NAP-Agriculture Project:

Integrating Agriculture in National Adaptation Plans

(UNFA/GLO/616/UND)

Nepal

Inception Report

Ministry of Agricultural Development,

United Nations Development Program and

Food and Agriculture Organization of the United Nations

03 October 2016

Kathmandu, Nepal

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Executive Summary

Country:	Nepal
Project Title:	Supporting Nepal to Integrate Agriculture Sectors into National Adaptation Plans (NAPs)
Project Objective:	Integrating climate change concerns (as they affect agricultural sector-based livelihoods) into associated national and sectoral planning and budgeting processes.
Donor:	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) of the Federal Republic of Germany via International Climate Initiative (ICI)
Project Symbol:	UNFA/GLO/616/UND
Project signed:	BMUB with UNDP 05 December 2014 GoN with FAO 21 June 2016
Duration:	36 months
Starting Date:	01 January 2016
Completion Date:	31 December 2018
Executing Entity:	United Nations Development Programme
Implementing Entities:	Food and Agriculture Organization of United Nations (lead implementing agency) and United Nations Development Programme (responsible agency) in Nepal in collaboration with the Ministry of Agricultural Development
Total Project budget:	USD 700, 000 FAO USD 420, 000 UNDP USD 280, 000 Government contribution in-kind

Many developing countries and particularly LDCs like Nepal is facing high impacts of climate change on development goals, especially those concerning poverty reduction, exclusion and inequality. This situation demands government to integrate requirements for climate risk management into existing planning and budgeting processes in a comprehensive and sustained manner. Given the capacity gaps and lack of understanding of climate change impacts and adaptation needs, planning and budgeting for climate change is rather done on ad-hoc basis. The project seeks to address the gaps by enhancing the understanding of climate change impacts on agriculture sector of Nepal and integrate climate change risk management into the planning and budgeting processes within the agriculture sector at all levels. The project aims to build technical capacities of ministries for agricultural development (MoAD/ MoLD) and other relevant ministries to integrate climate change concerns into relevant national and sectoral plans and budgets. The project is in line with the national development priorities relating to agriculture and climate change in Nepal as articulated in National Adaptation Programme of Action (NAPA), National Agriculture Sector Development Priority (NASDP), Priority Framework of Action (2011–2020) on Climate Change Adaptation and Disaster Risk Management of the Ministry of Agricultural Development (MOAD) and Agriculture Development Strategy (2015). The project will be jointly implemented by FAO and UNDP under the guidance of the PSC formed in MoAD and contribute to national adaptation planning process (NAP) initiated by Ministry of Population and Environment (MoPE).

Acronyms

ACD	Assistant Country Director
ADS	Agriculture Development strategy
AFS	Agriculture and Food Security
AR5	Fifth Assessment Report
BRH	Bangkok Regional Hub
BUMB	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
CBA	Cost Benefit Analysis
CC/ CCA	Climate Change/ Climate Change Adaptation
CCPO	Climate Change Project Officer
CDKN	Climate and Development Knowledge Network
CDRMP	Comprehensive Disaster Risk Management Program
CFGORRP	Community-Based Flood and Glacial Lake Outburst Risk Reduction Project
CPEIR	Climate Public Expenditure and Institutional Review
DADO	District Agriculture Development Office
DDC	District Development Committee
DFID	Department for International Development (UK)
DHM	Department of Hydro Meteorology
DLSO	District Livestock Service Office
DoA	Department of Agriculture
DoLS	Department of Livestock Services
DPs	Development Partners
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EBA	Ecosystem Based Adaptation
ECCA	Economics of Climate Change Adaptation
EFLGP	Environment Friendly Local Governance Programme
EU	European Union
EV	Economic Valuation
FAO	Food and Agriculture Organization
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GLOFs	Glacial Lake Out-brust Flood
GoN	Government of Nepal
GSP	Global Support Programme
HDI	Human Development Index
HDR	Human Development Report
HPI	Human Poverty Index
HQ	Head Quarter
IA	Investment Appraisal
ICI	International Climate Initiative
ICIMOD	International Centre for Mountain Development
IIED	International Institute for Environment and Development
IECCD	International Economic Cooperation Coordination Division
INGO	International Non-Governmental Organisation
IPCC	Intergovernmental Panel for Climate Change
LAPA	Local Adaptation Plan of Action
LDC	Least Developed Country
LDCF	Least Developed Country Fund

LEG	Least Developed Countries Expert Group
LPI	Labour Productivity Index
LTO	Lead Technical Officer
M&E	Monitoring and Evaluation
MoAD	Ministry of Agricultural Development
MoE	Ministry of Environment
MoF	Ministry of Finance
MoFALD	Ministry of Federal Affairs and Local Development
MoLD	Ministry of Livestock Development
MoPE	Ministry of Population and Environment
MoSTE	Ministry of Science, Technology and Environment (before MoPE in Nepal)
MTEF	Medium Term Expenditure Framework
NAP	National Adaptation Plan
NAP_Ag	Integrating Agriculture into National Adaptation Plan (project)
NAPA	National Adaptation Programme of Action
NARC	Nepal Agriculture Research Council
NASDP	National Agriculture Sector Development Priority
NCCSP	Nepal Climate Change Support Programme
NEFEJ	Nepal Federation of Environmental Journalists
NFP	National Focal Person
NGO	Non-governmental Organisation
NPC	National Project Coordinator
N/PMU	National Project Management Unit
PFA	Priority Framework of Action
PPCR	Pilot Project on Climate Resilience
PSC	Project Steering Committee
PTT	Project Technical Taskforce
RA	Risk Assessment
RCP	Representative Concentration Pathway
SBI	Subsidiary Body for Investment
SBSTA	Subsidiary Body for Scientific and Technological Advice
SCCF	Special Climate Change Fund
SDG	Sustainable Development Goal
SME	Small and Micro Enterprise
SSC	South-South Cooperation
SSP	Shared Socioeconomic-reference Pathway
TOR	Terms of Reference
TWG	Thematic Working Group
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
V/RA	Vulnerability and Risk Assessment
VA	Vulnerability Assessment
VDC	Village Development Committee
WFP	World Food Programme
WWF	World Wildlife Fund

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February 03, 2017

Dear Dr. Somsak Pippopinyo,

Sub: Approval of the Inception Report of UNFA/GLO/616/UND

This is in reference to your letter dated 17 January 2017 regarding clearance on the inception report of the project "Supporting Developing Countries to Integrate the Agricultural Sector into National Adaptation Plans (NAPs), Nepal component (UNFA/GLO/616/UND)".

I have pleasure informing you on behalf of the Ministry of Agricultural Development that the Government of Nepal (Secretary) on the date 02 February 2017 has approved the inception report including Mugu, Dailekh and Bardiya as pilot districts of the project.

Thanking you for your cooperation and support.

Sincerely Yours,

Parashu Ram Adhikari
Senior Plant Protection Officer

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1. Introduction

1.1. Purpose of the Report

The inception of the project "Supporting Nepal to Integrate Agricultural Sectors into National Adaptation Plans (NAPs)" was held on the 3rdof October in 2016 at Yak and Yeti Hotel in Kathmandu. Nepal is one of the eleven countries being supported by Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) of the Federal Republic of Germany via International Climate Initiative (ICI). The project is supporting the ministries of agriculture (MoAD) and livestock development (MoLD) and other relevant ministries to integrate agriculture sector(s) into the national NAP process and climate change adaptation into the sector planning and budgeting processes. The project is being implemented by FAO and UNDP upon guidance of inter-ministerial Project Steering Committee (PSC) of Nepal government.

The inception report complements the project document with the outcomes of the pre-inception activities, the half-day inception meeting and post inception consultations, analyses and meetings with the project stakeholders. The report is organized in four sections. Section 1 provides introduction of the project in global ground and description of sector background Section 2 covers institutional context and on-going programs in the country. Section 3, elaborates the project implementation plan in terms of approach and section 4 focuses on activities organization and deliveries.

1.2. Background on the NAP-Ag Program

National and sectoral planning processes are crucial to identify development priorities and ensure budgeting and implementation of activities. Given adverse effects of climate change on development goals, especially those concerning poverty reduction, exclusion and inequality, countries have begun to integrate climate risk management into existing planning and budgeting processes in the hope of advancing integrated solutions. The project is being implemented on grounds many (if not all) developing countries have not fully integrated climate change risks and opportunities in a comprehensive and sustained manner, and in particular at sector levels.

The global project on 'supporting developing countries to integrate agricultural sector(s) into national adaptation plans (NAPs) is developed in view of the disproportionate impacts of climate change that LDCs such as Nepal are facing with higher dependence in agriculture for their economy and livelihood, and in line to the NAP process established under the Cancun Adaptation Framework to support them in mainstreaming climate change into agriculture sector planning. This project responds to the UNFCCC Conclusions (FCCC/ SBI/ 2013/ L.10/ Add.1 and SBI/ 2014/ L.19) inviting UN organizations, specialized agencies and bilateral organizations to enhance financial and technical support in the NAP process of developing countries and SBSTA conclusions on adaptation issues related to agriculture (SBSTA/ 2014/ L.14) emphasizing the importance of identifying and assessing agricultural practices and

technologies to enhance productivity in a sustainable manner, as well as risks and vulnerability of such systems to climate change scenarios at regional, national and local levels.

Climate change impacts on agriculture (including livestock, fisheries, aquaculture, forestry and rural development) are much pressing because of its being major economic driver and substantial knowledge gaps regarding economic impacts of climate change, the costs and benefits of different adaptation options, evidence-based results of the options and underlying drivers of adaptation. The availability of technical information on current and emerging risks, vulnerabilities and adaptation-specific requirements for the agriculture sectors in context of ecosystems and landscapes are insufficient.

The goal of this project is to integrate climate change concerns related to agriculture-based livelihoods within existing national planning and budgeting processes in eleven countries[1] with supports in building technical capacities to integrate key adaptation requirements for the agriculture sectors into sectoral and cross-sectoral planning and budgeting processes.

The global project proposes supporting integration of agriculture-based livelihood adaptation concerns into medium- to long-term development planning through -

- institutional coordination mechanisms that promotes inter-sectoral and national-subnational coordination and cross-sector approach among multiple ministries,
- technical capacity development for adaptation planning in the agricultural sectors specifically to collect and assess climate information (climate vulnerability analysis), apply policy guidance on CCA planning and perform necessary analyses (cost-benefit) to inform sector based adaptation planning and budgeting,
- access to adaptation finance that requires innovation to diversify/ attract sources of funding, and
- access to information and knowledge to support decision-making that explicitly incorporates climate change concerns of the agriculture sector into national and sector specific development planning and budgeting that is cost-effective and socially inclusive

In Nepal, the project is strategized to advance integration of climate change risks and opportunities, as they affect agricultural sector-based livelihoods, into associated national and sector planning and budgeting processes, and seeks to achieve its goal through interventions (adhered to NAP guidance) for four major outcomes namely –

- **strengthening technical capacities and institutions on NAPs** to mainstream climate change risks and opportunities into the agriculture sector in Nepal.
- **Developing integrated roadmaps for NAPs** to address priorities of the agriculture sector focused on Agriculture Development Strategy (ADS) of Nepal.
- **Improving evidence-based results for NAPs** through development and introduction of an impact monitoring framework for the agriculture sector that will generate evidence based results of adaptation options based on quasi-experimental design principles.
- **Promote advocacy and knowledge-sharing on NAPs** through within and across countries exchange of lessons on integrating climate change risks and adaptation

[1] namely Kenya, the Philippines, Thailand, Vietnam, Uruguay, Nepal, Uganda, Zambia Colombia, the Gambia, and Guatemala

measures into sectoral and national development plans and their relevance for ecosystem based adaptation.

The project has envisaged country-driven approach of its implementation guided by national priorities, circumstances, and on-going climate change initiatives such as NAPA outcomes and other projects in operation. The vision of this project is to arrive at a situation where decision makers are able to integrate climate change concerns (as they affect agricultural sector-based livelihoods) into associated national and sectoral planning and budgeting processes based on the four outcomes. The implementation of the project is foreseen to be gender responsive and participatory of comprehensive stakeholders.

2. Background

2.1. Climate change in Nepal

Nepal is a country with intensively varying physiography situated to the south of the Himalayan range between two large economies India and China holding 26.5 million population in 147,181 km^2 area. The area with intense altitudinal variations ranging from 70 to 8848m and intensely rugged topography within a very narrow range of latitudinal (26^{0}22'N to 30^{0}27') and longitudinal (80^{0}4'E to 88^{0}12'E) span that received intensive precipitations due to seasonal monsoon resulting in a wide variation in climate in regions from eastern to western terai and from flat plains in terai to high altitudinal Himalayan picks ranging from sub-humid tropical to alpine and tundra depicts austerity of climatic behaviour and agro-ecological situations there. Such an austerity has sustained multiethnic, multilingual, multi-religious and multicultural nature of the society and its economic poverty persisted mainly among peoples with subsistent agriculture. As a result, Nepal is identified as one of the most vulnerable countries to climate change, where agriculture is a major base of its economy and livelihood. Agriculture contributes there about 33 percent of its GDP, 13 percent of total trade, and employments to 67% economically active population. Despite being self-sufficient in staple food supply before nineties, the country for the last one and half decade is facing food deficits likely to further exacerbate with possible adverse impacts of climate change.

Snow-melting and glacier-retreats resulting in GLOFs; irregular and intensive precipitation resulting in drought, desertification, landslides, floods, flash flood, and changes in temperatures affecting soil moisture balance and agro-ecological environment are major concerns of changing climate to adversely affect agricultural systems and agrarian livelihoods in the country. Smallholder and marginal farmers with limited assets (low income level), weak institutional capacity and dependent on natural resources and rain-fed agriculture are seen most vulnerable. Therefore, the country has to build its capacity to help agrarian communities to adapt to possible impacts of climate change with adaptation options integrated into existing national and sectoral policies and programs.

Nepal is one of the most vulnerable countries in the world to climate change (Verisk Maplecroft, 2016[2]). Nepal is highly exposed to climate change because of its fragile landscape, poor socio-economic growth and increased weather variability and change (NCVST, 2009). The Climate Vulnerability Mapping for Nepal carried out during NAPA (Fig.1) shows Kathathmandu, Ramechhap, Udayapur, Lamjung, Mugu, Bhaktapur, Dolakha, Saptari and Jajarkot districts falling in order into very high vulnerable group, and Mahottari, Dhading, Taplejung, Siraha, Gorkha, Solukhumbu, Chitwan, Okhaldhunga, Achham, Manag, Dolpa, Kalikot, Khotang, Dhanusa, Dailekh, Parsa and Salyan to high vulnerable group (MoE, 2010a).

[2] Maplecroft identifies 32 'extreme risk' countries based on its Climate Change Vulnerability Risk Index, which evaluates the sensitivity of populations, the physical exposure of countries and governmental capacity to adapt to climate change over the next 30 years.

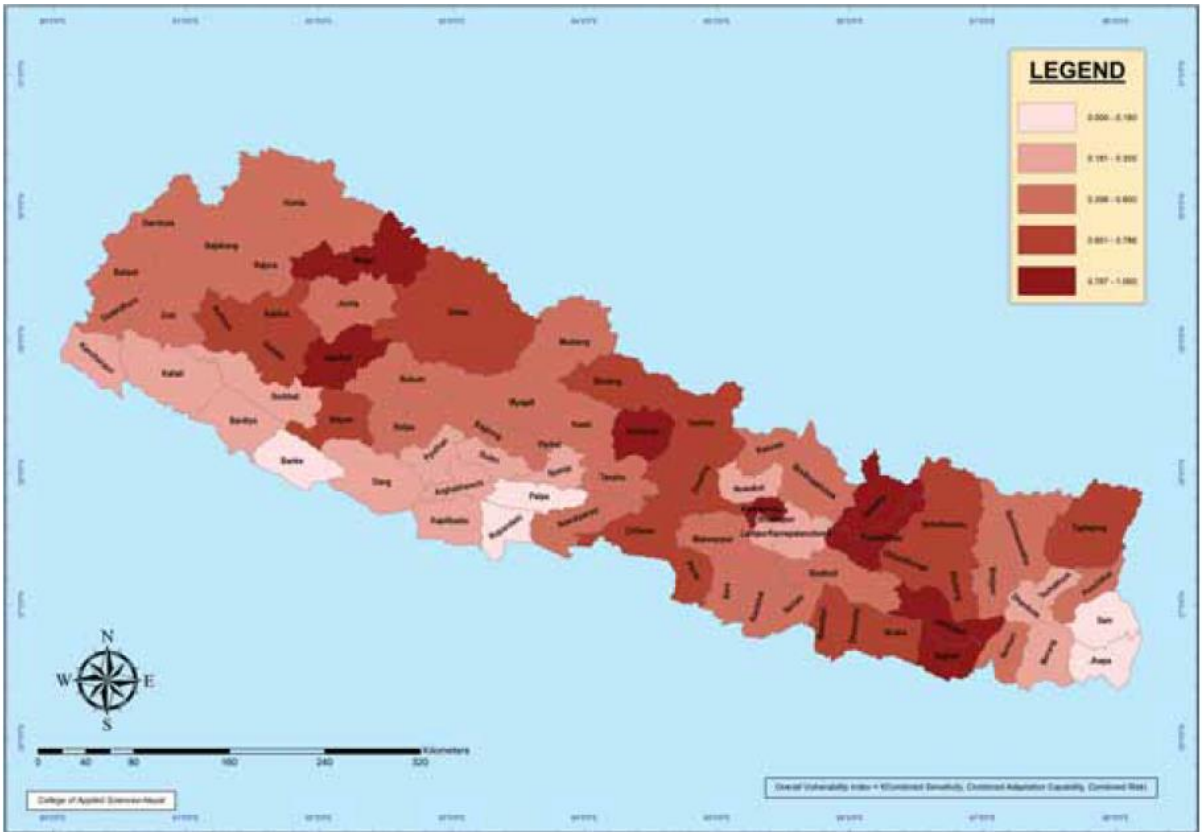

Fig. 1: Overall CC-vulnerability map of Nepal (MoE, 2010)

Overall trend in temperature:

The temperature in Nepal has increased rapidly at a much faster rate than the global average. The study carried out by Practical Action (2009) showed over a period of 30 years (1976 to 2005) that the trend of observed warming approximated 0.5^0 C per decade driven by higher warming at higher altitudes. This is significantly higher than the global average trend, closer to 0.1^0 C per decade, as per IPCC (MoPE, 2016). Warming is more pronounced in the high altitude regions compared to flat plains (Terai) and the Siwalik region. Mean Annual Temperature shows an increasing trend, and the seasonality of rainfall is also changing. Projections of future changes include the following (MoE, 2010b):

- An increase of Mean Annual Temperature across the country by an average of 1.2^0C by 2030, 1.7^0C by 2050 and 3.0^0 C by 2100.
- An increase in summer precipitation throughout the country by 15-20%.

Extreme variability in rainfall

There have also been changes in precipitation, including increases in extreme rainfall events and water related disasters such as drought and flooding. Nepal's monsoon climate means that normally the country receives almost 80% of its annual precipitation over four summer months ranging from May/June to August/September. The mean average annual rainfall is 1,800 mm. Daily precipitation data for the past 46 years (1961 to 2006) shows an increasing trend in precipitation extremes (DHM). The data from 73% out of 26 stations selected for the study exhibited an increase in the annual number of days, when precipitation was greater or

equal to 50 mm (MoAD, 2014). Winter precipitation is also increasing except in the northern part of mid-western, western, and eastern Nepal. Projections of future changes include the following.

- An increase in monsoon rainfall in the eastern and central Nepal.
- A general increase in monsoon and post-monsoon rainfall as well as rainfall intensity throughout the country.
- A general decrease in winter precipitation throughout the country.

Glacier melts

Climate science is not conclusive about the extent and pattern of glacial meltdown. There are evidences that suggest Nepal's glaciers are receding faster than elsewhere in the world. Glacial Lake Outburst Floods (GLOFs) are another major climate-related hazard Nepal faces with significant economic impact. When these lakes have burst in the past, GLOFs have destroyed entire villages and infrastructure (bridges, roads, and power stations). In the case of the Thulagi glacial lake alone, the potential damage of a GLOF has been estimated to be about US$ 415 million (or 3.5% of GDP).

Frequency of extreme weather events and natural disasters

Drought, floods (including GLOF), avalanches and landslides are some climate related disasters that Nepal has been experiencing. GLOFs, for example, in Nepal have increased since the 1930s, and there has been an increase in the number and frequency of droughts, floods, landslides and avalanches. Floods and landslides are among the most recurrent climate-induced hazards in Nepal, claiming an average of 200 lives annually since 1998 (NCVST, 2009). More than 4,000 people have died in the last decade due to the climate-induced disasters with property loss estimated over US$ 3 billion (MoHA, 2016). Heavy rainfall, landslides and floods, during 2011 to 2016, resulted in economic losses of respectively above 216, 1071 and 15500 billion Nepalese Rupees.

Impact on agriculture and land use

There are already evidences of impacts of climate change in agriculture sector in Nepal. Mixed effects are recorded on the yield of maize and wheat. Temperature rise has effects on the physiological growth of wheat (Malla, 2008). The rain-fed wheat productivity is likely to suffer more in Terai as compared to the mid-hill under climate change scenario, using DSSAT model for Nepal. The major impact of climate change on specific crops can be illustrated as follows:

- The impact of climate change is leading towards increased food insecurity in Nepal. Over 10% of decline in production is attributed to climate related disasters and lack of adaptation action (MoSTE, 2013).
- Eleven percent in rice and seven percent in wheat yield reductions were recorded in Nepal due to drought in 2006. The drought in the eastern region decreased rice production by 30%, and heavy flooding in the mid-western and far-western regions in 2006 and 2008 destroyed crops in many places (FAO, 2016).
- The period from 1971 to 2007 is reported to have more than 150 droughts events in Nepal affecting about 330 thousand hectares of agriculture land (UNDP, 2009).
- Due to extreme weather conditions, the rice yield in the Terai region is projected to decrease by 10% by 2070s (MoSTE, 2014).

- The Third National Communication Report of Nepal (in the process) projects around 1.6% decline in rice production and 15.5% decrease in wheat yield by 2020. In addition, it has also been estimated that food grain production in Nepal will decrease by 5.3% in 2020 (MoPE, 2016).

'Global warming' is seen to have complex and multidimensional relation with agriculture to affect production systems, yield and productivity. Soil moisture regime especially in rain-fed agriculture, water availability for agricultural uses, phenology of plants and the breeding behavior of animals, crop yield and productivity, deterioration of land resources, deterioration of agricultural infrastructure and facilities, feed and fodder supply and depleting crop and animal diversity are major components in agricultural systems presumed to receive threats of changing climate to affect economy and poverty in agrarian communities.

Social and gender impacts

Women and men are both vulnerable to climate change, but they may be vulnerable in different ways. Nepal's National Adaptation Programme for Action (NAPA) acknowledged gender specific vulnerabilities and emphasized how to address gender dimensions of climate change impacts for appropriate gender sensitive and inclusive actions for adaptation and mitigation. Nepal's Local Adaptation Plan for Action (LAPA) implementation also focused on socially marginalized and indigenous groups and women[3].

2.2. Institutional Context for Adaptation in Agriculture Sectors

Institutions

The processes of development planning and budgeting at national as well as local levels start with release of budget ceiling and guidelines by National Planning Commission (NPC) in coordination with the Ministry of Finance. Owing to devolved situation of agriculture development extension system, local governments (Village Development Committees, Municipalities and District Development Committees) are in place to formulate local level agriculture development plans, and agencies within some sector ministries in the central government formulate those at central and regional levels in the country. Ministries for agriculture (that includes fishery as well) and livestock development are mandated in planning and budgeting for agricultural development, albeit other sector ministries such as for irrigation and forest and soil conservation also contained agricultural activities in their plans. In addition, many of the programs supported by development partners, INGOs and NGOs in association with different sector ministries and local governments also engage in forming agriculture development plans.

Following release of budget ceiling and guidelines by NPC, the sector ministries avail their subordinating organizations and district offices with directives, guidelines and budget. Local governments are obliged by the Local Self Governance Act (1999) to form their annual programs through participatory planning process for which a 14-steps program planning process is set (Annex -5). Programmes to be implemented with VDC/ municipality budget are discussed and decided at respective VDCs or municipalities. The programmes requiring district

[3] LDC Expert Group, 2015 Strengthening gender considerations in adaptation planning and implementation in the least developed countries

or national level financial supports are discussed at sub-district (Ilaka) level, where a prioritization process takes place. Selected programmes are then forwarded to the district, where the programmes enter sequential process of selection and approval in order by sectoral committee, integrated planning committee and district council followed by their submission to NPC and sector ministries.

The district agriculture development programmes are monitored by respective DDCs. Specific guidelines and directives to form plans and activities mainstreaming climate change adaptation and disaster reduction in line to sustainable goals and periodic plans are released in the recent years including Climate Change Budget Coding system introduced into Medium Term Expenditure Framework (MTEF). Hardly, some plans and activities in such way are reported to evolve in the sector due mainly to lack of awareness and understanding of climate change and adaptation options among agricultural planners, even though much of the agriculture sector development programmes/ activities classified into climate change relevant interventions as per the Climate Change Budget Code system. On the other hand, physical achievement and weighted average budget expenditures in specified timeframe are major indicators adopted in monitoring of the development interventions. Besides, agriculture development planners (upon formulation and budgeting of the climate change adaptation specific plans) indicated programme/ activities specific achievements and outcomes upon their implementation as indicators to the programme monitoring. However, existing monitoring framework in the sector planning and budgeting process is lacking inclusion of appropriate key performance indicators (KPIs) for measure of climate change adaptation and climate risk management.

MoAD and recently formed MoLD are major government ministries to engage directly on agricultural development planning & budgeting, implementation and monitoring & evaluation of such interventions. Several divisions, sections, Boards and Committees within the ministries and their departments including subject specific directorates, programmes, national & regional centres/ stations/ laboratories and regional & district level extension offices constitute above 316 entities (Annex 4). The entities are in different ways engaged in agricultural planning and monitoring. However, environment and/or climate-change division/ directorate/ section in the ministries and their departments are formed to deal in climate change related policies, programme formulation and inter and intra sectoral coordination. Likewise, planning divisions in the ministries are central to build coordination with NPC and Ministry of Finance in national planning and with disaster risk management authorities in the Ministry of Home Affairs. Monitoring divisions in the ministries and their departments are mandated in forming and implementing monitoring frameworks. Planning divisions at department level are engaged to coordinate sector based plan formulation and implementation. District offices (DADOs and DLSOs), working in association with local governments (VDCs, Municipalities and DDC) are central to form, implement and monitor local level agricultural development programmes.

Considering districts (#150), regional (#20) and national level (#14) entities that engaged in agricultural planning, monitoring and training businesses, a total of above 200 personnel are seen important to train in climate change adaptation in the MoAD and MoLD. When considered the ministries such as for irrigation and forest & soil conservation and local governments that involved in planning, implementation and monitoring of programmes for agricultural development, an addition to the number by 60 personnel is estimated as representative of relevant divisions and training entities.

Relevant Policies for Adaptation

Nepal, being a least developed and Himalayan country, is placed in high impact zone of climate change, where agriculture - a major base of economy and livelihood - is most vulnerable to climate change impacts.

Technology development, transfer and utilization (specifically related to water-efficient irrigation, tolerant cultivars/species and low methane producing and climate-friendly agricultural practices), documentation of climate related indigenous knowledge and its utilization in technology generation, and crop insurance have been major provisions in the Climate Change Policy (2010) to be implemented by agricultural sectors.

Subsequently, National Adaptation Plan of Action (2010) of the country has identified most vulnerable sectors to climate change including agriculture, and established national priorities of interventions to build resilience and adapt to possible effects of climate change. Nepal's NAPA, concluded in 2010, reflects the importance of intensifying the conservation of drought-resistant crop varieties by adopting water-conserving cropping practices and by promoting crop diversification. Other pathways to decrease climate vulnerability in agriculture sector include development of improved climate scenarios, development of more suitable crop models, and search for alternative analytical approaches.

National development priorities relating to agriculture and climate change in Nepal are articulated in National Adaptation Programme of Action (NAPA), National Agriculture Sector Development Priority (NASDP), Priority Framework of Action (2011–2020) on Climate Change Adaptation and Disaster Risk Management of the Ministry of Agricultural Development (MOAD) and Agriculture Development Strategy (2015). National development goals in Nepal, particularly for agricultural sector, mainly comprise of poverty reduction and food security in addition to reducing regional disparities.

The National Agriculture Policy (2004) sets poverty reduction and food security as the underlying goals to be attained through higher agricultural growth based on increased productivity and commercial and competitive agricultural system. The Thirteenth Plan (2013/14 – 2015/16) underlined climate change as one of the main challenges to attaining the expected outcomes in the agricultural sector. One of the seven overarching strategies in the plan emphasized climate change adaptation mainstreamed into development programmes and, in its agriculture sector strategies, promotion of climate adaptive and environment-friendly techniques and practices to minimise adverse impacts of climate change such as crop and animal biodiversity management, development of crop resilience and scaling up of resilient crops in food-insecure areas through provisions of reliable and trustworthy metrological services. Climate change and climate associated disaster related priorities of the 13th plan are carried on by the Fourteenth Plan (2016/17-2018/19) that, in its overarching strategy, included production enhancement through priorities on agricultural sector(s) transformation, environment management and promotion of tourism, SMEs, industries, institutional capacities and good governance. The plan has emphasized climate change adaptation/mitigation and environment/disaster management mainstreamed into development planning at sectors and national/subnational levels, and climate investment into national budgeting processes. The

agricultural sector strategy in the plan has underlined development and dissemination of environment friendly technologies.

In view of systematic efforts needed to improve sustainability of the food production systems and ecosystem resilience under changing climatic conditions and addressing climate related risks and uncertainties in agriculture and food security in the country, the Government of Nepal has formed in 2011 'the Priority Framework for Action, 2011 – 2020' to address integrated climate change adaptation and disaster risk management in agriculture sector, and identified priorities based on NAPA (2010) and National Strategy for Disaster Risk Management (2008). The framework built on the strengths and comparative advantage of MoAD has proposed specific actions in five priority areas *(Institutional and technical capacity development, assessment and monitoring of climate risks and vulnerabilities, knowledge development and awareness raising, implementing CCA and DRM options and disaster management procedures)* considering existing gaps and weaknesses.

The Agriculture Development Strategy (2014) provides long term strategies for agricultural development in the country with emphasis on food security through enhancing agricultural productivity, sustainable production and resource management, improved land and water management system, and strengthened climate adaptation. The strategy envisions adaptation and building farmers' resilience to climate change through technology development, support in LAPA implementation, adoption of stress tolerant crops and animal species, establishment of early warning systems, climate-smart agricultural practices and farmers' access to welfare-fund, agricultural insurance and food and seed reserves systems.

In 2012, IUCN received an official request from Nepal's Ministry of Environment to support the development of national action plan on gender and climate change. The Government requested the plan within the broader framework of (i) Nepal's NAPA and (ii) the country's Climate Change Policy (2011) to "address adverse impacts of climate change on the vulnerable and marginalized communities with a focus on climate adaptation and impact mitigation." The process of developing the plan identified six priority areas that are all related to agriculture: (i) Agriculture and Food Security; (ii) Forests and REDD; (iii) Water, (iv) Energy, (v) Health and (vi) Urbanization. The Climate Change and Gender Action Plan (IUCN, 2012) was intended as a catalyst for action to support the inclusion of gender in national climate change processes, policy development, decision-making, project development and implementation. The Plan includes action steps needed, indicators of success, and suggested responsible government bodies under the different areas from a policy and planning perspective.

Complimentary projects and programs

Parts of the project scopes are in synergy with many of the other past and on-going climate change adaptation initiatives in the country implemented in association of the implementing partners (UNDP or FAO). Some of ongoing projects that could be leveraged with some outputs and outcomes of the project are discussed hereunder.

1. Reducing Vulnerability and Increasing Adaptive Capacity to Respond the Impacts of Climate Change and Variability for Sustainable Livelihood in Agriculture Sector (GCP/NEP/072/LDF), being implemented in Siraha, Udayapur, Arghakhanchi and

Kapilbastu by FAO, aims to increase technical and institutional capacities in agriculture (crops) and livestock sub-sectors to respond to the impacts of climate change and variability; promote transfer and adoption of sustainable, climate-resilient and environment friendly agriculture practices and technologies to increase adaptive capacities of rural livelihoods to climate change and variability, and promote awareness raising, knowledge and education on climate change adaptation among local communities and stakeholders.

2. FAO project on 'Technical Assistance to the Agriculture and Food Security Project (UTF/NEP/073) being implemented in 19 mountain districts of mid and far western development regions visualizes enhancing food and nutritional security of the vulnerable communities by increasing crop and livestock productivity, and thus is seen to share lessons learned on climate resilient and environmental friendly agricultural practices.
3. Community-Based Flood and Glacial Lake Outburst Risk Reduction Project (CFGORRP) by UNDP in Solukhumbu, Udayapur, Saptari, Siraha and Mahottari districts is aligned towards reducing GLOF risks arising from Imja Lake (Component I) and reducing human and material losses from recurrent flooding events (Component II) that would form a foundation for an assessment of instruments (hazard mapping, community based early warning system and mainstreaming gender into development path) for adaptation to be scaled up or extended to adaptation needs of the agricultural sector.
4. Ecosystem-Based Approaches to Adaptation: Strengthening the Evidence and Informing Policy, an IIED supported UNDP project being implemented in Kaski, Parbat and Syangja districts (2015-2019), presents ecosystem based management of land resources for agriculture and valuation of adaptation options. The project focuses on assessing EbA effectiveness and developing a research methodology. The project could generate useful assessment and monitoring tools that could feed into Outcome 3 of the NAP-Ag project.
5. UNDP implemented (2011 to 2015) Comprehensive Disaster Risk Management Program (CDRMP) in 39 districts. The programme aimed to strengthen the institutional and legislative sector of Disaster Risk Management (DRM) by building capacity in key government ministries and local Institutions and strengthening partnerships among institutions, private sector, civil society organisations, and other development actors. Outcomes of the project would leverage the NAP-Ag project efforts to build technical and institutional capacity in agriculture sector through trainings.
6. DFID supported Environment Friendly Local Governance Programme (EFLGP) being implemented (2014-2017) by MoFALD in 14 districts is an effort towards enhancing adaptive capacity of vulnerable communities including women to cope with impact of climate change by adopting integrated environment, climate and disaster resilient planning at local level. Experiences and lessons learned out of the project would be contributing towards mainstreaming climate change adaptation into agriculture sector planning and budgeting processes especially at local levels (outcome 2).
7. The Nepal Climate Change Support Programme (NCCSP), funded by DFID and EU and implemented by UNDP under the leadership of MoPE, supported building national and local capacities for development and implementation of local adaptation plans and evidence-based adaptation measures for agriculture in 14 highly remote climate vulnerable districts of Nepal in line to NAPA combined priority 1 - promoting community based adaptation through integrated management of agriculture, water, forest and biodiversity sectors. It has

a focus to ensure that the Nepal's poorest and most vulnerable people are able to adapt well to climate change effects.

The implementation of the NAP-Ag project will also build on a substantial wealth of knowledge, lessons and experiences that stem from some other UNDP-led initiatives aimed at supporting countries to effectively integrate climate change into their planning processes, policies and budgets:

1. The Global Support Programmes (GSP) for NAPs are funded by LDCF and SCCF and jointly implemented by UNDP and UNEP. These projects are actively leading a consortium of UN and other agencies to support the NAP process in developing and least developed countries. Key insights and lessons from the LDCF-funded Assisting Least Developed Countries with Country-Driven Processes to Advance National Adaptation Plans Project are taken into account while framing the NAP-Ag project.
2. Nepal Climate Change Public Expenditure and Institutional Reviews (CPEIR), part of the collaborative UNEP-UNDP Poverty Environment Initiative, is supporting the integration of climate change into decision-making in fiscal policy and planning. CPEIR based on review of financial management systems as well as the institutional arrangements and policy directives for allocating and spending climate change-related finance has assessed whether national climate change objectives are delivered through public expenditure and how institutional arrangements could be adjusted to improve the coherence, delivery and monitoring of climate finance activities to provide a departure point for long-term policy dialogue on how to coordinate increased financing with national climate change responses.
3. The Capacity Building Programme on the Economics of Climate Change Adaptation (ECCA), a 3-year project comprised of a series of technical trainings, interspersed with in-country applied work to enable trainees to master key economic concepts and tools for adaptation planning and decision-making.
4. The Green Climate Fund (GCF) Readiness Programme (2015-2017) offers needs-oriented support to the Government of Nepal (GoN) in strengthening its national capacities to effectively and efficiently access, manage, deploy and monitor climate finance from the GCF once it is fully operational. In response to the Government's specific needs UNDP and UNEP will build technical and institutional capacities of Ministry of Finance as the National Designated Authority to the GCF to ensure an efficient and collaborative engagement which will result in investments that address the climatic vulnerabilities of Nepal. Further, technical assistance will be provided to build national capacities across Government and nongovernment stakeholders to prepare robust investment frameworks and a pipeline of bankable proposals for adaptation and mitigation options aimed to reduce localized climate related disaster risks.

The project would also seek to liaise with the World Bank's global Pilot Program for Climate Resilience (PPCR), which builds on NAPA to support integration of climate risk and resilience into development planning.

3. NAP-Ag Program Approach in Nepal

3.1. Inception Phase Activities

The Government of Nepal (GoN) agreed implementation of the NAP-Ag global project in Nepal on 21 June 2016 with necessary rework in the project document following in-country stakeholder consultations. Thereafter, FAO and UNDP country offices initiated processes for hiring National Project Coordinator (FAO) and CC-Project Officer (UNDP). With the National Project Coordinator hired on 01 September 2016, the implementing partners have initiated office of the National Project Management Unit (NPMU), and the Ministry of Agricultural Development has formed the project's steering committee and technical task force. The secretary for the Ministry of Agricultural Development chairs the Project Steering Committee (PTT), and the joint secretary for Food Security, Agribusiness and Environment Division in the ministry, who led agriculture and food security (nutrition) thematic working group (TWG) of Nepal NAP-process, chairs the technical task force. Moreover, the PTT contained a majority of members common to the TWG.

The project's inception workshop was organized on the 3rdof October in 2016 chaired by the secretary in MoAD and participated by representatives of wider stakeholders that announced formal launching of the project in the country and, following presentations on 'national NAP process and till date progresses', 'agriculture sector integration into NAPs' and 'NAP-Ag activities implementation, discussed on issues relevant to its coordinated implementation. The workshop acknowledged the project in supporting the NAP-process to integrate agriculture sector(s) in its roadmap through a collaborative approach and in view of climate change having alarming and multidimensional impacts in agricultural sector(s). The workshop suggested fixing project's activity targets in way duplication among stakeholders is minimized; proper representation in the PSC and PTT that could be revisited and corrected through decisions; pilot districts in the project selected representing major ecological and, so far possible, development regions in the country; wider participation and cooperation fetched in the project implementation; learning from global, regional and local perspectives; agricultural perspectives of water conservation and use, land development and livelihood promotion considered; and the project's exit strategies identified.

It was proposed that the country would set up a project-based baseline by the inception phase for an M&E system and indicators as per Program Results Framework. Assessment of base information required by the Program Results Framework and skill and need assessment for capacity building trainings are underway. Part of the baseline information not achieved by the inception report is finalized would be completed before delivery of activities initiated.

3.2. Country Team Coordination and Communication

National Focal Person (NFP) in MoAD, Project Technical Taskforce formed in MoAD and National Project Management Unit (NPMU) consisting of National Project Coordinator (NPC), Climate Change Project Officer (CCAO), FAO/UNDP country office coordinators, representatives from MoAD & MoLD and regional project team would together constitute the project implementation team (Fig. 2).

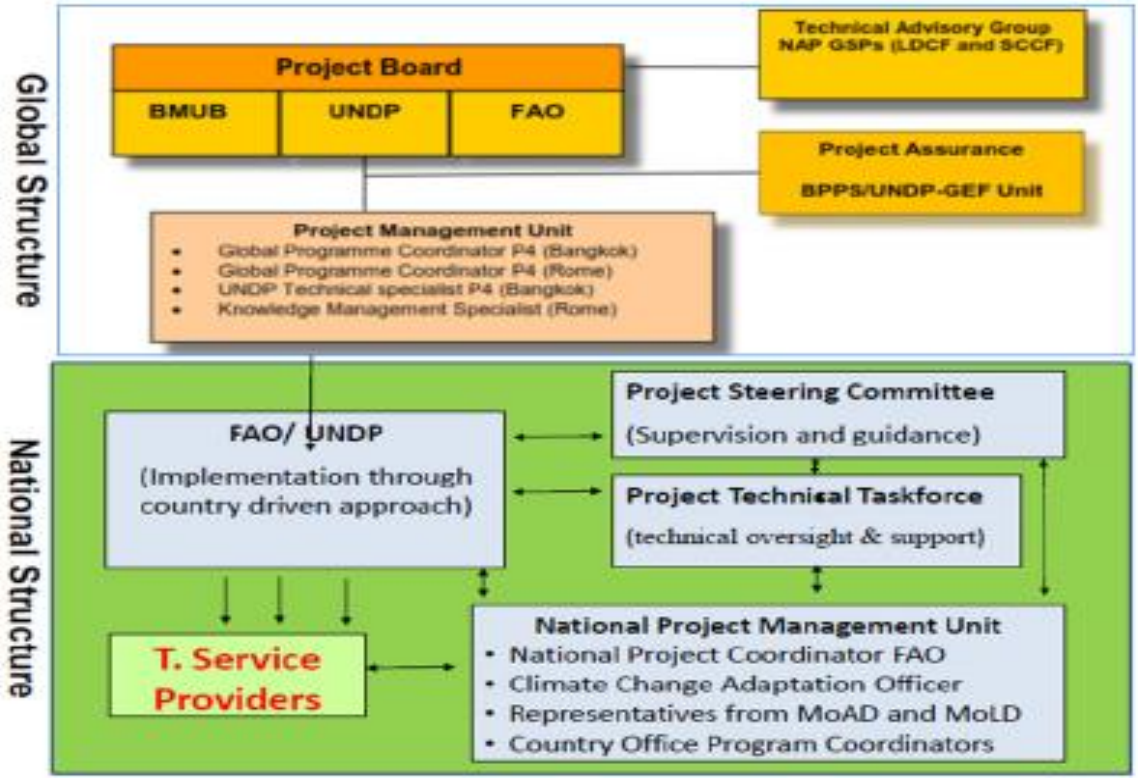

Fig. 2: Structural organizational of the project implementation

National Project Coordinator (NPC) will be in contact and liaise with MoAD National Focal Person (NFP) to hold regular meetings of the Project Steering Committee and Technical Taskforce (PTT) as well as NAP-Thematic working group (TWG) for Agriculture and Food Security theme to implement the project work plan and achieve results. This will help to facilitate the process of decision making by government counterpart for smooth execution of the project. The meetings would be appropriate fora to take stock of project progresses, facilitate technical advisory and mitigate possible limitations in the project implementation. The other way, forming meeting minutes would help keeping the members intact and communicated of developments. The country team including the project regional team and global project advisors shall also organize a call to take stock of, and to monitor the project progresses quarterly and facilitate technical advisory on the project implementation. If deemed necessary, the team shall coordinate calls on need basis.

The National Project Coordinator assigned by FAO and the Climate Change Project Officer assigned by UNDP in the NPMU are made responsible to take forward the project assignments as per the work plan together with MoAD designated officials. The National Project Coordinator will primarily lead the assignments. The Climate Change Project Officer will support in i) management of programme implementation; ii) coordination process for creating strategic partnership with key stakeholders; iii) providing technical assistance in particular on development of climate change M&E frameworks and indicators for relevant ministries and adaptation planning and iv) monitoring, evaluation and reporting of the project deliverables.

Together with NPMU, the FAO and UNDP country office designated coordinators will meet at least every month to discuss on progress and support required to take forward the project.

This will provide necessary quality assurance to the delivery of project activities so that item agenda that need to take up to PSC, PTT and TWG of NAP process on AFS will be identified for discussion and necessary decision making. This process will help evaluate the progress and necessary reporting mechanism to the government.

The NAP-Ag Nepal project will adhere to 'Communication Kit for the UNDP/FAO NAP-Ag Programme" document prepared for the global project to define modalities on communication including both internal and external communication. A key component of this programme is sharing of lessons learnt and best practices through a variety of communications channels. The results will be communicated effectively in order to ensure the programme has the maximum impact possible. In order to enhance communications and their strategic use, the project will use this guide, links to media databases, infographics, videos and slide share. The project will make use of guidance and resources from designated UNDP and FAO communication Coordinators to help national team in preparing press releases, posting on social media, conducting interviews and/or attending events on behalf of the NAP-Ag programme. For any necessary guidance, the national team will contact the designated communication focal points from UNDP and FAO. The national coordinator will be responsible to share the draft of any communication material to government for their timely endorsement and public release.

3.3. Project Steering Committee and Technical Taskforce

Overall implementation of the project will be guided by its steering committee chaired by the secretary in MoAD and its implementation coordinated by the joint secretary of the Food Security, Agribusiness and Environment Division in the ministry (National Focal Person and Member Secretary in the PSC).

Table 1: The project steering committee

1. Secretary, Ministry of Agricultural Development	Chairperson
2. Joint Secretary, National Planning Commission	Member
3. Joint Secretary, Ministry of Finance	Member
4. Joint Secretary, Ministry of Home Affairs	Member
5. Joint Secretary, Ministry of Federal Affairs and Local Development	Member
6. Joint Secretary, Ministry of Population and Environment	Member
7. Joint Secretary, Ministry of Forest and Soil Conservation	Member
8. Joint Secretary, Ministry of Livestock Development	Member
9. Joint Secretary, Ministry of Irrigation	Member
10. Joint Secretary, Policy and Intl. Coop. and Support Division of MoAD	Member
11. Joint Secretary, M &E and Statistics Division of MoAD	Member
12. Joint Secretary, Planning Division of MoAD	Member
13. Joint Secretary, Administration Division of MoAD	Member
14. Representative, Embassy of Federal Germany	Member
15. Executive Director, Nepal Agriculture Research Council	Member
16. Director General, DoA	Member
17. Director General, DoLS	Member
18. Representatives (3), National Peasant Coalition	Members
19. Representative, UNDP	Member
20. Representative, FAO	Member
21.Joint Secretary, Food Security, Agribusiness and Env. Division of MoAD	Member Secretary

A Project Steering Committee (PSC) is formed with representation from stakeholders (Table 1) to review and approve project annual plans, budgets and progress reports; provide policy advice and strategic guidance for the implementation of the project; review project targets, criteria and arrangements to ensure the outcomes; ensure inter-agency coordination and policy support; review and provide guidance on ensuring inclusiveness of the stakeholders input in project activities, and supervise overall performance, results delivered and sustainability of the project. The PSC will meet bi-annually with its decisions minuted.

Table 2: The project technical taskforce

1.	Joint Secretary, Food Security, Agribusiness and Environment Division, MoAD	Chairperson
2.	Under Secretary Level, Ministry of Livestock Development	Member
3.	Under Secretary Level, Ministry of Population and Environment	Member
4.	Under Secretary Level (NAP Focal Person), Policy and International Cooperation and Support Division of MoAD	Member
5.	Under Secretary Level, Gender and Social Inclusion Section, MoAD	Member
6.	Under Secretary Level, Department of Hydrology and Meteorology	Member
7.	Under Secretary Level, Department of Agriculture	Member
8.	Under Secretary Level, Department of Irrigation	Member
9.	Senior Scientist, NARC	Member
10.	Representative, GEF (IECCD, MoF)	Member
11.	Representative, Agriculture and Forestry University, Kathmandu	Member
12.	Representative, Local Initiatives for Biodiversity, Research and Development	Member
13.	Representative, Centre for Environment and Agri. Policy Res, Ext. and Dev.	Member
14.	Representative, UNDP	Member
15.	Representative, FAO	Member
16.	Under Secretary Level, Environment and Climate Change Section of Food Security, Agribusiness and Environment Division in MoAD	Member Secretary

Likewise, a taskforce of technical and expert representatives from key divisions of the stakeholders is formed (Table 2) to have technical oversight and support role in project implementation as guided by the PSC. The Project Technical Taskforce (PTT) will normally meet four times a year and may hold more meetings where appropriate with decisions minuted. The PTT in support of the project implementation will -

- provide technical oversight and guidance
- ensure national ownership
- align project deliveries with country development priorities
- ensure sector priorities (including crops, livestock, fisheries, forestry and aquaculture) integrated into the NAP-process
- review the project outputs, progresses and annual reports
- monitor project performances towards achievement of targets
- identify synergies and collaborative/strategic partnerships to improve the project outreach, scale and impact
- act as conduit and multiplier for capacity building of national stakeholders

3.4. Use of Global Program Experts

NAP-Ag global experts including both global project advisers and regional team are integral of the project implementation in the country to produce impacts as envisaged. Specifically, their supports and inputs in technical matters (including economic/social/gender matters) and

knowledge sharing will be important to ensure quality of the methodologies applied and the products developed. The experts' technical supports and inputs in the project implementation are valued for their global level experience of climate change adaptation and the project specific activities, and that the experts, based on frequent reviews of the project implementation progresses and achievements from different countries, can efficiently advise on its implementation. Supports by the project's global advisors and regional team in implementation of the project are foreseen specifically in relation to climate change vulnerability assessment (Activity 1.1.1), documentation of lessons learned (Activity 1.1.4), national level training on CCA and VA (Activity 1.1.6), economic valuation of adaptation options (Activity 1.2.1), national level training on EV of ecosystem services and adaptation options (Activity 1.2.5), Institutional gap and entry point analysis in ADS (Activity 2.1.1) and adoption of methods in integrating climate change economic and investment appraisal criteria (Activity 2.2.2). Moreover, in view of climate change vulnerability and risk assessments that MoPE has decided to carry out in the NAP-process and proposed NAP-Ag project to support, the scope and avenues of the experts' supports to the NAP team regarding climate change modelling and vulnerability/ risk assessment would be identified and materialized.

3.5. Coordination with NAP Processes

Ministry of Population and Environment (MoPE) launched the National Adaptation Plan (NAP) Formulation Process in September 2015 with nine thematic areas including Agriculture and Food Security (Nutrition) theme. MoPE has indicated that the NAP-team expects full coordination under the national NAP process and specific support from NAP-Ag focused on the Agriculture and Food Security thematic working group. MoPE has proposed, NAP-Ag project supported in its efforts producing a new national climate change vulnerability assessment based on the latest IPCC Assessment Report 5 suggested Representative Concentration Pathway (RCP) and Shared Socioeconomic-reference Pathway (SSP) climate scenarios. MoPE (NAP-Process) requested during the inception revisiting the NAP-Ag activities to –

- separate NAP-Ag project mandated activities and explore additional opportunities (activities) in support of Agriculture and Food Security (Nutrition) TWG in CC-vulnerability and risk assessments for agriculture sector(s)[4];
- identify activities seeking supports to and building synergy with the NAP process[5];
- explore possible synergy with forestry sector as FAO's knowledge products and other supports could be best utilised in the country's NAP formulation process;
- engage in building capacity of the NAP team where necessary;
- include newly identified/ rephrased activities in the inception report;

It is also noted, the ICIMOD is providing technical support to MoPE led NAP formulation process primarily in furnishing climate trend and scenarios information in line to IPCC-AR5. The climate trend and scenario information thus generated will then be used by all TWGs in the NAP-process to appraise theme (sector) based impacts and vulnerabilities. Following NAP-Ag

[4] MoPE (NAP-team) expected NAP-Ag project cooperation to avail it with technical service providers (Statistician, GIS expert, Economist, Agronomist, Horticulturist, Fishery specialist and Livestock specialist to engage right from climate trend and scenario analysis focussed on AFS theme) to support TWG on 'Agriculture and Food Security' as well as 'Forests and Biodiversity'.

[5] The NAP-team's concern was logistic supports from NAP-Ag project in operation of TWG on AFS and agriculture sector related activities.

inception on 03 Oct. 2016, MoPE, FAO and UNDP have had three rounds of discussion to identify activities that could be included in the Inception Report to work closely with the NAP-process including the national level climate change vulnerability and risk assessment under the Agriculture and Food Security theme. National NAP-team in MoPE has availed NAP-Ag team with its thematic (Agriculture and Food Security) approach paper on climate change vulnerability and risk assessment seeking the kind of cooperation.

In line to building synergies with the MoPE-NAP-Process, a consensus in the NAP-Ag team is conceived. Broadly, the NAP-Ag project will address MoPE requests in the following ways:

- support regular meeting with the MoPE NAP-team;
- ensure that the project outputs and guidance materials are consistent with the materials being produced by the MoPE team;
- Support NAP TWG meetings on Agriculture and Food Security theme including logistics;
- Offer to include members of NAP TWGs in NAP-Ag trainings;
- Provide technical review and input on agriculture related outputs of the NAP-process;
- exploring possibility of global experts on vulnerability assessment based on IPCC AR5 and climate change modelling to advise and support the NAP Team;
- Cooperate in national level agriculture and food Security based climate change vulnerability and risk assessment.
- Avail the NAP-process with NAP-Ag project generated relevant knowledge products and materials to include in exhibitions or expo events for knowledge sharing.
- Support NAP-Ag related government officials', such as coordinator(s), deputy coordinators(s) and member secretaries, participations in appropriate regional/ international fora for learning exchange.

NAP-Ag project under 'institutional capacity building in adaptation-sensitive planning (Output 1.1)' has delimited its scope of work to develop methods of CC-VA and CCA planning and budgeting for the agriculture sector(s) based on a synthesis of methods already applied. Owing to MoPE requests during the project inception, further clarification in the post inception follow up meetings and recently shared MoPE NAP-process V/RA approach paper to NAP-Ag team, the scope of the activities under the output would be rephrased on decision by the PSC to introduce required synergy with MoPE on its undertakings of climate change vulnerability and risk assessments in line to IPCC-AR5.

3.6. Gender

Relevant issues of gender mainstreaming will be considered during implementation of the project activities such as seeking (so far possible) representation of women in national and sub national level project meetings, consultations, trainings and sharing on knowledge. Needs and challenges of women and other visible social groups will be given priority while implementing the activities in the project districts. Where possible, such as during planning participatory analyses, trainings, case studies and preparing monitoring framework, participation by women representatives of relevant stakeholders and/or integrating gender disaggregation in information collection, analysis and reporting will be considered while forming baselines and M&E framework. Integrating gender sensitive practices/ indicators and gender-disaggregated data collection and analysis during the monitoring framework preparation (outcome 3) are other scope of gender consideration in the project. Representation in national level committees (PSC

and PTT) and participation in national trainings would also be thought to render inclusive of women, however such would not be much practical because of woman in minority and representatives selected on ground of their position and assigned responsibilities. On the other hand, NAP-process in Nepal is engaged in formulating NAP through TWG approach including a TWG to contribute in NAP from gender and social inclusion perspectives. The gender and social inclusion based thematic learning out of the process would also be applicable into the NAP-Ag processes.

3.7. Integration of DRR

Food production and agricultural systems in Nepal are highly vulnerable to increasing climate variability and change and are hit by natural disasters of hydro-meteorological origin such as floods, landslides, intensive rains, hailstorms, droughts, cold/ heat waves and pest/ disease incidences. Such events often lead to a situation of food insecurity affecting most the poor and marginalized peoples including women, children and differently abled people with its ultimate repercussions on the nation's economic growth.

Addressing climate related risks and uncertainties in agriculture and food security require development of an integrated framework for the sector, and identification of priorities in line with other national programs and strategies. Government of Nepal in 2011 has identified Priority Framework of Action[6] as a systematic effort to improve sustainability of the food production systems and ecosystem resilience under the changing climatic conditions. The Priority Framework for Action outlines 5 priority action areas: (i) Institutional and technical capacity for climate change adaptation and disaster risk management in agriculture; (ii) Assessment and monitoring of climate risks, vulnerabilities as well as enhancing early warning systems; (iii) Improving knowledge management, awareness raising and education on climate change, adaptation and disaster risk management; (iv) Reducing climate related risks and the underlying vulnerabilities by implementing technical options in agriculture and livestock; (v) Strengthening capacities and procedures for effective disaster preparedness, response and rehabilitation at all levels and integration of climate change adaptation interventions.

During the workshop requests were received from government representatives to better articulate the NAP-Ag approach with ongoing DRR initiatives in Nepal. Some of the priority actions in the framework are visibly contained in the NAP-Ag project activities. While this issue has not been addressed explicitly in the project work plan, it should be possible to incorporate DRR into work plan activities on stock taking, information gathering and adaptation planning including the development of enhanced M&E frameworks and indicators under outcome 3.

The NAP-Ag project will be able to contribute to the priority framework of action set by GoN to integrate climate change and DRR issues. The integration will be incorporated into implementation of current work plan activities, where climate related disaster issues will be explored and inferred into overall CCA planning and budgeting process of the government– particularly:

- The stocktaking exercises will consider existing policy frameworks and guidance related to DRR (Outputs 2.1 and 3.1).
- The climate change vulnerability/risk assessments methodology and application will include information on past experiences with climate-related disasters and responses (Output 1.1);

[6] Climate Change Adaptation and Disaster Risk Management in Agriculture: Priority Framework for Action, 2011 – 2020 (2011).

- The economic valuation of selected ecosystem services to the agriculture sectors will consider how disasters are affecting and are likely to affect the ecosystem services. (Output 1.1)
- The adaptation planning exercises will consider how district planning committees currently plan for and respond to climate-related disasters and look to identify how DRR best practices can be integrated into the adaptation planning approach to be developed under the program (Output 1.1);
- The training material including handbook for district and field extension officers will specifically guide how to prioritize, promote and integrate disaster issue together with climate (output 1.3).
- Advise government on consideration of disaster issues in integrated road maps for NAP mainstreaming climate change adaptation into ADS planning and budgeting cycle (output 2.1 and 2.2).
- Specific consideration of disaster issues during various trainings to government officials and decision makers in planning and budgeting process (Output 1.1, 1.2, 3.2, 4.1)

3.8. Monitoring, Evaluation and Reporting

Fund to the project implementation will be available from FAO and UNDP country offices as agreed at the HQ level, and the offices are responsible in managing the project funds in line to their modalities of fund management. The steering committee of the project will review the work plan and budgetary allocations in its meetings with authority of reallocations where appropriate.

The Project Steering Committee (PSC) is in place to oversee the project, provide with necessary guidance in its implementation and support in resolving possible risks and constraints, which in association with its Technical Taskforce will carry out reviews on project implementation and progresses through regular meetings and site visits.

Country offices of the implementing partners will administer funds to the activities with technical guidance and leadership provided by respective Assistant Country Director (UNDP)/ Assistant FAOR for programme in association with respective program analyst/ officer. Project Management Unit (PMU) will be responsible for effective implementation, quality assurance and meeting reporting requirements.

A joint project work plan (Table 3) is agreed between FAO and UNDP. The PMU, in coordination with the FAO and UNDP country coordinators and regional office country coordinators, will prepare project annual work plan and budget for endorsement by PSC each year. The country offices will be responsible for producing agency specific financial reports, and will work together to produce joint progress and financial report as required by the government and donor. Primary responsibility for producing the annual progress report lies with NPMU. Each agency will ensure adequate technical and managerial support and oversight provided to the PMU to ensure timely implementation of project activities and quality assurance of results produced, and provide for regular supervision and monitoring of the activities implementation. Aligned to the global project monitoring and evaluation framework and in coordination with FAO and UNDP country office coordinators, the Project Management Unit will prepare and share the project's progresses as stipulated.

Assurance in general

NAP Program coordinator has, as a part of the responsibility of the Project Steering Committee as well as UNDP and FAO country offices, the primary responsibility for ensuring that the monitoring of data is accurate and of high quality. The role of the data monitoring for their accuracy would also extend as responsibilities to the relevant staffs and members in the project and the offices who are not directly involved in management of the project. The assurance function is operational during all stages of the project formulation, implementation and closure specifically in regards to-

- adherence with monitoring and reporting requirements as per UNDP and FAO standards,
- Ensuring that high-quality periodic progress reports are prepared and submitted,
- Performing oversight activities such as periodic monitoring visits and spot-checks and
- Ensuring that decisions of the project committees are followed and changes are managed in line with the required procedures

Periodic monitoring and evaluation

Followings will be ensured in the project monitoring and evaluation further detailed in the programme result framework (Annex 1) and programme monitoring and evaluation planning matrix (Annex 6).

- A base line survey or initial stock taking carried out to establish the project baselines on the key indicators of the project outcomes before inception or delivery of the outcome.
- NAP- Agriculture will be implemented jointly by FAO and UNDP through Project Management Unit with support from different service providers. Both agencies through PMU will be responsible to hold their service providers accountable for producing high quality outputs as specified in joint work plan. PMU continuously and closely monitor the qualitative and quantitative progress in the field.
- Joint monitoring - As the project primarily concentrates on capacity building on policy formulation and implementation, there will be less scope of having joint monitoring on pilot area based implementation of activities. However, monitoring visits by members in PSC, PTT, FAO, UNDP, global/regional project team and other stakeholders will be organized as appropriate in association with national and sub-national level implementations.
- Periodic review meetings- Half yearly meetings with PSC and quarterly meetings with technical taskforce (at minimum) will be organized to share on progresses and learning, and to find ways forward. In addition, workshops such as on project launching inception, mid-term review and end-project evaluation in association with global program will be organized to inform wider decision makers and stakeholders on project progresses and achievements. In all these meetings, action points and their respective plan will be developed and implemented. A project end evaluation consisting of report with stocktaking will precede the end-project evaluation workshop that will support in global project evaluation.

Reporting

Adhered to the global guidance note on reporting requirements, National Project Coordinator collaborated by the CC-Project Officer in the NPMU will prepare quarterly, six-monthly, annual and project completion reports. Purpose of the periodic (such as quarterly, six-monthly and annual) progress reports is to measure achievements and monitor progresses in the country and highlight possible gaps and needs identified during implementation. In addition, NAP-Agriculture program coordinators in the FAO/ UNDP country offices will provide regular updates on the reports and overall status of the National Adaptation Process in the country with a focus on agriculture sub sectors.

Risks and mitigation strategy

Project risks and mitigation measures are summarized in the risk log in Annex 7.

3.9. Impacts Sustainability and Exit Strategy

The outcomes of the project are seen to sustain beyond the project period on following grounds as the exit strategies of the project.

- Multi-stakeholders involvement and multiple sub-sectors (crops, livestock, fishery and forestry) coverage in the project implementation,
- The project owned by the government and being operated under its guidance with MoAD in place to coordinate stakeholders (line ministries, departments, academia and private sectors) relevant to agriculture sector planning and budgeting.
- The project implementation integrated with national NAP-process.
- Sector-based national to sub-national level planners and program monitors involved in development of tools (CC-VRA and EV/IA) and frameworks (integrating CCA and CCA impacts assessment into sector planning and budgeting), trainings and other means of institutional capacity building such as knowledge sharing renders sufficient ground to sustain the project outcomes in the society. The training materials and trained sector staffs/ partners work beyond the project period.
- The project implemented in synergy with other existing initiatives so that it creates grounds for future access of climate change funds.
- Working with multi-sector planners (representatives) at district and national levels to find entry points of mainstreaming climate change adaptation concerns into agricultural planning and budgeting process ensures replicability of the outcomes to other sectors beyond agriculture and other districts beyond the project targeted.
- The analysis of evidence generated from pilot sites and review of existing planning and budgeting process will be captured in the form of relevant policy advocacy materials for reform needed to improve integration of climate risk planning and budgeting process in agriculture sectors for use to ministries.

4. Implementation Plan

4.1. Linkages between Outputs and Activities

The project activities are planned to support capacity building in CCA integrated agriculture sector (crops, livestock, fishery and forestry) planning and budgeting. MoAD is in place coordinating other line ministries, departments and district offices involved in agriculture based planning and budgeting. Recently formed Ministry of Livestock Development (MoLD) will be contained in the PSC, the PTT and the NPMU and its planning, budgeting and monitoring related divisions and sub-national units (as usual) will be coordinated in capacity building trainings, monitoring framework development and case studies.

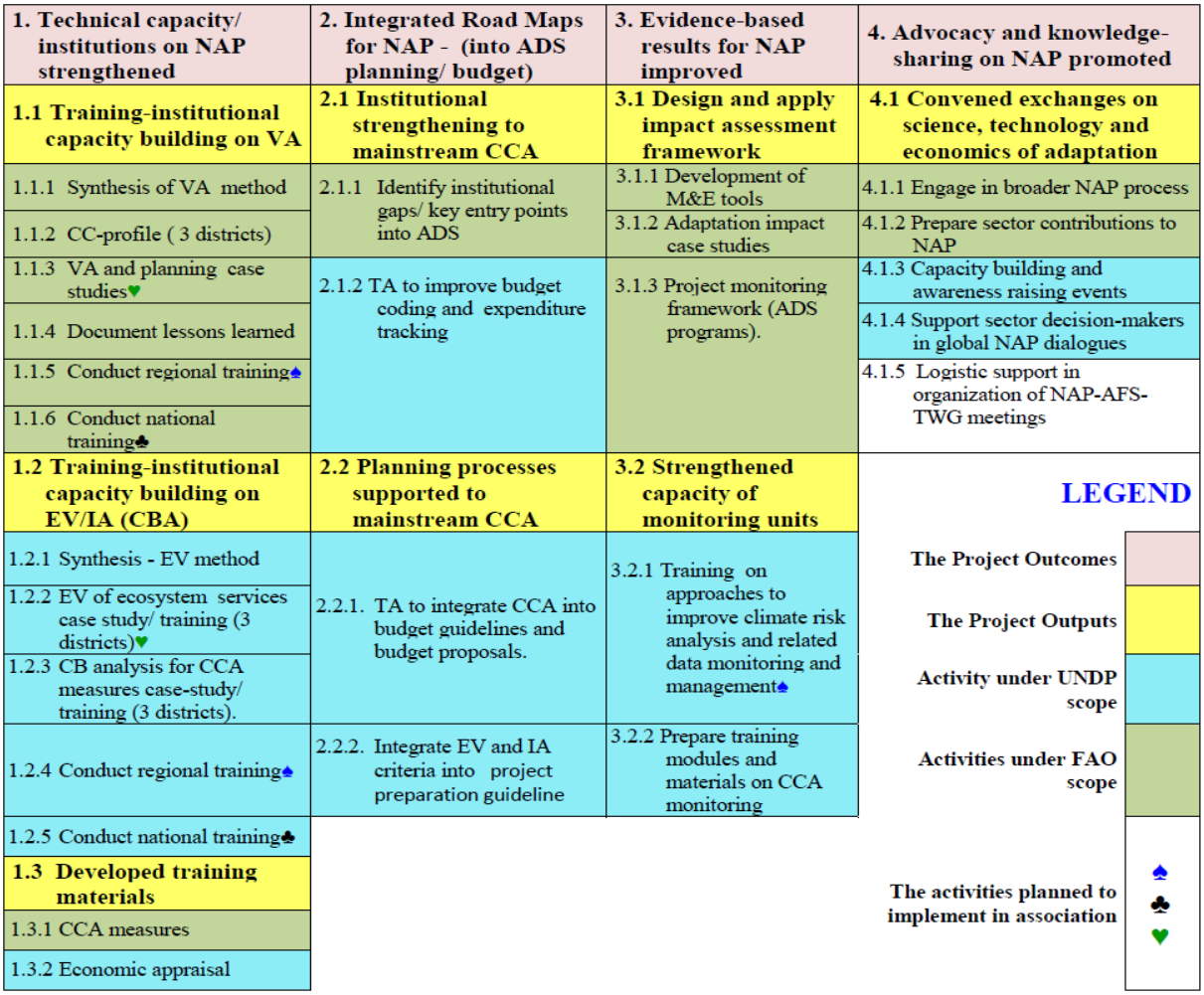

Fig. 3: Summary of project outcomes, outputs and activities and implementation linkage

Fig. 3 summarizes how the four outcomes of the project link to the work-plan-order of outputs (#8) and activities (#26) implementation. FAO scope of activities in general relates to CC-vulnerability assessment, CCA-planning and preparing a framework for CCA monitoring in agriculture and that of UNDP to economic valuation of ecosystem services and adaptation options, CCA-budgeting and CCA-monitoring training in the sector. The lessons learned therefrom are shared to the NAP-process on one hand to integrate the sector needs into the NAP. The other way, based on the knowledge and identification of entry points in the ADS, FAO

and UNDP together produce capacity building trainings to the sector-based local, regional and national level planners enabling them in integration of NAP road-map into the sector planning, budgeting and monitoring processes.

Project implementation team, consisting of NFP, PTT, NPMU and FAO/ UNDP country offices, will have overall responsibility of the project activities implementation. FAO and UNDP would hire local service providers on WAE basis as and when appropriate for activities under their scope, and the global advisors and regional team in the project would be partnering in the activities implementation as specified in Fig. 3 and Table 3.

Table 3: Activities implementation partnership among the project team members

Outcome/ Output/ Activities	Global Advisors	Regional Team	Service Providers
Outcome 1-Technical capacity and institutions on NAPs strengthened			
Output 1.1-Training and institutional capacity building in adaptation-sensitive planning			
1.1.1 Develop methods for CCA and CC-VA and planning and budgeting for the agriculture sector(s) based on a synthesis of methods already applied or suitable for Nepal context	✓	✓	✓
1.1.2 Prepare climate change profiles for the agriculture sector in 3 target districts representing a cross-section of ecological zones (Terai, Mid- and High-Mountain)			✓
1.1.3 Conduct applied participatory vulnerability assessment and planning case studies and training exercises with support of project taskforce in the (3) target districts			✓
1.1.4 Identify and document lessons learned based on training application and demonstration activities on integrating CCA into national and district –level planning and budgeting processes	✓	✓	✓
1.1.5 Conduct training of trainers on climate change adaptation and climate change vulnerability assessment and planning and budgeting for the agriculture sector in Nepal in five regional centres			✓
1.1.6 Conduct national level training on climate change adaptation and climate change vulnerability assessment, risk management and planning budgeting for the agriculture sector in Nepal	✓	✓	✓
Output 1.2-Training and institutional capacity building in EV and IA tools			
1.2.1 Based on a synthesis of best practice materials and institutional stock taking, identify good methods and approaches for evaluating priority agricultural sector adaptation options in Nepal, using applied economic valuation of ecosystem support services and investment appraisal tools such as cost benefit analysis of agricultural adaptation practices	✓	✓	✓
1.2.2 Conduct economic valuation of selected ecosystem services to the agriculture sector(s) as applicable to the 3 target districts. Hands-on training and support of project taskforce.			✓
1.2.3 Conduct cost benefit analysis for selected priority CCA measures/practices in the 3 target districts. Hands-on training and support of project taskforce.			✓
1.2.4 Conduct training of trainers on applied economic valuation of ecosystem support services to the agriculture sector and cost benefit analysis of agricultural adaptation practices in the regional centres			✓
1.2.5 Conduct national level training on applied economic valuation of ecosystem services to the agriculture sector and cost benefit analysis of agricultural adaptation practices	✓	✓	✓
Output 1.3-Developed training materials based on needs identified			

Outcome/ Output/ Activities	Global Advisors	Regional Team	Service Providers
1.3.1 Prepare instructional materials including a handbook for DDCs and field extension officers on how to prioritize, promote and mainstream CCA measures into planning processes for the agriculture sector(s)			✓
1.3.2 Prepare handbook/ internal guidelines for relevant MOAD/ MoLD staffs to improve economic appraisal of programs incorporating climate change costs and benefits of priority CCA practices			✓
Outcome 2 - Integrated roadmaps for NAPs developed			
Output 2.1-Institutional strengthening of MOAD and district authorities to mainstream CCA into ADS planning and budgeting			
2.1.1 Identify institutional gaps and elaborate planning road map with key entry points to better integrate CCA into MOAD, MoLD and DDCs, with priority to be given to ADS programs.		✓	✓
2.1.2 Technical assistance to improve existing climate change budget coding and expenditure tracking methods and mechanisms. Priority to be given to ADS programs.		✓	✓
Output 2.2-Consultative dialogues and planning processes supported at national and district level to mainstream CCA into sector planning and budgeting			
2.2.1 Technical assistance to integrate CCA into MOAD/ MoLD Budget Guidelines and Budget Proposals used to advocate to/through NPC and district authorities.		✓	✓
2.2.2 Integrate Climate Change Economic and Investment Appraisal Criteria (e.g, Cost-Benefit Analysis) into internal MOAD/ MoLD Project Preparation Guidelines. Priority to be given to ADS programs.		✓	✓
Outcome 3 - Evidence-based results for NAPs improved			
Output 3.1-Design and apply impact assessment framework for existing agriculture-based livelihood projects			
3.1.1 Development of related M&E tools for district authorities (DOAD, DLSO and DDCs) based on a stock taking of existing indicators and data collection processes within MoAD/ MoLD.			✓
3.1.2 Select 3 ongoing adaptation practices in target districts for developing adaptation impact case studies			✓
3.1.3 Prepare a programme monitoring framework including KPIs for enhanced CCA that for field monitoring of ADS priority programs.			✓
Output 3.2-Strengthened capacity of agriculture-based monitoring units for effective monitoring and adaptation budgeting			
3.2.1 Train MoAD/ MoLD monitoring unit on approaches to improve climate risk analysis and related data monitoring and management			
3.2.2 Prepare training modules and materials on CCA monitoring for central monitoring unit, District Planning Committees and MoAD/ MoLD Regional Centres.			✓
Outcome 4 - Advocacy and knowledge-sharing on NAPs promoted			
Output 4.1-Convened exchanges on science, technology and socio-economics of adaptation to support integration of adaptation options into national adaptation plans			
4.1.1 Engage in broader NAP process in Nepal and MoPE led meetings under Thematic Working Group on agriculture and food security.	✓	✓	

Outcome/ Output/ Activities	Global Advisors	Regional Team	Service Providers
4.1.2 Prepare contributions from agriculture sector to input into NAP for Nepal and contribute project knowledge and communications products to national scientific and technical workshops relevant for NAP development	✓	✓	
4.1.3 CCA options and strategies more broadly understood and appreciated by national stakeholders	✓	✓	
4.1.4 Support engagement of Nepalese agricultural sector decision-makers in global NAP dialogues	✓	✓	
4.1.5 Logistic support in organization of NAP-AFS-TWG meetings			

4.2. Integrated delivery of field level activities

The project activities will be delivered in an integrated manner at both national and local levels to the extent possible. A detailed overview of how the different activities link in their delivery is provided in Fig. 4.

The project activities primarily start at national level with stock taking of existing planning and budgeting processes within the agriculture development to identify entry points of mainstreaming CCA followed by syntheses of appropriate tools and method to assess climate change vulnerability and risk and cost-benefit of adaptation actions. Once finalized, the tools will be taken down to identified climate vulnerable sub national level to gather evidences required to understand context of local CC-vulnerabilities/risks, planning and budgeting processes and implementation of adaptation planning actions supporting integration of CC-adaptation process in agriculture. This process is intended to provide policy makers a choice in a rationale and evidence based manner.

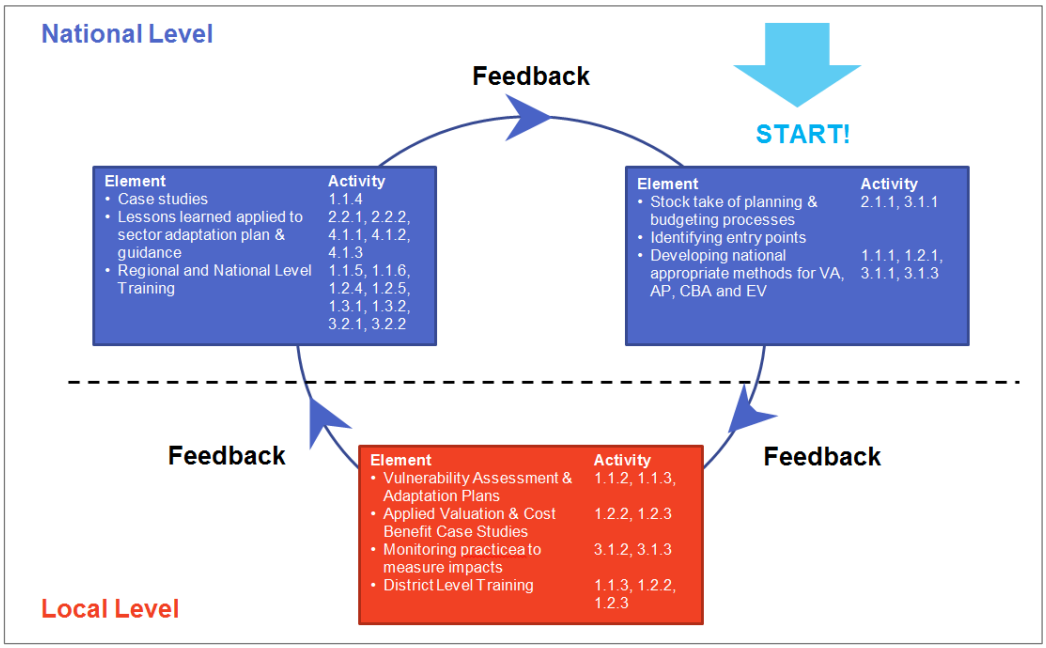

Fig. 4: Integrated delivery of project activities.

The project will provide trainings to relevant stakeholders at national and sub-national (district) level enhancing their technical skills on the sector based CC-adaptation planning and budgeting. The training content will be primarily developed through learning made through the project interventions. The project will help illustrate how to do sector adaptation planning, implementation, monitoring and evaluation. The lesson learnt through this exercise will be documented and communicated widely at national and international level through trainings, workshops, expos and seminars. The project will also aim to develop relevant technical knowledge products as required as a part of knowledge and information sharing to the process.

4.3. Geographical Focus

Selection of pilot districts in the NAP-Ag project is based on assessment of cumulative CC-vulnerability index, presence of implementing partners in the districts and the project's possible articulation to on-going climate change adaptation initiatives in the country. Representativeness by the districts of broader ecological and development regions in the country and their accessibility are other criteria taken into consideration, while picking up limited (#3) number of high ranking districts falling into the first quarter of cumulative index.

Fig. 5: Map of Nepal showing pilot districts (may be revised upon decision by MoAD)

A cumulative climate change vulnerability index was derived based on 'the cumulative index developed in 'climate change vulnerability mapping for Nepal' during NAPA process (MoE, 2010b), climate related disasters based economic loss published in MoHA portal (2016) and human poverty index (OpenNepal, 2016) adjusted into the fraction of one (Annex 2). Likewise, a matrix across each of the districts was derived representing presence of implementing

partners and/or other relevant climate change adaption initiatives. Presence of implementing partner would help to the project with staff support and that of other initiatives in articulated project delivery. The analysis of the district selection also considered aspects of different agriculture practices concentration over Nepal, representing physiographic regions and their watershed conditions.

With all of the analysis, the two lines of options are proposed for selection of 3 pilot districts containing Dolakha, Sindhuli and Mahottari districts in an option and Mugu, Dailekh and Bardia districts in the other subject to decision by the Ministry of Agriculture.

4.4. Detailed Implementation Plan

Outcome 1

Table 4: Overview of Outcome 1 and corresponding results/ outputs

Outcome/ Output/Activities	Results/Outputs	Timeframe									
		2016		2017				2018			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Outcome 1-Technical capacity and institutions on NAPs strengthened											
Output 1.1-Training and institutional capacity building in adaptation-sensitive planning											
1.1.1 Develop methods for CCA and CC-VA and planning and budgeting for the agriculture sector(s) based on a synthesis of methods already applied or suitable for Nepal context	Draft methodology for CCA and climate change vulnerability assessment and planning and budgeting										
1.1.2 Prepare climate change profiles for the agriculture sector in 3 target districts representing a cross-section of ecological zones (Terai, Mid-Mountain and High-Mountain)	District climate change profiles tailored to the agriculture sector (s) in the districts										
1.1.3 Conduct applied participatory vulnerability assessment and planning case studies and training exercises with support of project taskforce in the (3) target districts	Vulnerability assessment and adaptation planning reports in the (3) districts										
1.1.4 Identify and document lessons learned based on training application and demonstration activities on integrating CCA into national and district –level planning and budgeting processes	Lessons learned report identifying key findings from applied case studies for integrating adaption into existing agricultural planning processes.										
1.1.5 Conduct training of trainers on climate change adaptation and climate change vulnerability assessment and planning and budgeting for the agriculture sector in Nepal in five regional centres	Five regional-level training workshops										

Outcome/ Output/Activities	Results/Outputs	Timeframe									
		2016		2017				2018			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.1.6 Conduct national level training on climate change adaptation and climate change vulnerability assessment, risk management and planning budgeting for the agriculture sector in Nepal	National-level training workshop										
Output 1.2 Training and institutional capacity building in EV and IA tools											
1.2.1 Based on a synthesis of best practice materials and institutional stock taking, identify good methods and approaches for evaluating priority agricultural sector adaptation options in Nepal, using applied economic valuation of ecosystem support services and investment appraisal tools such as cost benefit analysis of agricultural adaptation practices	Draft methodology for applied economic valuation of ecosystem support services to the agriculture sector and cost benefit analysis of agricultural adaptation practices										
1.2.2 Conduct economic valuation of selected ecosystem services to the agriculture sector(s) as applicable to the 3 target districts. Hands-on training and support of project taskforce.	Applied case-study and lessons learned report										
1.2.3 Conduct cost benefit analysis for selected priority CCA measures/practices in the 3 target districts. Hands-on training and support of project taskforce.	Applied case-study and lessons learned report										
1.2.4 Conduct training of trainers on applied economic valuation of ecosystem support services to the agriculture sector and cost benefit analysis of agricultural adaptation practices in the regional centres	Five regional-level training workshops										
1.2.5 Conduct national level training on applied economic valuation of ecosystem services to the agriculture sector and cost benefit analysis of agricultural adaptation practices	National-level training workshop										
Output 1.3-Developed training materials based on needs identified											
1.3.1 Prepare instructional materials including a handbook for DDCs and field extension officers on how to prioritize, promote and mainstream CCA measures into planning processes for the agriculture sector(s)	Training manuals and materials										
1.3.2 Prepare handbook/ internal guidelines for relevant MOAD/ MoLD staffs to improve economic	Training manuals and materials										

Outcome/ Output/Activities	Results/Outputs	Timeframe									
		2016		2017				2018			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
appraisal of programs incorporating climate change costs and benefits of priority CCA practices											

The activities are designed to build technical and institutional capacity of key Ministries (agriculture, livestock, finance, planning, home affairs, local development, forestry and environment) involved in planning and budgeting for agriculture sector(s) and climate change and disaster risk management. Mainstreaming climate change adaptation concerns into the sector(s) through assessing and building on existing development priorities and planning/ budgeting processes is foreseen. Such includes organization of trainings with need assessment, formation of training materials and operation of case studies. Relevant assessments and case studies will be conducted in target districts through participatory approach in view of training local level planners, and the regional and national level trainings in association with training centres. In addition to V/RA, EV/IA, mainstreaming CCA measures into agriculture development planning and budgeting and assessing impacts of CCA (monitoring framework), the curriculum of the training would be adjusted to include technical aspects of formulating roadmaps, conducting in-country NAPs training and accessing climate finance possibilities.

Outcome 2

Table 5: Overview of Outcome 2 and corresponding results/ outputs

Outcome/ Output/Activities	Results/Outputs	Timeframe									
		2016		2017				2018			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Outcome 2 – Integrated roadmaps for NAPs developed											
Output 2.1-Institutional strengthening of MOAD/ MoLD and district authorities to mainstream CCA into ADS planning and budgeting											
2.1.1 Identify institutional gaps and elaborate planning road map with key entry points to better integrate CCA into MOAD/ MoLD and DDCs, with priority to be given to ADS programs.	• Needs assessment report, • Study validated at stakeholder workshop										
2.1.2 Technical assistance to improve existing climate change budget coding and expenditure tracking methods and mechanisms. Priority to be given to ADS programs.	Annex to MOAD/ MoLD Annual Budget Report and/or MTEF Submission (incorporates ADS Programming)			x	x						

Outcome/ Output/Activities	Results/Outputs	Timeframe									
		2016		2017				2018			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 2.2 Consultative dialogues and planning processes supported at national and district level to mainstream CCA into sector planning and budgeting											
2.2.1 Technical assistance to integrate CCA into MOAD/ MoLD Budget Guidelines and Budget Proposals used to advocate to/through NPC and district authorities.	• Technical assistance to revise guideline document; • Training on use and application of Guidelines in the Demonstration Districts			x	x						
2.2.2 Integrate Climate Change Economic and Investment Appraisal Criteria (e.g, Cost-Benefit Analysis) into internal MOAD/ MoLD Project Preparation Guidelines. Priority to be given to ADS programs.	• Revision of Project Preparation Guidelines by MOAD/ MoLD • Training other departments on use and application of the guidelines										

In view of ensuring that climate-induced risks, vulnerabilities and opportunities are given due considerations in national development plans and budgets, and aimed to integrate CCA options into agriculture sector development policies and strategies, the outcome contains activities to elaborate planning road-map through reviews on Agriculture Development Strategy to find institutional gaps and entry points (under FAO scope), and to introduce improvements in existing climate change budget coding and expenditure tracking methods (under UNDP scope).

The outcome will follow up through the evidence generated from the first outcome. The first outcome will provide comprehensive picture of climate change impact at the subnational level with its profiles in the agriculture sector, and of cost benefit analysis of adaptation measures and practices. With the first hand evidences, the support will provide MoAD/ MoLD to develop vision on integrating climate change adaptation learning in ADS implementation planning and budgeting cycle. The activity will initiate to identify current institutional gaps to elaborate road map and ensure key reforms required to better integrate CCA into agriculture sector planning and budgeting at central and subnational level. Climate change integration into the ADS key priority actions will be viewed and its economic and investment appraisal criteria defined. This will help to suggest and intervene reforms required in key aspect of agriculture sector public finance management such as strategic planning, budget formulation, budget database management, expenditure assessment & reporting and budget monitoring & evaluation.

Table 6: Overview of Outcome 3 and corresponding results/ outputs

Outcome/ Output/Activities	Results/Outputs	Timeframe									
		2016		2017				2018			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Outcome 3 – Evidence-based results for NAPs improved											

Outcome/ Output/Activities	Results/Outputs	Timeframe									
		2016		2017				2018			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 3.1-Design and apply impact assessment framework for existing agriculture-based livelihood projects											
3.1.1 Development of related M&E tools for district authorities (DADO/DLSO/DDCs) based on a stock taking of existing indicators and data collection processes within MOAD/ MoLD.	Summary report of stocktaking on existing indicators applied by MOAD/ MoLD										
3.1.2 Select three ongoing adaptation practices in target districts for developing adaptation impact case studies	Case study baseline reports for each site and practice										
3.1.3 Prepare a programme monitoring framework including KPIs for enhanced CCA that for field monitoring of ADS priority programs.	Summary framework report identifying tools for indicator-based, participatory field monitoring.										
Output 3.2-Strengthened capacity of agriculture-based monitoring units for effective monitoring and adaptation budgeting											
3.2.1 Train MOAD/ MoLD monitoring unit on approaches to improve climate risk analysis and related data monitoring and management	• National-level training workshop • Five regional-level training workshops										
3.2.2 Prepare training modules and materials on CCA monitoring for central monitoring unit, District Planning Committees and MOAD/MoLD Regional Centres.	Training manuals and materials										

Outcome 3

The outcome aims to formulate a monitoring framework for ADS priority programs with incorporation of appropriate key performance indicators measuring impacts of CCA measures on livelihood projects. The framework will be formulated based on stock taking of existing indicators and data collection processes and case studies on selected adaptation measures conducted in target districts. The purpose is to enable agriculture sector ministries to evaluate effectiveness of implemented CCA options, and such is desired to build on selection of appropriate CCA options (#3) and conduct of adaptation impact case studies. Effectiveness of the options is then determined using the monitoring framework. The national project management unit will design the case studies in coordination with global advisors and regional team. Service provider(s) hired to conduct the case studies in the target districts will work in close coordination with the NPMU members to select the CCA options, design the framework and form the case study reports. The monitoring framework developed will then be packaged into training modules and materials and delivered to relevant agriculture sector officials at central (#1) and subnational level (#5).

Outcome 4

In addition to the project implementing partners' engagement in the broader NAP-process meeting including the TWG on agriculture and food security (led by the project's NFP), the

partners (on turn basis rotation) will share on the logistic supports required by regular meetings of the TWG. Moreover, the project will contributes to the NAP-process in consolidating sector relevant knowledge and sharing lessons learnt and best practices.

The knowledge products and outreach tools prepared during the project implementation will be developed and shared to broader stakeholders, and the lessons learned documented and disseminated to make them informed of CCA options evolved in the project. The sectoral decision makers will also be facilitated technically and financially for their participation in global meetings and events to utilize such platforms to share the country's experiences and gain knowledge in CCA-process development.

Table 7: Overview of Outcome 4 and corresponding results/ outputs

Outcome/ Output/Activities	Results/Outputs	Timeframe									
		2016		2017				2018			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Outcome 4 – Advocacy and knowledge-sharing on NAPs promoted											
Output 4.1-Convened exchanges on science, technology and economics of adaptation to support integration of adaptation options into national adaptation plans											
4.1.1 Engage in broader NAP process in Nepal and MoPE led meetings under Thematic Working Group on agriculture and food security.	Nepal NAP reflects outputs and briefing materials prepared by MOAD whose generation or content is facilitated through project.										
4.1.2 Prepare contributions from agriculture sector to input into NAP for Nepal and contribute project knowledge and communications products to national scientific and technical workshops relevant for NAP development	• Agriculture sector briefing materials to be included in broader NAP • Agriculture sector scientific and technical papers prepared to inform broader NAP process as required										
4.1.3 CCA options and strategies more broadly understood and appreciated by national stakeholders	At least 5 national newspaper articles and/or public radio and TV segments that cover activities and/or technical presentations delivered to broader academic audience on project outputs and knowledge products										
4.1.4 Support engagement of Nepalese agricultural sector decision-makers in global NAP dialogues	Back-to-office reports and internal seminars delivered from participants in international fora.										
4.1.5 Logistic support in organization of NAP-AFS-TWG meetings											

Project Management Support Activities

In line with the above project interventions, following activities will require in their implementation support.

Table 8: Overview of Outcome 4 and corresponding results/ outputs

Outcome/ Output/Activities	Results/Outputs	Timeframe									
		2016		2017				2018			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Project establishment and team formation											
i. Project development and approval by the government	FAO-Government Agreement										
ii. Set up Project Steering Committee, Technical Taskforce and Management Unit	Formation and operationalization										
iii. Staffs recrutement	NPC and CCPO										
iv. Hire short term consultants/ service providers	Service providers in place and mobilized										
2. Organize workshops/ meetings and participation											
i. Project related workshops	Inception, kowledge sharing, review and reflection										
ii. PSC meetings	Meetings and minutes										
iii. PTT meetings	Meetings and minutes										
iv. NPMU meetings	Meetings and minutes										
v. Coordination meetings	Meetings and minutes										
vi. Webinar/ skype meetings	Presentation and sharing materials										
3. Lesson learned, documentation and media release											
i. Document preparation	Project related docs[7]										
ii. Reviews and edits	Reviewed/ edited products										
iii. Media release	Message										
iv. Update web-page	Updated information										
v. Workshop sharing	Papers/ presentations										
vi. Publications	IEC materials										
4. Oversight, monitoring and Evaluation											
i. Form project M &E frame-work and baselines	M&E planning and result matrix										
ii. Project activities monitoring by FAO/ UNDP support team	BTOR										
iii. Supervision and field activities monitoring by the PSC/PTT members	BTOR										
iv. Supervision and field activities monitoring by the regional/ global team members/experts	BTOR										
v. Mid-term evaluation	Support global mission/ coordination										
vi. Final project evaluation	Support global mission/ coordination										
5. Project implementation and progress reporting											
i. Project inception report	Report										

ii. Quarterly Project Implementation Report	Report										
iii. Terminal report	Report										

[7] Training/ communication materials, RFPs, TOR, contract, Proceedings, minutes

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Annexure

Annex 1: Program results framework and preliminary baseline information

Expected Results (Goal, Outcomes and Outputs)	Indicators	Base line	Target	Means of Verification (Data source & type)	Risks and Assumptions
Goal: Climate change concerns as they affect agricultural sector-based livelihoods are integrated in associated national and sectoral planning and budgeting processes	• Number of gender-sensitive adaptation action areas prioritized by the agriculture sectors, and commenced implementation in the context of existing national and subnational development frameworks. • Medium-term and annual budget for the agriculture sector adjusted to accommodate requirements for addressing climate change concerns.				1. Coordination, multiple partnership and institution related risks (medium). 2. Ownership of the project implementation related risk (Medium) 3. Knowledge, skill and attitude related risk (medium) 4. Financial limitation (Low) 5. Political unrest and security (High)
Outcome I: Technical capacity and institution-building on NAPs strengthened	Proportion of technical staff and public service officers supporting agriculture-based livelihood adaptation in relevant ministries trained in national adaptation planning and budgeting, including the technical aspects of formulating roadmaps, and conducting economics of adaptation assessments.			Attendance register of the training	
1.1 Training and institutional capacity building in adaptation-sensitive planning	1.1.1 No. of methods/ guidelines for climate change vulnerability assessment, planning and budgeting for the agriculture sector in Nepal.		30% of staff supporting CC risk management within key ministries.	Guidelines itself	
	1.1.2 No. of districts having climate change profiles for the agriculture sector	0	3	Climate change profiles of the districts	
	1.1.3 No. of districts covered under vulnerability assessment and planning case studies	0	3	Progress report	
	1.1.4 No. of document on lesson learnt on integrating CCA into national and district level planning and budgeting	0	1	Document on lesson learnt	
	1.1.5 No. of beneficiaries of ToT on climate change adaptation and climate change vulnerability assessment and planning and budgeting for the agriculture sector in Nepal (national and regional)	0	30% of staff supporting CC risk management within key ministries.	Attendance Resister	
1.2 Training and institutional capacity building in economic valuation and investment appraisal tools	1.2.1 No. of document and their qualities (of wider acceptance) that identify good methods and approaches for evaluating priority agriculture sector adaptation options in Nepal using applied economic valuation of ecosystem support services and investment appraisal tools such as cost benefit analysis of agricultural adaptation practices			Document/consultant report	
	1.2.2 No. of districts on economic valuation of selected ecosystem services to the agriculture sector	0	3	Economic Valuation Report	
	1.2.3 No. of cost benefit analysis events (districts) for selected priority CCA measures/practices undertaken by project technical taskforce	0	3	CBA report	

Expected Results (Goal, Outcomes and Outputs)	Indicators	Base line	Target	Means of Verification (Data source & type)	Risks and Assumptions
	1.2.4 No. of beneficiaries of ToT events on applied economic valuation of ecosystem support services to the agriculture sector and cost benefit analysis of agricultural adaptation practices in Nepal at national, regional and/or districts centers	0	30% of staff supporting CC risk management within key ministries	Training record	
1.3 Developed training materials based on needs identified	1.3.1 No. of instructional materials including a handbook for DDCs and field extension officers on how to prioritize, promote, and mainstream CCA measures into planning processes for the agriculture sectors	0	1	Instruction materials	
	1.3.2 No. of handbook/ internal guidelines for relevant MOAD/MOLD staff to improve economic appraisal of programs incorporating climate change costs and benefits of priority CCA practices	0	1	Handbook/guidelines	
Outcome II: Integrated roadmaps for NAPs developed	• Number of national and subnational planning and budgeting roadmaps formulated, taking gender into account, to guide the process of integrating climate change concerns affecting livelihoods into the agriculture sector. This includes documents containing current, future scenarios for the agriculture-sector under conditions of climate change (including both slow onset and extremes), cost-benefit assessments of adaptation options, documentation of climate-resilient budgeting in the agriculture sector, as well as stock-taking of national and subnational priority adaptation options that also safeguard livelihoods.	0	A consolidated and mandated integrated roadmap for NAPs with a particular focus on the agriculture sector.	Annual Plan with budgets	
	• Number of target institutions with increased technical capacity to manage adverse impacts of climate change on agriculture-based livelihoods.		At least 5 key institutions at national and sub-national level.	Plan/progress reports of targeted institutions	
	• Percentage of the budget of the public institutions (national-sub national) allocated to climate change adaptation concerns of the agricultural sector		20% increase in budget allocations dedicated to address climate change adaptation priorities	Increased budget and expenses	
2.1 Institutional strengthening of MOAD and district authorities to mainstream CCA into ADS planning and budgeting	2.1.1. Report that identifies institutional gaps and elaborates planning road map with key entry points to better integrate CCA into MOAD and DDCs, with priority to be given to ADS programs.	*0*	1	Report on institutional gaps and roadmaps	
	2.1.2. No. and type of technical assistance events that improve existing climate change budget coding and expenditure tracking methods and mechanisms. Priority to be given to ADS programs.			Minute/Decisions/Action points	
2.2 Consultative dialogues and planning processes supported at national and district level to mainstream CCA into sector planning/ budgeting	2.2.1 No. and type of technical assistance events that integrate CCA into MOAD/ MOLD Budget Guidelines and Budget Proposals used to advocate to/through NPC and district authorities.			Minute/Decisions/Action points	
	2.2.2 No. of MOAD project preparation guidelines/documents using Climate Change Economic and Investment Appraisal Criteria in implementation of ADS programs.			Guidelines/Documents	

Expected Results (Goal, Outcomes and Outputs)	Indicators	Base line	Target	Means of Verification (Data source & type)	Risks and Assumptions
Outcome III: Evidence-based results for NAPs improved	Number of ministries of agriculture with impact evaluation frameworks for adaptation in the agriculture sector based on quasi-experimental design principles adopted. These frameworks include the identification of differential needs and adaptation options for men and women and the systematic integration of gender-sensitive indicators or sex-disaggregated data into data collection and analysis systems of the government.	0	Ministries for agriculture (MOAD/ MOLD) adopt impact assessment frameworks based on quasi experimental design frameworks	Impact evaluation report	
3.1 Design and apply impact assessment framework for existing agriculture-based livelihood projects	3.1.1. Document on M&E tools for district authorities (DDCs) based on a stock taking of existing indicators and data collection processes.	0	1	Document on M&E tools / application reports	
	3.1.2. No. of adaptation practices in target districts taken for developing adaptation impact case studies (target-3)	0	3	Case studies	
	3.1.3. No. of Project monitoring framework including KPIs for enhanced CCA that for field monitoring of ADS priority programs.	0	1	Monitoring framework with tools	
3.2 Strengthened capacity of agriculture-based monitoring units for effective monitoring and adaptation budgeting	3.2.1 No. of trainings to MOAD monitoring unit on approaches to improve climate risk analysis and related data monitoring and management	0	6	Attendance register	
	3.2.2 Training modules and materials on CCA monitoring for central monitoring unit, District Planning Committees and MOAD Regional Centers prepared.	0	1	Training modules	
Outcome IV: Advocacy and knowledge-sharing on NAPs promoted	• Number of best practices and lessons learned, taking into account gender dimensions, from the project disseminated. This will include dissemination through documentation and relevant communication platforms at national and international levels		4 national exchange consultations and 8 case studies shared per country	Documents on best practices and lesson learned	
	• Number of communication platforms in which best practices and lessons learnt were shared and disseminated at the national and international platforms (south-south exchanges, SSC global supply-demand matching platform, regional forums) and at the UNFCCC (including events organized in partnership with LEG).			Register of events on sharing/ dissemination of lesson learned	
4.1 Convened exchanges on science, technology and economics of adaptation to support integration of adaptation options into national adaptation plans	4.1.1. No. of MoPE led meetings under thematic working group on agriculture and NAPs in order to engage in broader NAP process in Nepal			Meeting minutes	
	4.1.2. No. of knowledge and communication products shared in national scientific and technical workshops relevant for NAP development			Proceedings of national scientific and technical workshops	
	4.1.3. No. of capacity building and awareness raising events to ensure CCA options and strategies more broadly understood and appreciated by national stakeholders			Attendance register of capacity building and awareness raising events	
	4.1.4. No. of global dialogue events where Nepalese agricultural sector decision-makers participate			Presentation materials/ Individual report from participants	

Expected Results (Goal, Outcomes and Outputs)	Indicators	Base line	Target	Means of Verification (Data source & type)	Risks and Assumptions
	4.1.5. No. of NAP-Ag supported of NAP-AFS-TWG meetings		1 in a quarter	No. of meeting and minutes	

Annex 2: Selection of pilot districts based on cumulative CC-vulnerability and presence of implementing partners

Districts	Watershed Condition[8]	Cumulative cc-vul index, NAPA 2010[9]	Eco- loss index of C-disaster[10]	HPI[11]	Sum of CC-vulnerability. indices	FAO-GCP	UNDP-CDRMP	UNDP-EBA	UNDP-CFGORRP	DFID-EFLGP	UNDP-NCCSP	PPCR[12]	Order
	Climate change vulnerability					Presence of other CCA initiatives							
Achhaam	0.100	0.662	0.002	0.467	1.131		✓				✓	✓	48
Arghakhanchi	0.400	0.230	0.092	0.274	0.595	✓	✓						12
Baglung	0.200	0.574	0.175	0.273	1.023		✓						40
Baitadi	0.200	0.464	0.832	0.396	1.692								71
Bajhang	0.200	0.538	0.022	0.453	1.014								38
Bajura	0.200	0.474	0.004	0.433	0.911						✓		29
Banke	0.200	0.071	1.000	0.321	1.392		✓					✓	63
Bara	0.100	0.432	0.011	0.401	0.843		✓						21
Bardiya	0.100	0.296	1.000	0.323	1.619						✓		70
Bhaktapur	0.400	0.886	0.097	0.194	1.177		✓						53
Bhojpur	0.200	0.565	0.199	0.330	1.095		✓						45
Chitawan	0.100	0.725	0.010	0.248	0.983		✓			✓		✓	34
Dadeldhura	0.200	0.523	0.039	0.358	0.920		✓						30
Dailekh	0.300	0.625	1.000	0.414	2.039						✓		72
Dang	0.500	0.205	1.000	0.349	1.554						✓		65
Darchula	0.200	0.395	0.006	0.331	0.732								18
Dhading	0.300	0.785	0.044	0.334	1.163		✓						52
Dhankuta	0.200	0.311	0.035	0.276	0.622		✓						13
Dhanusha	0.100	0.635	0.022	0.417	1.074		✓			✓			43
Dolakha	0.100	0.855	0.364	0.357	1.576		✓					✓	68
Dolpa	0.300	0.649	0.053	0.446	1.147						✓		50
Doti	0.200	0.513	0.066	0.436	1.015		✓						39
Gorkha	0.200	0.733	0.008	0.336	1.077					✓			44
Gulmi	0.400	0.280	0.015	0.274	0.569								7
Humla	0.100	0.476	0.385	0.493	1.354						✓		62
Ilaam	0.200	0.140	0.161	0.270	0.571		✓						8
Jajarkot	0.200	0.838	0.013	0.442	1.293						✓		59
Jhapa	0.100	0.125	0.084	0.218	0.427		✓						4
Jumla	0.200	0.562	0.000	0.421	0.983		✓				✓		35
Kailali	0.100	0.192	0.006	0.295	0.493		✓				✓		5
Kalikot	0.200	0.648	0.003	0.452	1.103						✓		47
Kanchanpur	0.100	0.309	0.003	0.266	0.578								10

[8] DoSC, 2014. Annual report, Department of soil Conservation. Available at http://www.dscwm.gov.np/images/pdf/Annual_Report_Final_2015.pdf

[9] Cumulative CC-vulnerability index (higher the index, higher the vulnerability) adopted from climate change vulnerability mapping for Nepal-NAPA (MoE, 2010)

[10] Index based on economic loss (higher the index, higher the loss) due to landslide, thunderstorm, flood, heavy rainfall and windstorm available at http://drrportal.gov.np/reports

[11] District human poverty index(higher the index, higher the poverty) based on human development report , 2014 available at http://data.opennepal.net/content/human-poverty-index-value-districts-2011; adjusted HPI value=(HPI index /100)

[12] Pilot Project on Climate Resilience, Sectoral Case Study Districts

Districts	Watershed Condition[8]	Cumulative cc-vul index, NAPA 2010[9]	Eco- loss index of C-disaster[10]	HPI[11]	Sum of CC-vulnerability. indices	FAO-GCP	UNDP-CDRMP	UNDP-EBA	UNDP-CFGORRP	DFID-EFLGP	UNDP-NCCSP	PPCR[12]	Order
Kapilbastu	0.100	0.290	0.001	0.383	0.673	✓							15
Kaski	0.200	0.389	0.018	0.165	0.572		✓	✓		✓			9
Kathmandu	0.400	1.000	1.000	0.225	2.225		✓					✓	73
Kavrepalanchowk	0.500	0.180	0.087	0.273	0.540		✓			✓			6
Khotang	0.300	0.647	0.384	0.295	1.325								61
Lalitpur	0.300	0.193	0.037	0.192	0.422		✓						3
Lamjung	0.200	0.948	0.057	0.270	1.275					✓			58
Mahottari	0.100	0.785	1.000	0.448	2.233		✓		✓				74
Makawanpur	0.200	0.496	0.020	0.284	0.801		✓						19
Manang	0.300	0.650	0.000	0.255	0.905								28
Morang	0.100	0.228	0.113	0.253	0.594		✓						11
Mugu	0.100	0.922	1.000	0.452	2.374						✓		75
Mustang	0.500	0.559	0.013	0.312	0.884		✓					✓	26
Myagdi	0.300	0.492	0.165	0.285	0.943							✓	31
Nawalparasi	0.200	0.414	0.000	0.280	0.694		✓			✓			16
Nuwakot	0.500	0.337	0.177	0.357	0.871								25
Okhaldhunga	0.500	0.680	0.021	0.356	1.057								42
Palpa	0.300	0.003	0.000	0.252	0.255								1
Panchthar	0.200	0.531	0.017	0.337	0.885		✓					✓	27
Parbat	0.500	0.525	0.099	0.246	0.870			✓					24
Parsa	0.100	0.604	0.024	0.364	0.992								36
Pyuthan	0.300	0.248	1.000	0.339	1.587								69
Ramechhap	0.400	0.995	0.208	0.364	1.566								66
RASUWA	0.100	0.426	0.004	0.422	0.852								22
Rautahat	0.100	0.536	0.034	0.464	1.034					✓			41
Rolpa	0.200	0.548	0.280	0.386	1.214						✓		55
Rukum	0.300	0.536	0.045	0.390	0.971		✓				✓		33
Rupandehi	0.200	0.000	0.000	0.262	0.262								2
Salyan	0.200	0.603	0.000	0.406	1.009								37
Saptari	0.100	0.852	0.081	0.336	1.270		✓		✓	✓			57
Sarlahi	0.100	0.410	0.071	0.383	0.865		✓			✓			23
Shankhuwasabha	0.100	0.574	0.149	0.439	1.162		✓						51
Shyanja	0.500	0.182	0.135	0.380	0.696		✓	✓					17
Sindhuli	0.200	0.567	0.007	0.380	0.954					✓			32
Sindhupalchowk	0.200	0.403	0.271	0.426	1.100		✓						46
Siraha	0.100	0.749	0.139	0.325	1.213	✓			✓	✓			54
Solukhumbu	0.100	0.725	0.584	0.265	1.574				✓				67
Sunsari	0.100	0.515	0.261	0.364	1.139		✓						49
Surkhet	0.500	0.231	1.000	0.253	1.484		✓						64
Tanahu	0.300	0.503	0.015	0.298	0.815								20
Taplejung	0.100	0.756	0.204	0.264	1.225		✓						56
Terhathum	0.200	0.288	0.038	0.330	0.656		✓						14
Udayapur	0.300	0.956	0.060	0.297	1.314	✓	✓		✓				60

Annex 3: The Inception workshop proceedings

Supporting Nepal to Integrate Agriculture Sector(s into National Adaptation Plan
(UNFA/NEP/616/UND)
Hotel Yak and Yati, Darbarmarg, Kathmandu, 03 October 2016

(Rapporteurs: Binod Kumar Bhattarai and Parashu Ram Adhikari, MoAD)

Participants of the inception workshop

S.N.	Name of the participants	Organization/ Designation
1.	Mr. Yogendra Kumar Karki	Joint Secretary/ MoAD
2.	Mr. Lekhnath Acharya	Joint Secretary/ MoAD
3.	Mr. Shyam Paudel	Joint Secretary/ MoLD
4.	Dr. Yubak Dhoj GC	Director General/ DoA
5.	Dr. Somsak Pipoppinyo	FAO Representative
6.	Mr. Vijay Singh	ACD/ UNDP
7.	Mr. Bean Damen	FAO
8.	Mr. Glen Hodes	UNDP
9.	Mr. Apar Paudel	UNDP
10.	Mr. Ram Luitel	FAO
11.	Mr. Binod Kumar Bhattarai	MoAD
12.	Mr. Parshuram Adhikari.	MoAD
13.	Dr. Shree Bhagwan Thakur	NAP Process
14.	Mr. Batu Krishna Uprety	NAP Process
15.	Dr. Deepak Mani Pokhrel	FAO
16.	Mr. Laxman Uprety	NEFEJ
17.	Ms. Bidya Pandey	MoAD
18.	Ms. Jyotsana Shrestha	MoAD
19.	Dr. K.P. Pant	FAO
20.	Ms. Anupa Lamichhane	UNDP
21.	Ms. Bella Tarkangy	UNDP
22.	Mr. Ghanasyam Malla	NARC
23.	Mr. Ramesh Sharma	UNDP
24.	Mr. Pragyanjan Yalamber Rai	MoF
25.	Mr. Ram Hari Bantawa	MoPE
26.	Dr. Binod Shaha	FAO
27.	Mr. Anil Kumar Acharya	MoAD
28.	Mr. Indra Hari Paudel	MoAD
29.	Mr. Narayan Bahadur Thapa	Ministry of Home
30.	Mr. Baikuntha Bhandari	Sai Nepal
31.	Mr. Shrawan Adhikary	FAO
32.	Mr. Mahendra Poudel	MoAD
33.	Mr. Sunil Kumar Chaudhary	Fox of Nepal
34.	Mr. Surendra Shah	GoN
35.	Mr. Basu Dev Kaphle	MoAD

Schedule of the inception workshop

Time	Program	
15.00-15:15	Registration	
15:15-15:20	Welcome of the participants and take chair by participants Chairperson: The Secretary, MOAD Dr. Somsak Pipoppinyo, FAOR Mr. Renaud Meyer, Country Director, UNDP Mr. Damen Beau, LTO, FAO-RAP Mr. Glenn Hodes, UNDP-BRH Ms. Bella Tonkonogy, UNDP Rest of the participants	Master of Ceremony
15:20-15:25	Welcome to participants	Mr. Lekh N Acharya, Joint Sec. MoAD
15:25-15:35	Self introduction of participants	All participants
15:35-15:50	National Adaptation Plan (NAP)-process, the road-map and progresses	Batu Krishna Upreti (NAP-TL), Representative, MoPE
15:50-16:20	NAP-Agriculture: supporting Nepal to integrate agricultural sectors into National Adaptation Plan	Beau Damen, FAO-RAP/ Glenn Hodes, UNDP-BRH
16:20-16:35	NAP-Agriculture: Nepal component activities and implementation arrangements	Deepak Mani Pokhrel, NPC
16:35-17:15	Open floor discussion	Moderated by Chairperson
17:15-17:30	Response from FAO and UNDP	Dr. Somsak Pippopinyo, FAOR Mr. Vijaya Singh, ACD/ UNDP
17:30-18:00	Chairperson's Remark followed by putting the session to end	The Secretary, MoAD
18:00	Dinner	All participnts

Operation of the inception workshop

The inception workshop on the project entitled “Supporting Nepal to Integrate Agricultural Sectors into National Adaptation Plans (NAPs)” was organized on the 3rdof October in 2016 at Yak and Yeti Hotel, Kathmandu. Nepal is one of the eleven countries receiving support from German Federal Ministry of the Environment (BMUB) for the project. The project aims to support the Ministry of Agricultural Development (MoAD) and relevant ministries to integrate agricultural sectors into the national NAP process and climate change adaptation into sector planning and budgeting processes. The project envisages meeting four outcomes namely,

Outcome 1: Technical Capacity and institution building on NAPs strengthened
Outcome 2: Integrated roadmaps for NAPs developed
Outcome 3: Evidence-based results for NAPs improved
Outcome 4: Advocacy and Knowledge sharing on NAPs promoted

The project is being implemented by FAO and UNDP upon guidance of MoAD.

Mr. Yogendra Kumar Karki, the officiating Secretary for the Ministry of Agricultural Development chaired the workshop, where Joint Secretaries from Ministry of Agricultural

Development, Ministry of Livestock Development, Director Generals from the departments of agriculture and livestock services, Executive Director of NARC, representatives of Ministries for home affairs, population and environment, development partners, private sectors including media personnel participated. Dr. Somsak Pipoppinyo (FAOR) and Mr. Vijaya Singh (ACD, UNDP), with project team, represented respective implementing organizations. Mr. Beau Demen from FAO RAP, Mr. Glenn Hodes from UNDP-BRH and Ms. BellaTonkonogy from UNDP participated in the workshop as international experts. The detail list of participants is attached in Annex 1.

Upon permission of the chairperson, Mr. Binod Kumar Bhattarai as Master of Ceremony operated the event as per schedule in order of welcome speech, self introduction by participants, paper presentations, discussion and summarization.

Fig. 1: Inception workshop operation.

Mr. Lekhanath Acharya, Joint Secretary in MoAD and National Focal Person of the project, while delivering welcome speech to the participants, highlighted the importance of integrating agriculture sectors into the NAP Process. Agriculture being one of the most vulnerable sectors to climate change effects, Mr. Acharya with the project anticipated appropriate measures be developed for the sector and necessary support from the sector generated to the country's NAP formulation process led by the Ministry of Population and Environment. Moreover, as the chairperson of the project's technical task force and agriculture and food security (nutrition) thematic working group (TWG) under the national NAP process, he informed the participants of the committees been formed and the first meeting of the TWG held recently, and of his commitment to provide the committees with necessary supports. He called for coordinated efforts to achieve the project outcomes within the project period commensurate with NAP formulation that is a complicated process involving several stakeholders. Finally he thanked FAO and UNDP for undertaking responsibilities to carry out the project, and anticipated the project outcomes contributing to an access to global funds.

Mr. Batu Krishna Uprety (Team Leader of NAP Process) on behalf of MoPE discussed on the national NAP process and till date progresses on it. He mainly shared on the i) Climate Change Adaptation- Global to National context(including efforts made in the past, Nepal's successful formulation of NAPA and LAPA, the journey from NAPA to NAPs and negotiations and commitments from Cancun to Paris leading to form NAPs.) ii) NAP Process in Nepal iii)Progresses on NAP activities and iv)Alligning NAP-Agactivities with NAP process and pointed out that the NAP formulation approach involved i) Establishing working groups to coordinate multi-stakeholder thematic areas and utilising existing coordination mechanisms; ii) Building capacity and enhancing understanding on CCA; iii0 Building ownership and avoiding duplications on efforts; iv) Promoting multi-stakeholder participation; v)Ensuring gender-sensitivity and inclusiveness; vi) 'LEAVING NO ONE BEHIND'; vii) Generating, utilizing and sharing knowledge and good practices; viii) Adopting 'development first' with integration of adaptation actions; ix) Aligning with national policies and linking with recent initiatives (DRR and SDGs), and x). Synergizing ecosystem-based and community-based adaptations (the discussion paper attached). As NAP formulation process involved multi stakeholders with principle of 'leaving no one behind', the NAP process had ensured participation of about 200 organizations including 14 ministries through formation of Thematic Working Groups (#7) led by sectoral ministries and Cross Cutting Working Groups (#2) to support the process.

Putting light on importance of aligning NAP-Ag activities with the NAP process, he emphasized the national NAP process required programmatic and fund supports for capacity building, resilience development and undertaking mitigation and adaptation measures and highlighted roles of multi sector organizations including UNDP/FAO, Practical Action, ICIMOD, CDKN, CARE and WWF for supporting the NAPs process. Mr. Uprety, in his presentation, stressed out the expectation made from the NAP-Agriculture project; hoped that the project would be strongly linked to (and support) Nepal's NAP process initiated by MoPE, and meet the common objectives of i) reducing vulnerabilities and ii)integrating Climate Change Adaptation into new and existing policies, programmes and activities.

The second presentation of the workshop entitled 'Agriculture Sector Integration into NAPs'" was jointly made by Mr. Beau Demen from FAO RAP and Mr. Glenn Hodes from UNDP-BRH. The presenters highlighted the UNFCCC (Cancun) framework for NAPs formulation, and pointed out importance of NAPs as an opportunity for countries to be able to 1) address risks and vulnerabilities in climate-sensitive sectors, 2) identify and prioritize response actions, 3) coordinate and integrated these with wider policy, planning and budgeting processes and 4) strengthen capacities to use domestic and international climate finance more effectively to reduce loss and damage in the sector. They expressed NAP. as a continuation of NAPA process, would help in accessing and implementing LDCF, GCF GEF and other bilateral funds available; described NAP- Agriculture project in global scenario being implemented partnered FAO and UNDP; discussed on gender mainstreaming in the NAP- agriculture project; emphasized on the need to identify entry points in the planning process to integrate CCA into sector planning, programs and budget, and concluded –

i. Sector integration is a crucial element of the NAP process
ii. Identifying entry points along the planning cycle facilitates effective mainstreaming
iii. Many experiences and lessons learned
iv. Wide range of support available to countries from NAP-AG and NAP GSP

The third and final presentation of the workshop was made by Dr. Deepak Mani Pokhrel on 'Supporting Nepal to Integrate Agriculture Sectors into NAPs: Activities implementation'. In his presentation, Dr. Pokharel underlined on the brief of the background on NAP-Agriculture project in Nepal, achievements till date and the road ahead. As per the presentation, NAP-Agriculture project was approved by the Government of Nepal on 21 June.The project is country driven guided by national priorities and circumstances and linked to ongoing initiatives. The following are the achievements till date;

i. National project document formed
ii. GoN participation in global workshop in Rome (April 2016)
iii. TOR for economic appraisal specialist consultant drafted (UNDP)
iv. Nepal NAP- Ag poster and project launch media release.
v. FAO-GoN agreement to implement the project
vi. Lead consultant and Agriculture Adaptation Planning Expert (Nat.Project Coordinator) hired
vii. Hiring PO (climate change) at last stage
viii. Office of the NPMU established
ix. Project Steering Committee formed
x. Project Technical Task Force formed
xi. The inception workshop

Dr. Pokhrel also presented the detailed activities proposed under the four outcomes and the project organization and management structure. At national level, the Project Steering committee (PSC) supported by a Project Technical Task Force would be guiding the project implementation and a Project Management Unit and technical service providers hired would carry out the project activities. He briefly described on the composition and TOR of the Project steering committee chaired by the secretary in the Ministry of Agricultural Development, and the Technical Task Force chaired by National Focal Person and the joint secretary of Food security, Agribusiness and Environment Division in the ministry, who is member-secretary in the PSC of the Steering committee.

The chairperson opened the floor to discussions after all presentations. The following are the issues raised by the participants;

1. Mr. Shyam Prasad Paudel, Joint Secretary in the Ministry of Livestock Development queried on the term 'agriculture' used in the project to know whether it covered or not the livestock and fisheries sub-sectors. If it covered the sub--sectors, Mr.Poudel suggested to enter adjustments where appropriate in the project activities so as to address the pertinent issues (including capacity building activities mentioned for MoAD) in the sub-sectors as well.
2. Dr. Yubak Dhoj GC (Director General, Department of Agriculture) appreciated the project concept to integrate agriculture sector into NAPs. He highlighted the importance of this initiative as agriculture sector is the most vulnerable sector of climate change risks and adversities. However, he was surprised not to see DoA in both of the committees. As DoA is involved in implementation and monitoring of agriculture development and directly supervise the District and local level institutions, there should have been provision for its representation in the committees.
3. Mr. Narayan Bahadur Thapa(Under Secretary, Ministry of Home Affairs) agreeing with the former commentators emphasized on the need for proper representation of appropriate stakeholders in the committees, and suggested the DRR issues addressed by the project.

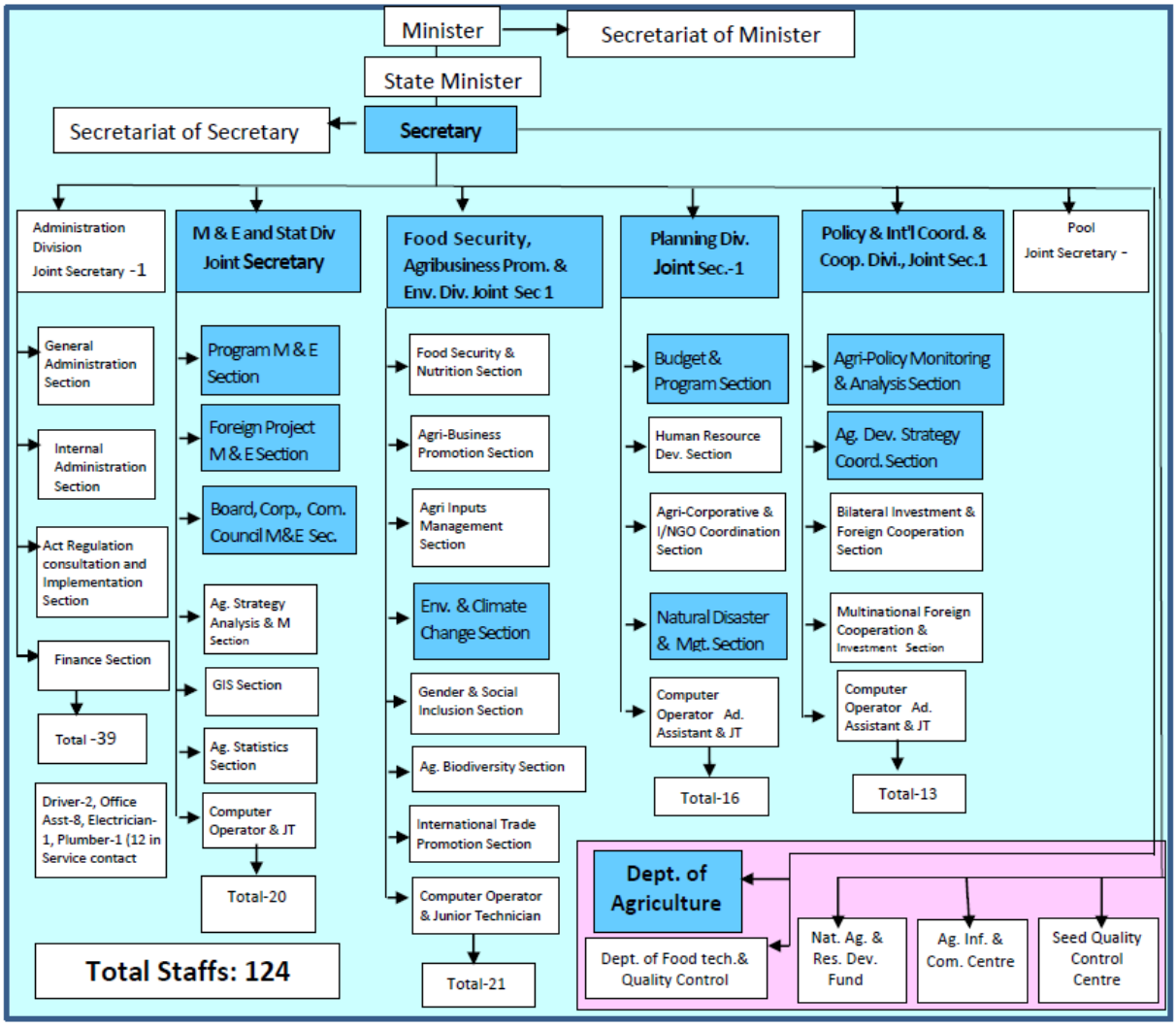
4. Dr. Bhagwan Thakur (Consultant in the national NAPs Process) emphasized proper collaboration by sectors in the NAPs formulation processespecially by the TWG on Agriculture and Food Security (Nutrition) managed byMoAD and anticipated NAP-agriculture project's support to the TWG.
5. Mr. Laxman Uprety (journalist) commented on number of target districts in the project on ground mere 2-3 districts would not perfectly represent diverse agro-ecological situations of the country.
6. Mr. Baikuntha Bhandari (journalist) raised technical issue of difference between vulnerability and risk assessment.
7. Dr. Somsak Pipoppinyo (FAO Country Representative), while responding to some of the issues raised by stakeholders, made clear that the project would not be catering overall climate change adaptation related issues as the project is designed to pilot a framework (tool) implementable in agriculture sector planning and monitoring, which could later be shared to other sectors of development. This is initial stage of the project implementation, where the project steering committee is functional to enter required amendments through decisions. FAO will be providing trainings and capacity development supports on CC vulnerability assessment, planning and budgeting and UNDP on cost benefit analysis and economics of climate change adaptation as per needs of MoAD and relevant ministries.
8. Mr. Vijaya Singh(Acting Country Director in UNDP country office) further cleared that the project was not providing any package of support, but piloting some tools to develop. With pleasure of having the project inception conducted, Mr. Singh appreciated the project concept being implemented globally in partnership of UNDP and FAO. He elaborated that the implementation would be country driven, and UNDP and FAO would be executing different but complementing role and responsibilities focused on trainings and capacity building according to country situations and the expertise the organizations had.
9. Dr. Deepak Mani Pokharel (National Project Coordinator) elucidated that the term 'agriculture' as used in the project included crops as well as livestock and fisheries; therefore, project delivery of trainings and capacity building intervention would include MoAD as well as other ministries relevant in agriculture development planning and budgeting and adjustments in the project activities would be incorporated considering changed context of the then MoAD.
10. Mr. Batu Krishna Uprety (Team leader- NAPs process) further highlighted the past efforts and need of coordinated works among sectors in the NAP formulation. With commitment in supporting the ministry for necessary logistics whenever it required, Mr. Uprety hoped that MoAD, with the NAP-Agriculture project, would produce valuable contribution in the NAPs process as the ministry is entitled of coordinating National NAP-process 'Agriculture and Food security (Nutrition)' Thematic Working Group.

The chairperson of the workshop and officiating secretary of the Ministry of Agricultural Development, Mr. Yogendra Kumar Karki, on his concluding remarks, thanked all the presenters for their clear presentations and FAO and UNDP for organizing the inception workshop. Mr. Karki acknowledged 'support to the NAP process in its roadmap, sector integration into the NAP-process and collaborative implementation' as three broader scope (objectives) of the project, and appreciated the project and its inception in view of alarming and multidimensional impacts of climate change (anthropogenic and natural) in agricultural sector(s). He suggested fixing targets and meeting them in way duplications in activities among stakeholders are minimized. Further suggested are missing representation of valuable

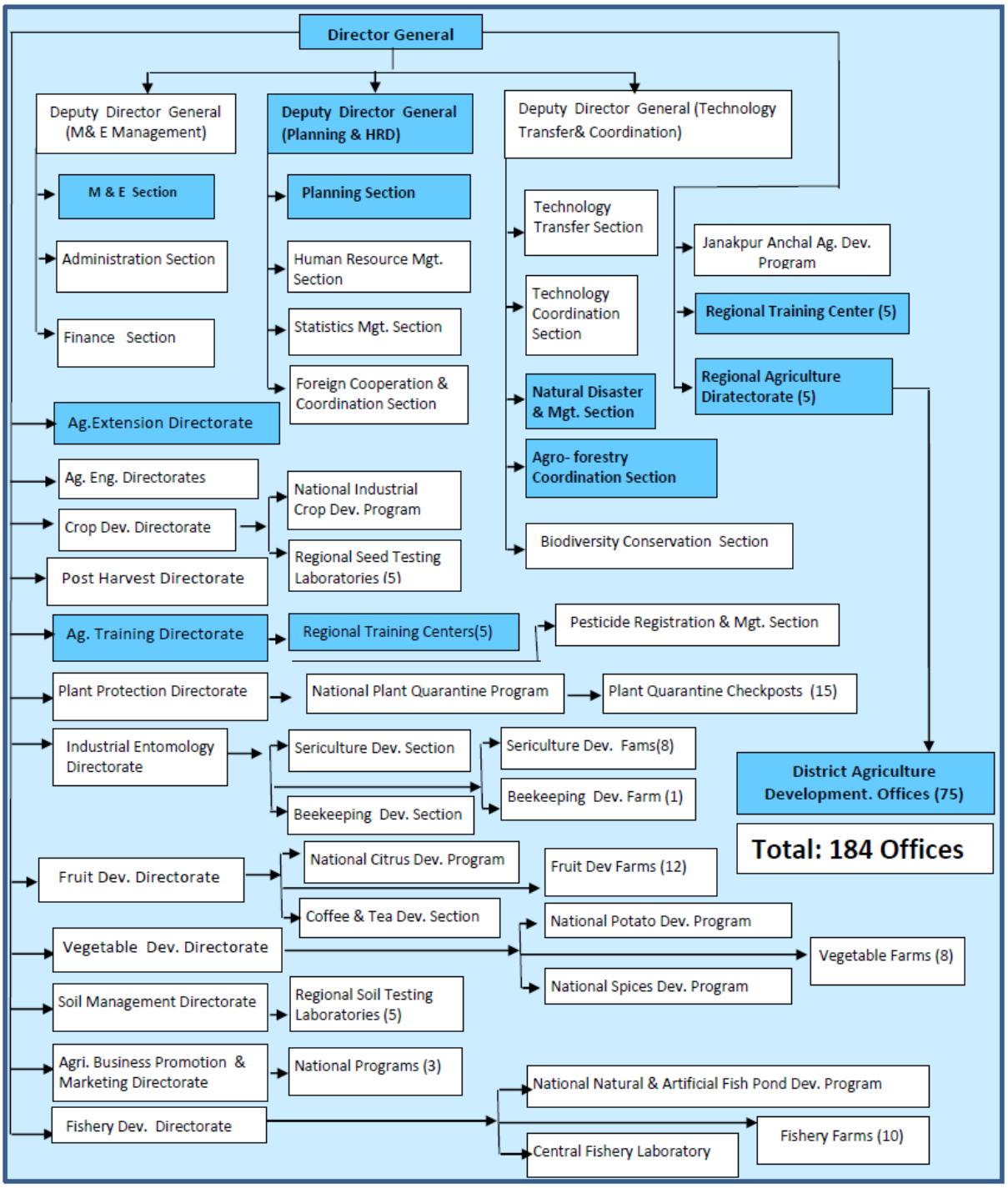
stakeholders in the PSC and PTT corrected through rework and PSC decision; pilot districts in the project selected representing high mountain, middle mountain and terai region of the country; participation/cooperation from wider stakeholders fetched; learning from global, regional and local perspectives; practicality, cost effectiveness and agricultural perspectives of water conservation and use, land development and livelihood promotion considered, and project's exit strategies identified. Reiterating on the importance of integrating agriculture into NAPs, Mr. Karki, committed full supports from the Ministry of Agricultural Development for the project's successful implementation.

Annex 4: Organization structures in agricultural ministries depicting major involvement in agriculture development planning and monitoring

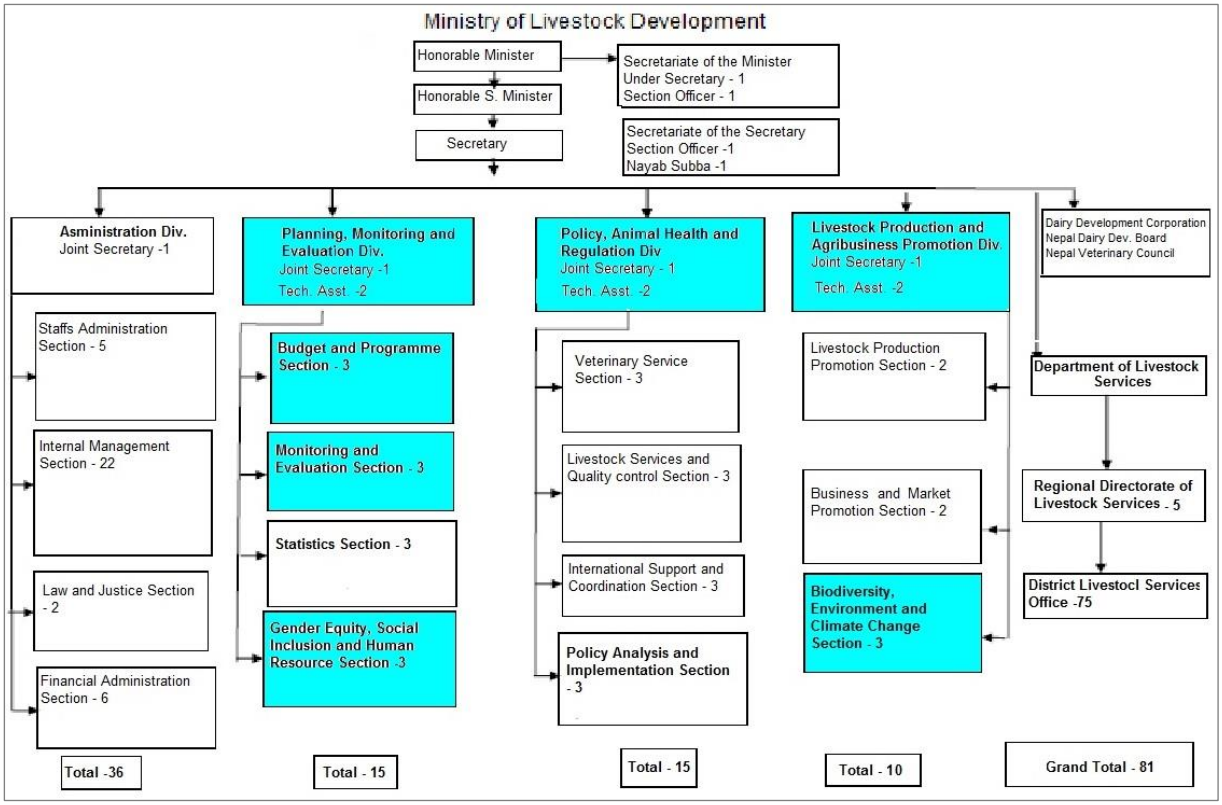
a. Ministry of Agricultural development (MoAD)



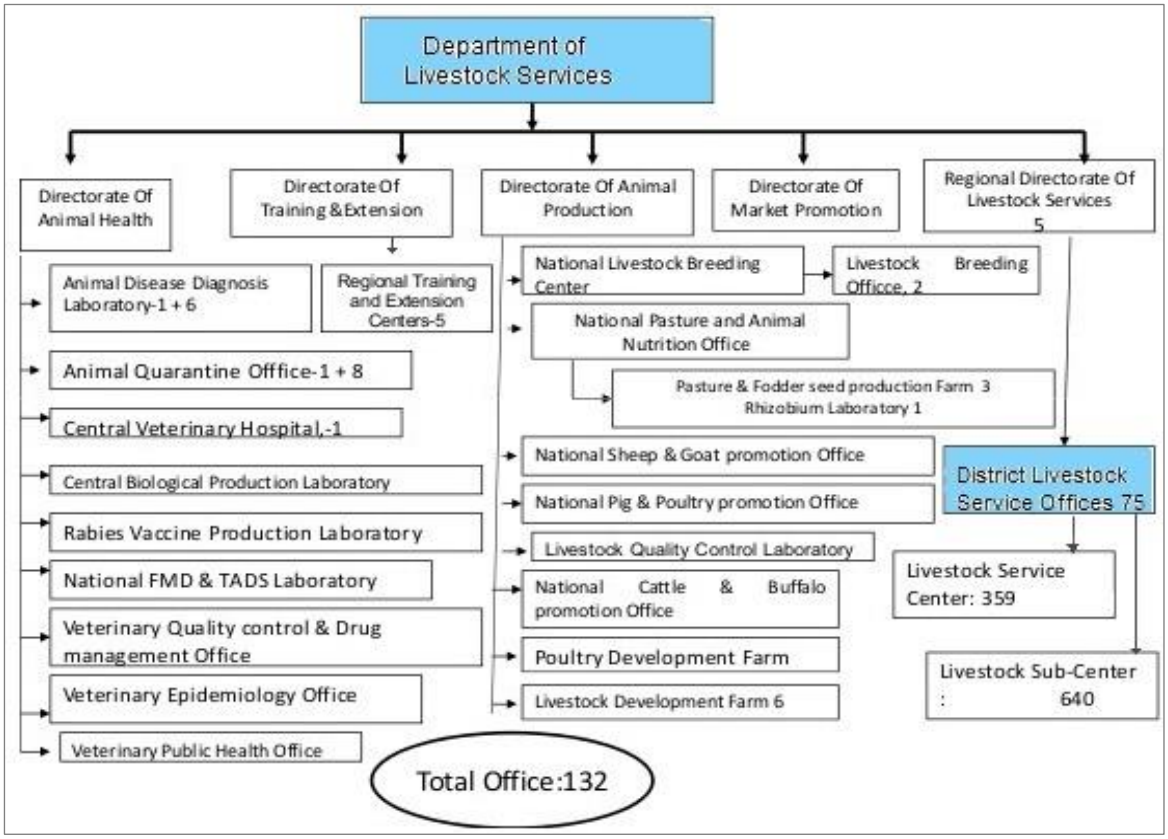
b. Department of Agriculture (DoA)



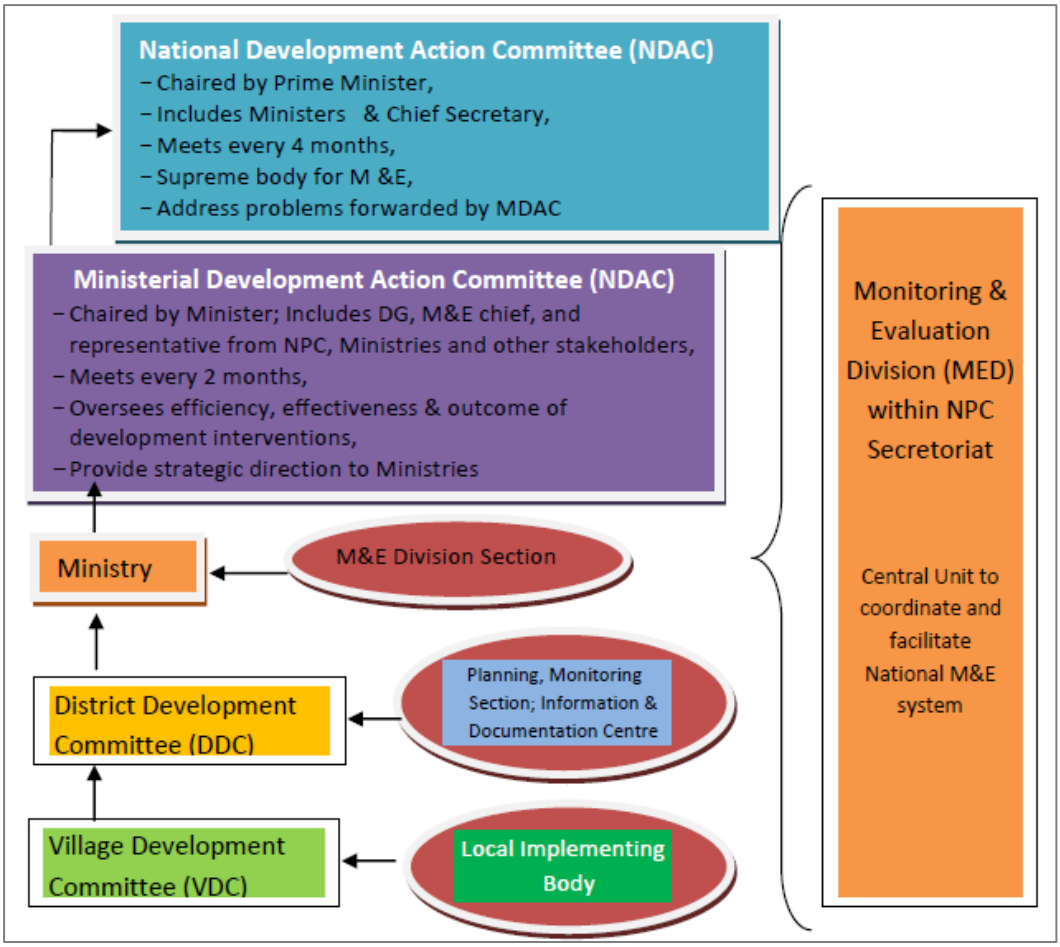
c. Ministry of Livestock Development (MoLD)



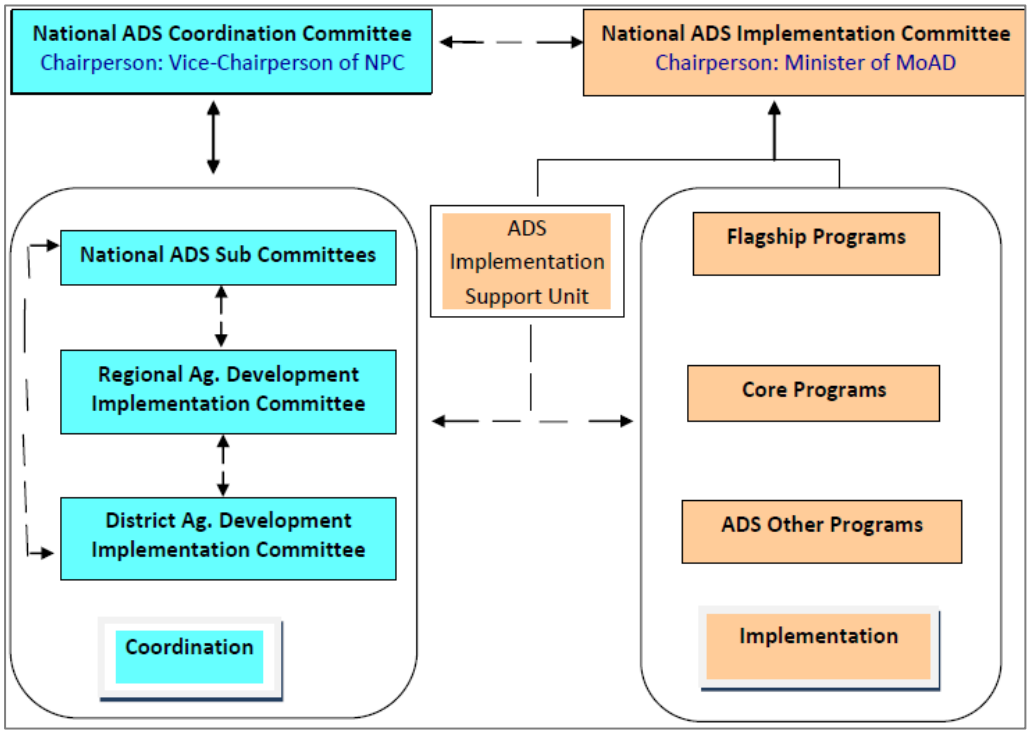
d. Department of Livestock Services (DoLS)



e. The institutional arrangements for national level monitoring and evaluation



f. Agriculture Development Strategy Implementation & Coordination Mechanism



Annex 5: Fourteen-steps participatory district development planning process

Steps	Step-actions	Activities	Participation	Timeframe (by)
1	Receipt of directives	Directives and budget celling for coming year received from Ministries and NPC	District level sector agencies	mid Nov.
2	Review of directives	Analysis and review of directives, guidelines and budget provided	DDC chair/ vice-chair, members and sector agencies	3rdweek of Nov.
3	Planning workshop	Dissemination of information on policies, directives, objectives, programs, activities, budget and orientation on format filling	DDC officials, sector agencies, development partners (DPs)	end of Nov
4	VDC meeting	Analysis of program to be carried out at the ward level by the VDC	VDC and DDC officials and reps. of sector agencies	2nd week of Dec.
5	Ward level planning workshop	Participatory assessment and analysis of programs and completion of forms	Local peoples, user groups, ward members, chairperson, DPs	3rd week of Dec.
6	Ward committee meeting	Prioritization of programs from the ward level	Ward members, chairperson, and user groups	end of Dec.
7	VDC meeting	Prepare the list of programs on priority basis, separate those to be done by VDC and requiring support from outside	VDC officials and representatives from sector agencies	Ist week of Jan.
8	Village council meeting	Approve programs submitted by the ward or VDC plan, prioritize to them which require support by DDC or outside	VDC council members	2nd week of Jan.
9	Ilaka level workshop	Prioritize the sector programs identified by VDCs and Municipalities forwarded to the DDC's sector committees	Ilaka members, VDC chair/ vice chair, Mayors/Deputy mayors, chief of sector agencies and DPs	1st week of Feb.
10	Sector planning meeting	Prioritized programs identified by Ilakas and forwarded to the DDCs integrated plan formulation committee	DDC members, sector committee members, development partners	2nd week of Feb.
11	Integrated plan formulation meeting	Assess and analyze the prioritized programs of the sectors, and submit the draft to the integrated plan formulation committee	DDC chair/ vice chair, MPs from the district, sector committee chief, DPs	3rd week of Feb.
12	DDC	Assess the district development plan (DDP)in relation to the NPC's instruction, district periodic plan, environment impact, prioritize the programs on sector, geographic and resource basis then submit for the approval of the district council	DDC chair/ vice chair and members	1st week of Mar.
13	District council	Discuss and approve the district development plan	Members of district council	2nd week of Mar.
14	Implementation	Forward the DDP to the MoFALD, sector Ministries and NPC	NPC, MoFALD and sec. ministries	end of Mar

Annex 6: Planning matrix of program monitoring

Expected Results (Outcomes and Outputs)	Indicators	Baseline	Target	Data collection methods	Time/ schedule and frequency	Means of Verification(Data source and type)	Resources	Risks and Assumption
Outcome I: Technical capacity and institution-building on NAPs strengthened	Proportion of technical staff and public service officers supporting agriculture-based livelihood adaptation in relevant ministries trained in national adaptation planning and budgeting, including the technical aspects of formulating roadmaps, and conducting economics of adaptation assessments.		30% of staff supporting CC risk management within key ministries.	Review of records (participants list in attendance register)	End of year (Annual)	Attendance register of the training		
1.1 Training and institutional capacity building in adaptation-sensitive planning	1.1.1 No. of methods/ guidelines for climate change vulnerability assessment, planning and budgeting for the agriculture sector in Nepal.	0	1	Review of record	End of quarter	Guidelines itself	FAO	
	1.1.2 No. of districts having climate change profiles for the agriculture sector	0	3	Review of document	Quarterly	Climate change profiles of the districts	FAO	
	1.1.3 No. of districts covered under vulnerability assessment and planning case studies	0	3	Review of report	Quarterly	Progress report	FAO	
	1.1.4 No. of document on lesson learnt on integrating CCA into national and district level planning and budgeting	0	1	Review of document	End of quarter	Document on lesson learnt	FAO	
	1.1.5 and 1.1.6 No. of beneficiaries of ToT on climate change adaptation and climate change vulnerability assessment and planning and budgeting for the agriculture sector in Nepal (national and regional)	0	30% of staff supporting CC risk management within key ministries.	Review of record (attendance)	End of quarter	Attendance Resister	FAO	
1.2 Training and institutional capacity building in economic valuation and investment appraisal tools	1.2.5 No. of document and their qualities (of wider acceptance) that identify good methods and approaches for evaluating priority agriculture sector adaptation options in Nepal using applied economic valuation of ecosystem support services and investment appraisal tools such as cost benefit analysis of agricultural adaptation practices			Review of documents	Quarterly	Document/consultant report	UNDP	
	1.2.6 No. of districts on economic valuation of selected ecosystem services to the agriculture sector	0	3	Review of documents	Quarterly	Economic Valuation Report	UNDP	
	1.2.7 No. of cost benefit analysis events (districts) for selected priority CCA measures/practices undertaken by project technical taskforce	0	3	Review of document	Quarterly	CBA report	UNDP	

Expected Results (Outcomes and Outputs)	Indicators	Baseline	Target	Data collection methods	Time/ schedule and frequency	Means of Verification(Data source and type)	Resources	Risks and Assumption
	1.2.8 No. of beneficiaries of ToT events on applied economic valuation of ecosystem support services to the agriculture sector and cost benefit analysis of agricultural adaptation practices in Nepal at national, regional and/or districts centers	0	30% of staff supporting CC risk management within key ministries	Review of record	Quarterly	Training record	UNDP	
1.3 Developed training materials based on needs identified	1.3.3 No. of instructional materials including a handbook for DDCs and field extension officers on how to prioritize, promote, and mainstream CCA measures into planning processes for the agriculture sectors	0	1	Instruction materials/ handbook	Quarterly	Instruction materials	FAO	
	1.3.4 No. of handbook/ internal guidelines for relevant MOAD/MOLD staff to improve economic appraisal of programs incorporating climate change costs and benefits of priority CCA practices	0	1	Review of handbooks/guidelines	Quarterly	Handbook/guidelines	UNDP	
Outcome II: Integrated roadmaps for NAPs developed	• Number of national and subnational planning and budgeting roadmaps formulated, taking gender into account, to guide the process of integrating climate change concerns affecting livelihoods into the agriculture sector. This includes documents containing current, future scenarios for the agriculture-sector under conditions of climate change (including both slow onset and extremes), cost-benefit assessments of adaptation options, documentation of climate-resilient budgeting in the agriculture sector, as well as stock-taking of national and subnational priority adaptation options that also safeguard livelihoods.	0	A consolidated and mandated integrated roadmap for NAPs with a particular focus on the agriculture sector.	Review of national and sub national plan/ roadmaps	Annual	Annual Plan with budgets		
	• Number of target institutions with increased technical capacity to manage adverse impacts of climate change on agriculture-based livelihoods.		At least 5 key institutions at national and sub-national level.	*Review of plan and progress*	Annual	Plan/progress reports of targeted institutions		
	• Percentage of the budget of the public institutions (national-sub national) allocated to climate change adaptation concerns of the agricultural sector		20% increase in budget allocations dedicated to address climate change adaptation priorities	Review of plan and their budgets	Annual	Increased budget and expenses		

Expected Results (Outcomes and Outputs)	Indicators	Baseline	Target	Data collection methods	Time/ schedule and frequency	Means of Verification(Data source and type)	Resources	Risks and Assumption
2.1 Institutional strengthening of MOAD and district authorities to mainstream CCA into ADS planning and budgeting	2.1.3. Report that identifies institutional gaps and elaborates planning road map with key entry points to better integrate CCA into MOAD and DDCs, with priority to be given to ADS programs.	*0*	1	Review of documents	Quarterly	Report on institutional gaps and roadmaps	FAO	
	2.1.4. No. and type of technical assistance events that improve existing climate change budget coding and expenditure tracking methods and mechanisms. Priority to be given to ADS programs.			Review of records	Quarterly	Minute/Decisions/Action points	UNDP	
2.2 Consultative dialogues and planning processes supported at national and district level to mainstream CCA into sector planning/ budgeting	2.2.3 No. and type of technical assistance events that integrate CCA into MOAD/ MOLD Budget Guidelines and Budget Proposals used to advocate to/through NPC and district authorities.			Review of records	Quarterly	Minute/Decisions/Action points	UNDP	
	2.2.4 No. of MOAD project preparation guidelines/documents using Climate Change Economic and Investment Appraisal Criteria in implementation of ADS programs.			Review of documents	Quarterly	Guidelines/Documents	UNDP	
Outcome III: Evidence-based results for NAPs improved	Number of ministries of agriculture with impact evaluation frameworks for adaptation in the agriculture sector based on quasi-experimental design principles adopted. These frameworks include the identification of differential needs and adaptation options for men and women and the systematic integration of gender-sensitive indicators or sex-disaggregated data into data collection and analysis systems of the government.	0	Ministries for agriculture (MOAD/ MOLD) adopt impact assessment frameworks based on quasi experimental design frameworks	Review of framework and their application record	Annual	Impact evaluation report		
3.1 Design and apply impact assessment framework for existing agriculture-based livelihood projects	3.1.4. Document on M&E tools for district authorities (DDCs) based on a stock taking of existing indicators and data collection processes.	0	1	Review of documents	Quarterly	Document on M&E tools / application reports	FAO	
	3.1.5. No. of adaptation practices in target districts taken for developing adaptation impact case studies (target-3)	0	3	Review of documents/case studies	Quarterly	Case studies	FAO	
	3.1.6. No. of Project monitoring framework including KPIs for enhanced CCA that for field monitoring of ADS priority programs.	0	1	Review of framework	Quarterly	Monitoring framework with tools	FAO	

Expected Results (Outcomes and Outputs)	Indicators	Baseline	Target	Data collection methods	Time/ schedule and frequency	Means of Verification(Data source and type)	Resources	Risks and Assumption
3.2 Strengthened capacity of agriculture-based monitoring units for effective monitoring and adaptation budgeting	3.2.3 No. of trainings to MOAD monitoring unit on approaches to improve climate risk analysis and related data monitoring and management	0	6	Review of record/Attendance	Quarterly	Attendance register	UNDP	
	3.2.4 Training modules and materials on CCA monitoring for central monitoring unit, District Planning Committees and MOAD Regional Centers prepared.	0	1	Review of documents/training modules	Quarterly	Training modules	UNDP	
Outcome IV: Advocacy and knowledge-sharing on NAPs promoted	• Number of best practices and lessons learned, taking into account gender dimensions, from the project disseminated. This will include dissemination through documentation and relevant communication platforms at national and international levels		4 national exchange consultations and 8 case studies shared per country	Review of documents	Quarterly	Documents on best practices and lesson learned		
	• Number of communication platforms in which best practices and lessons learnt were shared and disseminated at the national and international platforms (south-south exchanges, SSC global supply-demand matching platform, regional forums) and at the UNFCCC (including events organized in partnership with LEG).			Review of records	Quarterly	Register of events on sharing/ dissemination of lesson learned		
4.1 Convened exchanges on science, technology and economics of adaptation to support integration of adaptation options into national adaptation plans	4.1.6. No. of MoPE led meetings under thematic working group on agriculture and NAPs in order to engage in broader NAP process in Nepal			Review of record	Quarterly	Meeting minutes	FAO	
	4.1.7. No. of knowledge and communication products shared in national scientific and technical workshops relevant for NAP development			Review of records	Quarterly	Proceedings of national scientific and technical workshops	FAO	
	4.1.8. No. of capacity building and awareness raising events to ensure CCA options and strategies more broadly understood and appreciated by national stakeholders			Review of records	Quarterly	Attendance register of capacity building and awareness raising events	UNDP	
	4.1.2 No. of global dialogue events where Nepalese agricultural sector decision-makers participate			Review of record	Quarterly	Presentation materials/ Individual report from participants	UNDP	

Annex 7: Risks and Risk Mitigation Measures

Risk	Description	Proposed mitigation actions
6. Coordination, multiple partnership and institution related risks (medium).	The project requires coordination among Ministry of Agricultural Development, Ministry of Livestock Development, Ministry of Population and Environment, Ministry of Home Affairs, Ministry of Finance, Ministry of Planning (NPC), Ministry of Federal Affairs and Local Development, Development Partners, Academia, media, private sectors, service providers and various sub-national public and private agencies. Moreover, the project seeks synergies with past and present initiatives in the agencies. Possible risks associated with multiple partnership, coordination and institutional matters could be - • Conflicting interest of the parties on project matter • Frequent changes of project responsible government staffs in the ministries • As a result, decision processes in the PTT and PSC, supports to field level organization of events and project synergies with other initiatives affected.	Ministry of Agricultural Development is central of the project implementation. It is rendered responsible to establish coordination among relevant public and private agencies. The ministry through frequent meeting of the PSC, PTT, AFS-TWG of NAP-process, other inter-ministerial committees operational in the government system and experiences of the relevant parties built through continual work in association in the past would help in establishing coordinated and enabling environment for necessary adjustments. Moreover, UNDP and FAO (Nepal) have long experience in supporting the country development with several projects. Both the agencies have worked with GoN for CCA and livelihood development initiatives (described elsewhere in the report) that were linked with agriculture
7. Ownership of the project implementation related risk (Medium)	Roles assigned to the stake taking organizations could be considered as an added workload by their responsible members due to their routine responsibilities thus eroding government ownership in the project implementation. Owing to major concerns of the project on state policy matters, its supports in terms of goods and services reaching local community members are negligible. Hence, government counterparts and community members in pilot areas may lose interests eroding their ownership on the project implementation.	FAO and UNDP relation in lunching government partnered development initiatives and supporting the members' direct involvement in implementation of project activities (such as meeting/session operations, presentations, monitoring visits, trainings and reviews on report and training/ knowledge materials) should help to foster enabling environment.
8. Knowledge, skill and attitude related risk (medium)	'Climate change' and 'adaptation to the situation' are new area of study and development efforts to which majority of development workers especially in least developed countries like Nepal are less informed of recent scientific and institutional developments reached in global arena. Besides, CC-V/RA, CBA of ecosystem services and CCA-options, development projects' EV/IA, designing CCA monitoring framework and their fitting into sector planning and budgeting are new concepts the project is trying to introduce. Knowledge/skill and motivational gap in applying the concepts would be a shortcoming in appropriately aligning the project implementation to its achievements as envisaged	Where necessary, additional capacity will be strengthened in relevant government offices by drawing on existing technical staff at the regional and global level that are specialized in relevant subject matters. Moreover, the sector representatives (with global support programs) will be engaged in knowledge exchange and updated with available knowledge materials.
9. Financial limitation (Low)	Limited financial resources to support V/RA in agriculture sector and a full suite of adaptation options being tested under Outcome 3.	Where possible, this project will be linked to national NAP-process, UNDP-GCF readiness project and FAO GCP/LDF project in implementation. Outcomes of the project should ease avenues to access globally available climate fund to continue with the project establish pathways.
10. Political unrest and security (High)	Current debate in Nepalese politics regarding implementation of newly formed Nepal Constitution (2015) and amendments on it may urge some regional conflict and insurgence affecting timely implementation of the project activities.	The situational context will be analyzed with local stakeholders including political leaders and community members, and drive of the project implementation strategized based on PTT and PSC decisions.

Annex 8: NAP-Ag country work plan and budget

Level	Output	Activities	Type of activity	Sup. Inst.	2016				2017				2018				Budget 2016	Budget 2017	Budget 2018	Total
Goal - Climate change concerns as they affect agricultural sector-based livelihoods are integrated in associated national and sector planning and budgeting processes					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Outcome 1 - Technical capacity and institutions on NAPs strengthened																				
Output	1.1 Training and institutional capacity building in adaptation-sensitive planning																			
Activity		1.1.1 Develop methods for CCA and climate change vulnerability assessment and planning and budgeting for the agriculture sector in Nepal based on a synthesis of methods already applied or suitable for the Nepal context	Technical	*FAO*				*X*	*X*	*X*	*X*					1000	12000	12000	25000
Activity		1.1.2 Prepare climate change profiles for the agriculture sector in (2-3) target districts representing a cross-section of agro-ecological zones (e.g. Terai, Hills, Mountains)	Technical	*FAO*					*X*	*X*	*X*	*X*					0	10000	0	10000
Activity		1.1.3 Conduct applied participatory vulnerability assessment and planning case studies and training exercises with support of project taskforce in (2-3) target districts	Institutional	*FAO*							*X*	*X*	*X*	*X*			0	15000	9000	24000
Activity		1.1.4 Identify and document lessons learned based on training application and demonstration activities on integrating CCA into national and district –level planning and budgeting processes	Institutional	*FAO*								*X*			*X*		0	9000	0	9000
Activity		1.1.5 Conduct training of trainers on climate change adaptation and climate change vulnerability assessment and planning and budgeting for the agriculture sector in Nepal in five regional centres	Institutional	*FAO*									*X*	*X*				0	30000	30000
Activity		1.1.6 Conduct national level training on climate change adaptation and climate change vulnerability assessment, risk management and planning and budgeting for the agriculture sector in Nepal	Institutional	*FAO*									*X*	*X*			0	0	10000	10000
Output	1.3 Developed training materials based on needs identified																			
Activity		1.3.1 Prepare instructional materials including a handbook for DDCs and field extension officers on how to prioritize, promote, and mainstream CCA measures into planning processes for the agriculture sector		*FAO*								*X*			*X*		0	10000	20000	30000

Level	Output	Activities	Type of activity	Sup. Inst.	2016				2017				2018				Budget 2016	Budget 2017	Budget 2018	Total
Outcome 2 - Integrated roadmaps for NAPs developed																				
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Output	2.1 Institutional strengthening of MOAD and district authorities to mainstream CCA into ADS planning and budgeting																			
Activity		2.1.1 Identify institutional gaps and elaborate planning road map with key entry points to better integrate CCA into MOAD, MOLD and DDCs, with priority to be given to ADS programs.	Institutional	*FAO*					*X*	*X*	*X*									
Outcome 3 - Evidence-based results for NAPs improved																	0	30000	0	**30000**
Output	3.1 Design and apply impact assessment framework for																			
Activity		3.1.1 Development of related M&E tools for district authorities (DDCs) based on a stock taking of existing indicators and data collection processes within MOAD/ MOLD.	Institutional	*FAO*					*X*	*X*	*X*	X					0	20,000	0	**20000**
Activity		3.1.2 Select 3 ongoing adaptation practices in target districts for developing adaptation impact case studies	Technical	*FAO*							*X*	X						3,000	17000	**20000**
Activity		3.1.3 Prepare a programme monitoring framework including KPIs for enhanced CCA that for field monitoring of ADS priority programs.	Institutional	*FAO*								*X*	*X*	*X*	*X*				15000	**15000**
Outcome 4 - Advocacy and knowledge-sharing on NAPs promc																				
Output	4.1 Convened exchanges on science, technology and economics of adaptation to support integration of adaptation options into national adaptation plans																			
Activity		4.1.1 Engage in broader NAP process in Nepal and MoSTE-led meetings under agriculture TWG on NAPs.	Institutional	*FAO*				*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	4000	12000	14000	**30000**
Activity		4.1.2 Prepare contributions from agriculture sector to input into NAP for Nepal and contribute project knowledge and communications products to national scientific and technical workshops relevant for NAP development	Technical	*FAO*					*X*	*X*	*X*	*X*	*X*	*X*	*X*		0	10000	5000	**15000**
																	5000	131000	132000	**268000**
																	18140	54420	54,440	**127000**
																	3000	12000	10000	**25000**
																	26140	**197420**	**196440**	**420000**

Output	Activities	Sup. Inst	2016				2017				2018				Budget 2016	Budget 2017	Budget 2018	Total Budget
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Outcome 1: Technical capacity and institutions on NAPs strengthened, (Global Logframe)/Strengthening MOAD/ MOLD Capacity & Knowledge on Climate Change Adaptation (CCA) planning (Nepal – Specific)																		
1.2 Training and institutional capacity building in economic valuation and investment appraisal tools																		
	1.2.1 Identify best methods and approaches for evaluating priority CCA practices and programs in agricultural sector in Nepal, using applied economic valuation of ecosystem support services and investment appraisal tools such as cost benefit analysis and 'business models' to refine feasibility of bankable activities.	UNDP				X	X	X							1500	18000	0	19500
	1.2.2 Conduct economic valuation of selected ecosystem services to the agriculture sector as applicable to 2-3 target districts	UNDP						X	X						0	11000		11000
	1.2.3 Conduct CBA for selected priority CCA measures/practices in (2-3) target districts. Hands-on training and support of project taskforce.	UNDP						X	X						0	11000		11000
	1.2.4 Conduct training of trainers on applied economic valuation of ecosystem support services to the agriculture sector and cost benefit analysis of agricultural adaptation practices in Nepal in 2-3 target districts and/or regional centres	UNDP								X	X				0	9000	5500	14500
	1.2.5 Conduct national level training on applied economic valuation of ecosystem services to the agriculture sector and cost benefit analysis of agricultural adaptation practices in Nepal	UNDP								X					0	9500	0	9500
1.3 Develop training materials based on needs identified																		
	1.3.2 Prepare handbook/internal guidelines for relevant MOAD/ MOLD staff to improve economic appraisal of programs incorporating climate change costs and benefits of priority CCA practices	UNDP								X	X				0	4000	5000	9000

Output	Activities	Sup. Inst	2016				2017				2018				Budget 2016	Budget 2017	Budget 2018	Total Budget
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Outcome 2: Integrated Road Maps for NAP (Global Logframe)/ Mainstreaming CCA into ADS or Agriculture sector? Planning & Budgeting Cycle																		
2.1 Institutional strengthening of MOAD and district authorities to mainstream CCA into ADS planning and budgeting																		
	2.1.2 Technical assistance to improve existing climate change budget coding and expenditure tracking methods and mechanisms. Priority to be given to ADS programs.	UNDP			X	X			X	X	X	X			500	1200	500	22000
2.2 Consultative dialogues and planning processes supported at national and district level to mainstream CCA into sector planning and budgeting																		
	2.2.1 Technical assistance to integrate CCA into MOAD/ MOLD Budget Guidelines and Budget Proposals used to advocate to/through NPC and district authorities.	UNDP				X	X	X	X						3000	20250	0	23250
	2.2.2 Integrate Climate Change Economic and Investment Appraisal Criteria (e.g, Cost-Benefit Analysis) into internal MOAD/ MOLD Project Preparation Guidelines. Priority to be given to ADS programs.	UNDP								X	X	X	X		0	0	11500	11500
Outcome 3: Evidence-based results for NAPs improved																		
3.2 Strengthened capacity of agriculture-based monitoring units for monitoring CCA programme effectiveness and results-based budgeting																		
	3.2.1 Train MOAD/ MOLD monitoring unit on approaches to improve climate risk analysis and related data monitoring and management	UNDP									X	X			0	0	26200	26200
	3.2.2 Prepare training modules and materials on CCA monitoring for central monitoring unit, District Planning Committees and MOA/ MOLD Reg. Centres.	UNDP									X	X			0	0	8250	8250
Outcome 4: Advocacy and knowledge-sharing on NAPs promoted																		
4.1 Convened exchanges on science, technology and economics of adaptation to support integration of adaptation options into NAPs																		
	4.1.3 Demonstrated successful CCA options and strategies for scaling-up broadly understood and appreciated by national stakeholders	UNDP						X	X	X	X	X			0	11000	13000	24000
	4.1.4 Support engagement of Nepalese agricultural sector decision-makers in global NAP dialogues	UNDP		X		X		X		X		X		X	5000	15000	10000	30000
	UNDP's technical support for overall NAP advocacy and knowledge-sharing	UNDP	X	X	X	X	X	X	X	X	X	X	X	X				54800
	Budget Summary														**10000**	**109950**	**79950**	**274500**
	Direct project costs (DPC)														**199900**			**5500**
	Total Budget																	**280000**