increased for Project area farmers** | - Farmers, incl. 35% women and 10% DAG/IPs, have invested in at least 100 operational farm technology (e.g., rainwater harvesting tanks, micro irrigation, mechanization, CEAT) by 2015  
  - Farmers, including women and DAG/IPs, oriented and trained through farm demonstrations: i.e., 2,300 ha on climate change adaptive measures; 490 ha. on drought resistant new crop varieties; 910 ha on forage plants on terraces; and 915 ha on soil management, by 2016 | - Applications of FGs for Project support  
  - Annual surveys under PPMS | |
| **2. Farmer participation in the HVC value chain strengthened** | - Post harvest losses reduced by 10% by 2016, against a baseline established in 2011  
  - Share of HVC wholesale market and retail prices received by farmers increased by 10% by 2016 compared with baseline | - PPA socio-economic profile submitted with application for project support  
  - Project progress reports based on PPMS indicators  
  - PCR  
  - Value chain analyses | |
| **2.1 Awareness building and training in post harvest technology, value addition and marketing** | - FGs comprising 50% women and 10% DAG/IPs as members, in at least 200 PPAs, oriented and trained in post harvest technology through 300 agribusiness courses by 2015  
  - At least 10 cooperatives trained in management, negotiation, and reporting | - Project progress reports based on PPMS indicators | |
| **2.2 HVC market linkages and value addition increased** | - At least 10 cooperatives or well organized farmers' groups have established direct linkages with wholesaler, retailers, or large traders through seasonal contracts or | - PPA socio-economic profile submitted with application for project support  
  - Project progress reports based on PPMS indicators | |
## Design Summary

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<tr>
<td>• contract farming by 2016</td>
<td>• Project progress reports based on PPMS indicators</td>
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<tr>
<td>2.3 AMIS established and operational</td>
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<td>• 22 new AMIS price collection and information dissemination centers established and operational by 2012, and self financing by 2016</td>
<td></td>
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<tr>
<td>2.4 Post-harvest value chain investments established</td>
<td>• Project progress reports based on PPMS indicators</td>
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<tr>
<td>• At least 75 HVC collection and marketing centers being managed by cooperatives or well organized FGs operational by 2016, with 35% of the centers having women serving in management committees</td>
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<td>• At least 30 post-harvest VCIIs utilizing alternative energy systems operational by 2016</td>
<td></td>
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<tr>
<td>3. Project management support</td>
<td>• Mid term review</td>
<td>• Project completion reports</td>
</tr>
<tr>
<td>• Project management arrangements operational within one month of grant effectiveness</td>
<td></td>
<td></td>
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<tr>
<td>• Project implementation undertaken according to output targets and Project implementation schedule</td>
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## Activities with Milestones

<table>
<thead>
<tr>
<th>Activities with Milestones</th>
<th>Inputs</th>
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<tbody>
<tr>
<td>1.1 Build awareness of HVC potential among advisory service providers (ASPs) and farmers</td>
<td>Item</td>
</tr>
<tr>
<td>1.2 Establish HVC demonstration plots</td>
<td>Amount ($ million)</td>
</tr>
<tr>
<td>1.3 Train farmers in HVC production practices</td>
<td>Financing</td>
</tr>
<tr>
<td>1.4 Orient key ASP staff and lead farmers to HVC markets in region</td>
<td>• ADB: $20.1 million equivalent (75.1%)</td>
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<tr>
<td>1.5 Identify, test and disseminate HVC farm technologies</td>
<td>• Government of Nepal: $1.32 million equivalent (4.9%)</td>
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<tr>
<td>1.6 Establish mechanism for addressing HVC production problems</td>
<td>• Beneficiaries: $5.34 million equivalent (19.9%)</td>
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<tr>
<td>1.7 Promote and support establishment of farmer group (FG) seed/planting material nurseries</td>
<td>Consulting Services</td>
</tr>
<tr>
<td>1.8 Support FGs in access to HVC inputs</td>
<td>• International: 6 person-months</td>
</tr>
<tr>
<td>1.9 Support FGs in access to farm technology investments</td>
<td>• National: 104 person-months</td>
</tr>
<tr>
<td>2.1 Build awareness of value addition potential among ASPs and farmers</td>
<td></td>
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<tr>
<td>2.2 Promote and support FG formation for enhanced value chain participation</td>
<td></td>
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<tr>
<td>2.3 Train farmers in post-harvest handling and marketing techniques</td>
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<tr>
<td>2.4 Expand outreach of agricultural market information systems (AMIS)</td>
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<tr>
<td>2.5 Support post-harvest VCI by FGs and cooperatives</td>
<td></td>
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<tr>
<td>2.6 Identify and pilot innovative production-market linkages</td>
<td></td>
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<tr>
<td>2.7 VCI fund established</td>
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<tr>
<td>3.1 Establish and implement project management arrangements including structure and procedures, staff recruitment</td>
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<tr>
<td>3.2 Undertake GIS survey on agricultural resources and potential project area by DOA</td>
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<tr>
<td>3.3 Select and train ASPs in HVC production, post-harvest handling and marketing technology, and awareness of gender, indigenous peoples, and climate change issues</td>
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<tr>
<td>3.4 Conduct overall project promotion and awareness campaign</td>
<td></td>
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<tr>
<td>3.5 Establish and operate PPMS</td>
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<tr>
<td>3.6 Train staff in ADB project procedures</td>
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<td>3.7 Procure and operate vehicles and equipment</td>
<td></td>
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<td>3.8 Prepare and submit project accounts and progress reports</td>
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</tbody>
</table>
### Activities with Milestones

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<tr>
<td>3.9</td>
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Abbreviations – AEC: Agro - Enterprise Center; AMIS: Agricultural Marketing Information System; ARCs: Agricultural Resource Centers; ASPs: Advisory Service Providers; CASCs: Community Agricultural Service Centers; CASMs: Community Agricultural and Social Mobilizers; CBS: Central Bureau of Statistics; CEAT: controlled environment agricultural technology (e.g., greenhouses); GIS: Geographic Information System; DADOs: District Agricultural Development Offices; DOA: Department of Agriculture; FGs: Farmer Groups; HVC: High Value Commodities; MOAC: Ministry of Agriculture and Cooperatives; PCR: Project Completion Report; PPMS: Project Performance and Management System; VCI: Value Chain Investments