ADAPTATION FUND

DATE OF RECEIPT:
ADAPTATION FUND PROJECT/PROGRAM ID:

(For Adaptation Fund Board Secretariat Use Only)

PROJECT/PROGRAMME PROPOSAL

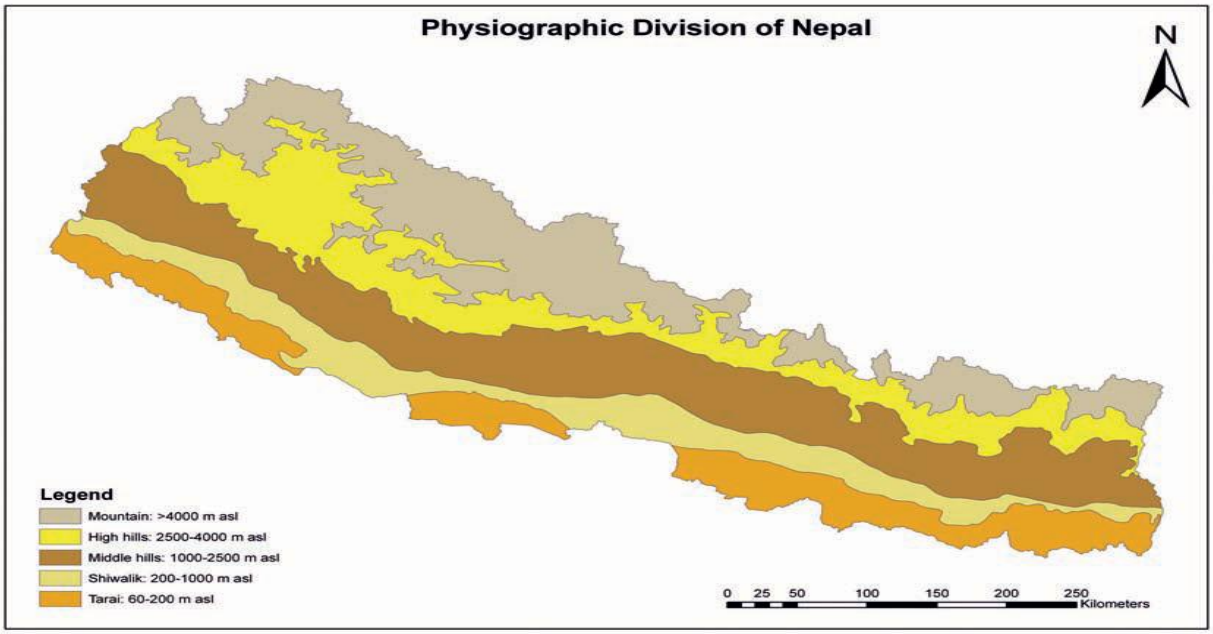
PART I: PROJECT/PROGRAMME INFORMATION

PROJECT/PROGRAM CATEGORY:	PROJECT
COUNTRY/IES:	**NEPAL**
SECTOR/S:	**FOOD SECURITY AND AGRICULTURE**
TITLE OF PROJECT/PROGRAM:	**ADAPTING TO CLIMATE INDUCED THREATS TO FOOD PRODUCTION AND FOOD SECURITY IN THE KARNALI REGION OF NEPAL**
TYPE OF IMPLEMENTING ENTITY:	MULTILATERAL IMPLEMENTING ENTITY
IMPLEMENTING ENTITY:	WORLD FOOD PROGRAMME
EXECUTING ENTITY/IES:	MINISTRY OF SCIENCE TECHNOLOGY AND ENVIRONMENT MINISTRY OF FEDERAL AFFAIRS AND LOCAL DEVELOPMENT WORLD FOOD PROGRAMME
AMOUNT OF FINANCING REQUESTED:	**USD $ 9,527,160 (over 4 years)**

PROJECT BACKGROUND AND CONTEXT:

Nepal is a landlocked country straddling the Himalayas and Tibetan plateau to the north and the dry Indian plains to the South. Its 147,181 square kilometers of land contain immense geophysical and ethnic diversity.

Based on elevation, geology and terrain the country is divided in to five physiographic regions (figure below). On average it extends 885 kilometers from east to west and 193 from south to north. Altitudinal variation from south to north is vast; from an average of 80m above sea-level in the southern plains or Tarai to 8,848m in the northern High Himalayas. The Tarai plains occupy around 17%, the hills around 68% and the high mountains around 15% of the land.[1]



Administratively Nepal is divided into five development regions, 14 zones and 75 districts. In these 75 districts, there are 58 Municipalities and 3,915 Village Development Committees.

Nepal's population of 27 million is ethnically diverse. The major ethnic groups are mosaics of people originating from Indo-Aryan and Tibeto-Burmese races. Two major religions, Hinduism and Buddhism have molded the country's cultural landscape. The population growth rate is over 2.2%, while life expectancy is about 63 years and literacy is around 65%.

Nepal's economy is largely agricultural. Over 80% of the population is engaged in agriculture[2]. However, farming is largely at subsistence-level, without advanced technology or markets. Agriculture (33%) and services (39%) are the largest contributors to GDP.

Nepal has made considerable progress towards eradicating poverty. The poverty rate was 25.2% percent in 2010-11 compared with 41.2% fifteen years ago.[3] While Nepal is on track

[1] Marasini Prasad, Sambhu. Country Paper on Disaster Risk Reduction in Nepal, Asian Disaster Reduction Centre, 2008

[2] National Adaptation Program of Action to Climate Change. Ministry of Environment, Science and Technology, Government of Nepal 2010

[3] Nepal Living Standard Survey NLSS-III 2010-2011

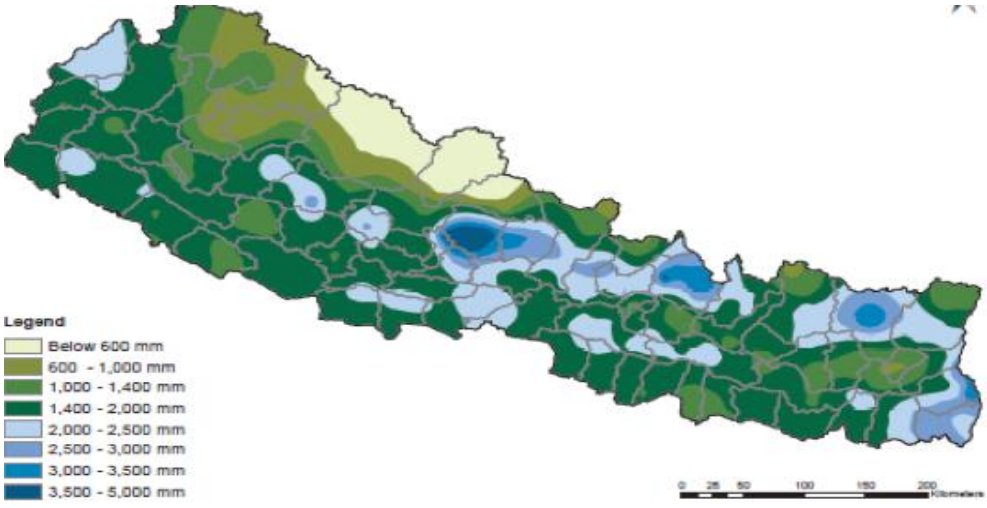
to achieve many of its Millennium Development Goals by 2015, it remains one of the poorest countries in the world. The country is categorized as 'least developed' ranking at 157 out of 187 countries in UNDP's human development index. Per capita annual income is less than US$ 650.[4] A combination of shocks, including political instability, limited economic growth, high prices and frequent natural disasters combine to keep a quarter of Nepal's population under the poverty line.

Nepal's fragile geology and steep topography makes it one of the most disaster prone countries in world. Floods, landslides, earthquakes, GLOFs (glacial lake outburst floods) and droughts are the most common natural hazards; while regular epidemics, fire, and accidents also contribute to its disaster risk.

Nepal is one of the most food insecure countries in Asia. Estimates suggest that approximately 38 per cent of the country's population does not consume enough food and is undernourished.[5] In recent years, the combination of climate-related disasters, high food prices, and low economic growth has resulted in higher food insecurity in the most vulnerable communities, particularly in Western Nepal. The mid-Western mountain regions have some of the worst hunger rates in the world, highlighting the spatial differences in vulnerability across the country[6].

Climate and Climate Change in Nepal

Nepal's climate is influenced by the South Asian monsoon and the country has four distinct seasons: pre-monsoon (March to May), monsoon (June to September), post-monsoon (October to November), and winter (December to February). Average rainfall is 1,856 mm, however there is considerable variation across the country. Monsoon rainfall is highest in the eastern flank and gradually declines westwards. Winter rainfall on the other hand is higher on the north western side of Nepal and declines eastwards. Annually, the heaviest rainfall is received in the mid-hills around Pokhara and northeast and east of Kathmandu Valley[7].



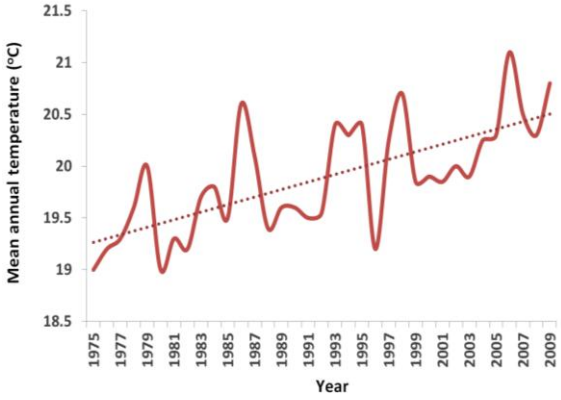
Mean Annual Precipitation

[4] World Bank Country Overview 2012
[5] Nepal Living Standard Survey NLSS-III 2010-2011
[6] WFP and NDRI Food Security Atlas
[7] Practical Action 2009

Temperature varies with altitude and season. In the Tarai plains, a sub-tropical and sub-humid climate is found, with summer temperatures climbing to 45 °C. In the middle hills, warm temperatures are prevalent for most parts of the year, but temperatures reach 0°C in winter. In the mountains it is chilly all the year with below freezing temperatures in winter.

General circulation models (GCM) and regional circulation models (RCM) both point to a warming trend across Nepal. One study[8] based on the analysis of temperature trends from 1977 to 1994 in 49 meteorological stations indicates a warming trend of 0.06°C per year. A more recent study by Practical Action in Nepal (2009), using data from 45 weather stations for 1996 to 2005, shows a consistent and continuous rise in maximum temperature. Studies indicate that the warming trend is spatially variable and temperature rise is more evident at higher altitudes.

According to global models, temperature in Nepal is expected to increase by 1.2°C by 2030 compared to the 2000 baseline, while regional models project a temperature increase of around 1.4°C in the same period. In general, models suggest higher temperatures during the winter season, especially in the far western region, with potential impacts on glacier melt and drought intensity.



Mean temperature trends in Nepal (average from weather stations in the whole country), 1975-2009

Overall temperatures have increased by around 1.5 degrees Celsius in Nepal over the period 1975-2009.*This trend is not uniform across the year or across the country. The majority of this increase has taken place during the dry season (December through March), especially in* ***the Himalayan regions, where average temperature has increased by 2 ºC since 1970.***

Source: McSweeney et al., 2010; DHM, 2010

Mean Temperature Trends 1975-2009

Himalayan glacial melt and retreat have been well documented. Fifteen Glacial Lake Outburst Floods (GLOF) events have been recorded, with the most recent in 1985 in Dig Tsho Lake in the headwaters of Koshi River. The potential damage caused by such disasters to human lives, homes, and infrastructure can be immense.[9]

The inter-annual variation of rainfall, especially the monsoon rains, is large, and this makes it difficult to draw conclusions about long-term changes of rainfall in the country. Results from weather station data for the period 1976 to 2005 indicate the following trends in the different regions: the western regions have experienced a decrease in precipitation (approximately 10 to 20 mm/year), and the central and eastern regions have experienced an increase in precipitation of approximately 10 to 20 mm/year.

Despite high inter-annual variability, weather station data indicate a decrease in winter precipitation, and an intensification of summer precipitation, leading to more droughts in the winter months and more floods during the monsoon season (Practical Action, 2009). At the same time, pre-monsoon rains (March to April) show a generally increasing trend across the

[8] Shrestha et al 1999
[9] Ives 2009

country except for some pockets in the western, central and eastern regions. Monsoon precipitation (June to August) shows a general decreasing trend in the mid-western and southern part of western region. Post monsoon (October to November) rainfall show a generally increasing trend in these regions and also in southern parts of eastern and central Nepal. Winter precipitation shows a generally increasing trend, except for northern mountainous areas of mid-western, western and eastern Nepal.

Precipitation trends in different regions of Nepal, 1976-2005 (based on Practical Action, 2009)

	Development Regions					
	Mid- and Far Western			Western, Central and Eastern		
	Terai	Hills	Mountains	Terai	Hills	Mountains
Monsoon	Decrease	Decrease	No change	Increase	No change	No change
Post-monsoon	Decrease	Decrease	Decrease	Increase	Increase	Decrease
Annual	Decrease	Decrease	Decrease	Increase	Increase	Decrease

There have been a number of studies and surveys on local perceptions and observations of climate change. In an annex to the National Adaptation Plan of Action (NAPA) describing the Transect Appraisal on location specific perceived changes in climate change or variability, local communities speak of increased day and night-time temperature, an upward shift of agro-climatic zones, and changes in precipitation in terms of timing, duration, intensity and form. According to communities, these trends have negative impacts on crop production (particularly barley, wheat, and potato) and their incomes.

Projected Climate Change for Nepal

Temperature: The results of an OECD study[10] using General Circulation Models (GCMs) run with the SRES B2 scenario show a mean annual temperature increase of an average 1.2°C by 2030, 1.7°C by 2050 and 3°C by 2100 compared to the pre-2000 baseline. A similar study by NCVST in 2009 using GCM and regional circulation models (RCM) projects a higher annual temperature rise - 1.4°C by 2030, 2.8°C by 2060 and 4.7°C by 2090. Both projections show a higher temperature increase during winter compared to the monsoon months. In terms of spatial distribution, the NCVST study shows a higher increases in temperature over western and central Nepal, with the highest increases over western Nepal.

Precipitation: OECD projections for precipitation are similar to those presented by the IPCC (2007) and predict a general increase. This could result in increasing intensity of floods. In winter, the models predict less precipitation for western Nepal and 5 to 10% increase for eastern Nepal. Over the summer or monsoon months however, the models project an increase in precipitation for the entire country in the range of 15 to 20%, though much less for Western Nepal. The NCVST study finds an increase in the monsoon and post monsoon rainfall for most parts of the country and a decrease in winter rainfall. Spatially, eastern and central Nepal are projected to experience greater precipitation than western Nepal. Nepal is increasingly experiencing changes in precipitation in terms of intensity, timing and form. The monsoon is often delayed; intensity of rainfall has increased while duration is shorter; and

[10] OECD 2003

the form of precipitation (rain, snow, sleet, etc.) is changing. Therefore, evidence of climate change is not only manifested as ***increased variability*** but also increased ***uncertainty*** and reduced reliability. As a result, livelihood systems of this largely agricultural country are adversely impacted by crop damage, infrastructure damage and outbreak and infestation of pests and diseases in both animals and plants.

Poverty, Food Security and the Particular Vulnerability of Women in the Western Hill Area of Nepal (the Proposed Project Area)

Nepal's population is predominantly rural with over 80% engaged in agriculture. Larger numbers of the rural, agricultural population are poorer than their urban counterparts. The poverty level is much higher in rural areas than in urban areas (27.4% compared to 11%).[11] In rural areas there is also a high spatial variation in poverty. ***Poverty is highest in the mountains (42%) and the rural hills of the far and mid-western region (36.8%). These areas are developmentally challenged because of their remoteness and difficulties in access.***

Poverty in Nepal is correlated with household size and number of young children. Poverty is higher among dalits[12] (who have larger families and are caste-discriminated) than non-dalits. Most tellingly, poverty rates fall drastically for households with over one hectare of agricultural land. Poverty is also strongly linked to access to public services such as schools, hospitals and health posts, paved roads, bazaars and markets and banks.

Foreign remittances have become a main source of income for rural families, especially in the mid- and high- hills. Migration for labor (mostly unskilled) is seasonal, covering the lean rainfall months, as well as semi-permanent. The largest destination for migration is India, however some poor people travel to the Middle East or Southeast Asia.[13]

WFP estimates that 15 per cent of the population is food-insecure. Malnutrition rates in Nepal are very high: the prevalence of stunting is 41 per cent amongst children below five years of age, 29 per cent are underweight, and 11 per cent of children are wasted, a figure that has remained the same since 1996.

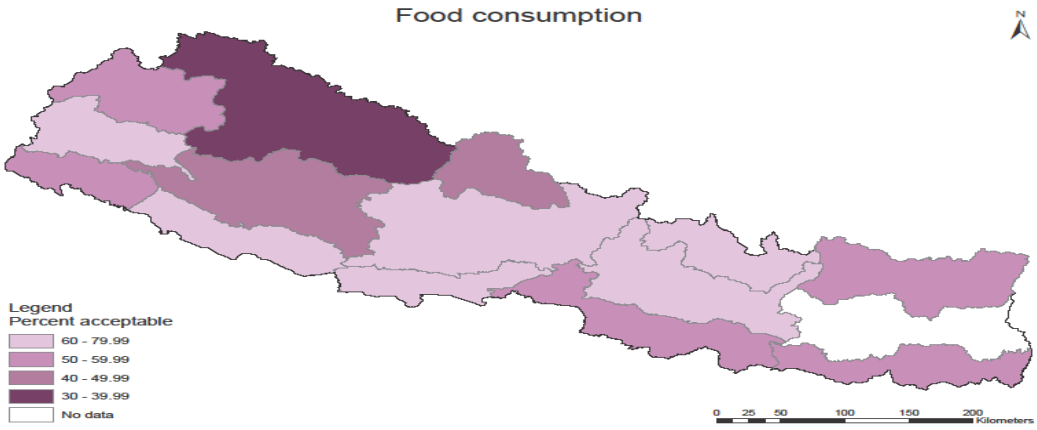
Until 1990, Nepal produced sufficient food for its population. Since then, population growth has outpaced food production. Adverse weather conditions and natural disasters undermined advances in production, especially in the late 1990s[14]. In recent years, natural disasters, high food prices and stagnant economic growth increased food insecurity for the country's most vulnerable groups. ***The worst impacts are felt in the far and mid-western hills and mountains.***

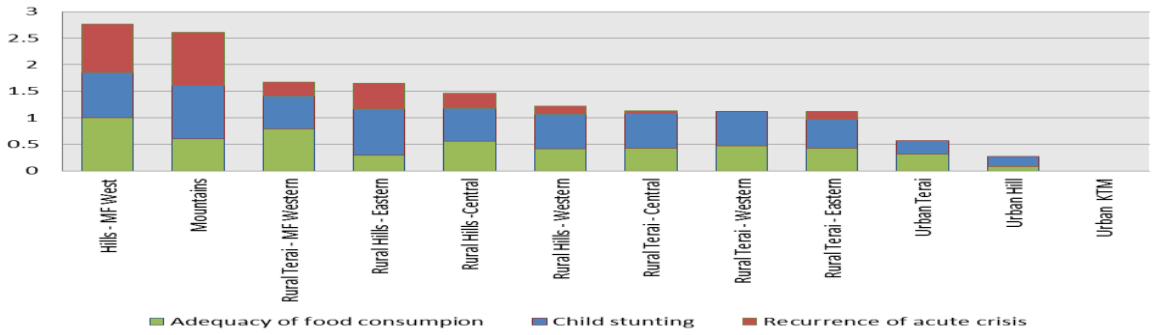
Nepal's three ecological regions have differing levels of food availability and utilization. In the hills and mountains, lack of arable land, roads and markets restrict food availability causing widespread food deficits. ***Food deficits are especially pronounced in the remote western and far-western regions where there is the highest prevalence of hunger (and where the hunger index points to an 'extremely alarming' situation). Indeed, the mid-western mountains of Nepal ranked last in a comparative assessment of hunger (Global Hunger Index) in 88 countries in 2008 (with Nepal as a whole ranking 57 from the top).***

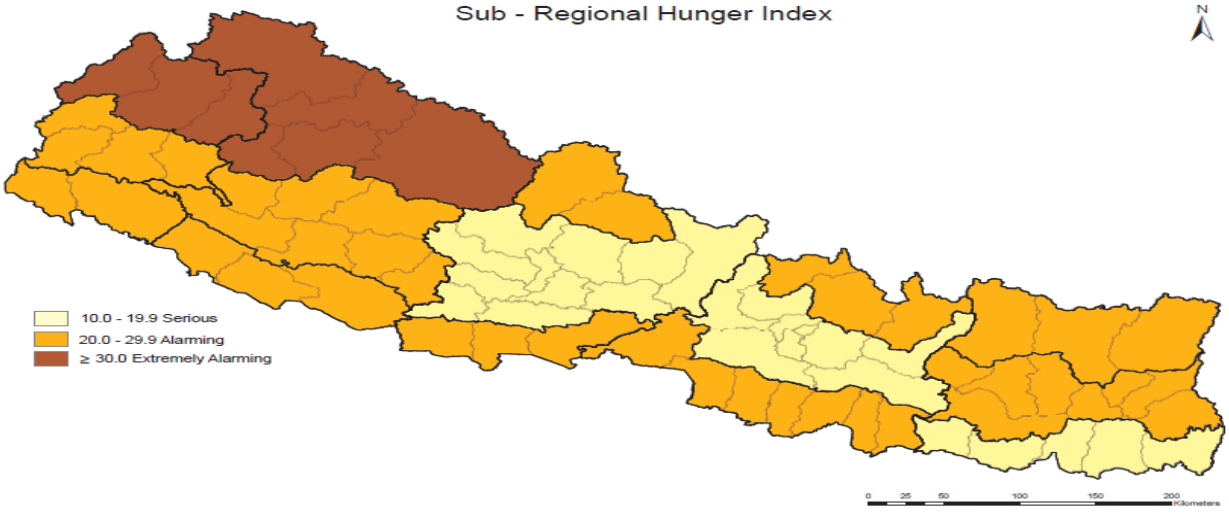
[11] Nepal Living Standard Survey NLSS-III 2010-2011
[12] A scheduled caste
[13] Passage to India: Migration as a coping strategy in times of crisis in Nepal. World Food Programme 2008
[14] WFP and NDRI Food Security Atlas

Non-climatic Aspects of Food Insecurity in Nepal: 1. **Food Access**: ability of a household to acquire enough food to meet minimum consumption needs is compromised by low production, disasters, and purchasing power and food stocks. To cope, families generally barter, borrow, out-migrate for employment or look to external food assistance 2. **Food Utilization**: Selection, preparation and food distribution in households is affected by socio-cultural factors such as gender biases even in food supply such as discriminatory feeding favoring male over the women. 3. **Hunge**r: is most directly caused by inadequate food intake manifest in under nourishment and low birth weight and stunting in children.

Index of Food Consumption, Under-nutrition and Recurrence of Acute Crisis



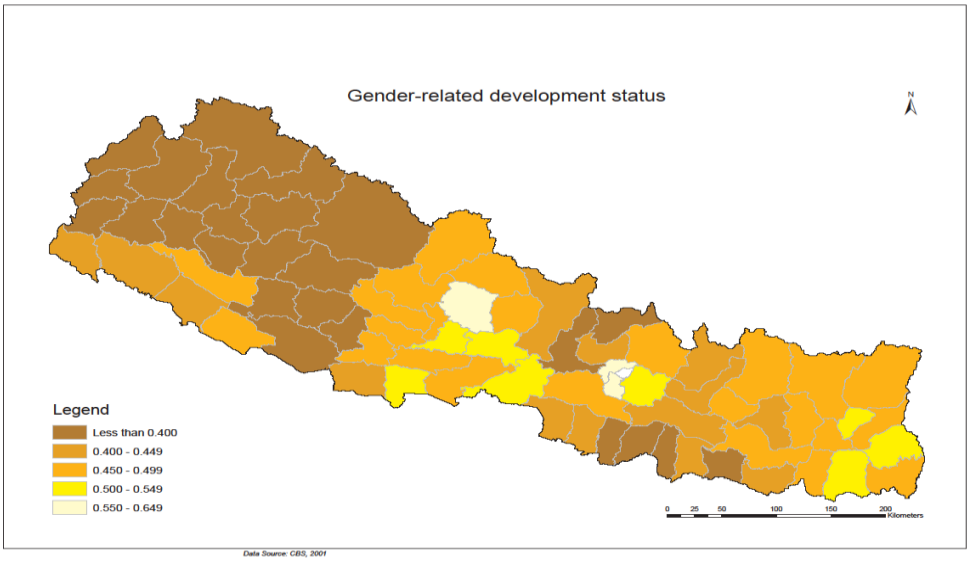




The maps above show the hunger rates in the different regions of Nepal using IFPRI's global hunger index. The results show that the most vulnerable and food insecure communities live in the Western Himalayan region of Nepal. The Global Hunger Index is calculated by combining three factors: (i) proportion of population undernourished, (ii) prevalence of underweight in children under the age of 5, and (iii) mortality rate in children under 5. A higher index score indicates higher hunger risk (IFPRI, 2008). Sources: IFPRI, 2008; WFP and NDRI, 2010

Nepal's Gender Development Index is 0.545, and it places 119 out of 155 countries in a global ranking. Gender disparity is more pronounced in rural than urban areas and is manifested in poor access to education, health care and income earning opportunities. ***Districts in the far and mid-west rank the lowest in GDI values.***

Due to cultural and other ingrained practices, women have limited control over household decision-making, but have primary responsibility for childcare, agricultural activities and domestic chores such as fetching water. Employment opportunities for women are limited outside of subsistence agriculture. In the country as a whole, 71% of economically active females engage in unpaid agricultural labor and only 6% of them work in non-agricultural sector compared to 21% of men. [15] Women are also discriminated in labor wages, with men earning substantially more for both skilled and unskilled labor.[16] There is general under-valuing of their education and access to health care. As a result, women are more vulnerable during periods of food insecurity. Their most common coping strategy is to reduce food intake, when women already eat last in the household and generally suffer from low body mass, and often anemia.



The status of women with regard to employment, health, life expectancy and education is the lowest in the hills and mountains of the far and mid-west (see figure above using the GDI, where the average for the country is 0.545). ***The highest prevalence of female-headed households is found in far and mid-western Nepal, caused by out-migration of male members in search of employment.***

[15] Ten years and above

[16] Food Security Atlas of Nepal. WFP and GoN 2010

Climate Related Impacts on Food Production, Food Security and Livelihoods in Nepal and the Project Area (the Western Karnali Zone)

Nepal's food security is highly sensitive to climate change and climatic shocks.[17] Data from the Central Bureau of Statistics (CBS) show that over the last decade around 31,000 ha of land owned by some 5% of all households, have become uncultivable due to climate related hazards, mostly drought, landslide and flood. In the eastern Tarai unusually low rains in 2005/2006 associated with an early monsoon resulted in crop losses of almost 30%.[18] The cold wave of 1997/1998 also had negative impacts on agricultural productivity resulting in losses of up to 38% in chickpeas and lentils and 28% in potato.[19]

A decline in rainfall from November to April has affected winter and spring crops. Wheat and barley are particularly susceptible to variability in winter precipitation. Consultations done in the field show that sowing and harvesting times have already shifted due to climate change. ***Under a lower winter rainfall regime the western parts of Nepal are experiencing declines in wheat and barley yields, exacerbating food insecurity and poverty.***

Climatic trends are expected to have an impact on all aspects of production and food security in Nepal. This includes crop production, seasonal variability of production, food availability, and food prices (especially of staples and livestock).[20] Diet quality, caloric intake, and seasonality of food consumption could all be impacted by climate-related food prices and production related availability.

According to a recent CGIAR study (see below), rural livelihoods as a whole are particularly vulnerable to climatic changes and shocks. This includes farming, cash cropping, herding and farm laboring. Family income has a strong co-relation to food security and food consumption. The combination of low productivity in agriculture and higher food prices due to climate related stresses could undermine gains in poverty reduction and nutrition.

Income source	Climate sensitivity
Cash crops/livestock	Changes in rainfall patterns are expected to decrease both the quantity and quality of water available for crop and livestock production, resulting in lower quality crop yields, as well as lower livestock, meat and milk quality.
Own farm/forest	Agriculture in Nepal might be affected by erratic rainfall patterns, which could reduce growing season and yields.
Agriculture labourer	Agricultural labour is likely to be affected by seasonal and long-term changes in rainfall patterns. Labour availability under climate change is likely to become unpredictable, potentially lowering income for agricultural labourers.

Source: Climate Risk and Food Security in Nepal 2012, WFP and CGIAR

Nepal's mid-western mountainous sub-region, the Karnali, is expected to experience the worst poverty and food security impacts of climate change. At one time the area's location on the trade route between Nepal and Tibet ensured prosperity, when salt from the high

[17] Krishna Krishnamurthy et al: Climate Risk and Food Security in Nepal: Analysis of Climate Risk on Food Security Components 2012. WFP and CGIAR

[18] Krishna Krishnamurthy et al: Climate Risk and Food Security in Nepal: Analysis of Climate Risk on Food Security Components 2012. WFP and CGIAR

[19] Krishna Krishnamurthy et al: Climate Risk and Food Security in Nepal: Analysis of Climate Risk on Food Security Components 2012. WFP and CGIAR quoting NARC statistics

[20] Krishna Krishnamurthy et al: Climate Risk and Food Security in Nepal: Analysis of Climate Risk on Food Security Components 2012. WFP and CGIAR

Tibetan lakes was traded for grain from Nepal. However, this trade collapsed in the 1970s and low productivity due to climatic factors (mostly drought) and conflict have left the region in poverty.

The region is comprised of five districts - Humla, Jumla, Dolpa, Mugu and Kalikot and is named after the Karnali River, which originates from the Himalayan districts of Mugu and Humla and eventually flows into the Indian Ganges River. The region is bordered by Tibet (China), and defined by its mountainous terrain, highly variable precipitation, and high prevalence of natural disasters. Karnali rates 48.1 on the Human Poverty Index (HPI-1)[21] and is the most impoverished region in Nepal.

The terrain in Karnali varies from high Himalaya to river valleys dissecting lower hills. Due to steep terrain, there is very little cultivable land, soils are poor and eroded. Food production, as estimated by WFP in 2010, is sufficient for only 3 to 6 months of the year. At higher altitudes only one crop is possible for the year. Except in Jumla (a relatively better connected district) irrigation is non-existent.[22] The majority of households rely on subsistence farming as their primary source of livelihood.

Farmers in Karnali commonly sow rice, maize and millet as summer crops, and wheat and barley as popular winter crops. Crops such as native barley and oats are still important. Karnali households depend on a mix of their own subsistence agriculture, harvesting of timber and non-timber forest products (NTFPs), daily wage labor, seasonal migration to Tarai districts or India, and government and international food aid.

Karnali districts have low population density and are remote and unconnected by infrastructure (roads and bridges). Some higher elevations are habitable only during the summer months. A vulnerability analysis conducted as part of the NAPA formulation in 2010 shows that the region is highly exposed to changing temperature and precipitation and all districts face the risk of drought. Some are highly exposed to landslides.

All districts show very low adaptive capacity in terms of the robustness of markets and connectivity. Despite low population density, one district (Mugu) ranks “very high” in overall vulnerability to climate change[23], while two districts (Kalikot and Dolpa) rank high and others (Jumla and Humla) rank moderate. However the moderate districts are still vulnerable to changes in precipitation and temperature, and they are considered to be at risk of severe drought. A full analysis of district vulnerability and risks to different climatic hazards is presented in Annex 11.

The Karnali region suffers chronic food deficits and exhibits alarming rates of hunger.[24] The Government began supplying food to Karnali in 1972 to ease famine, and this temporary measure soon became a long term practice.[25] The food security situation in the region deteriorated as a result of civil conflict and has been difficult to address because of weather and economic shocks.[26] An assessment of data generated by NekSAP Food Security

[21] The United Nations Development Program’s Human Poverty Index (HPI-1) is measured on the scale of 0-100 where 0 is least impoverished.

[22] National Planning Commission – National Food Security Monitoring Task Force Food Security Atlas of Nepal (NeKSAP)

[23] National Adaptation Programme of Action, Nepal, Ministry of Science, Technology and Environment (MoSTE)

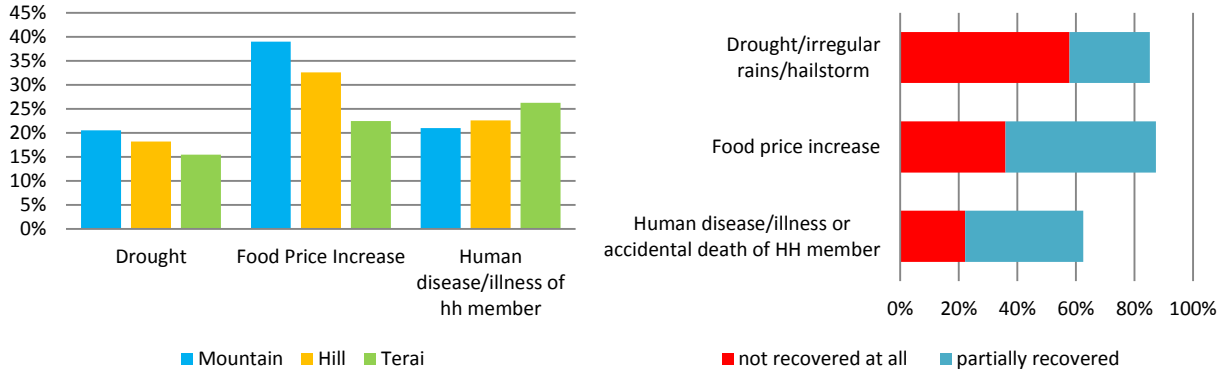
[24] National Planning Commission – National Food Security Monitoring Task Force Food Security Atlas of Nepal (NeKSAP)

[25] Adhikari. Jagannath. Food Crisis in Karnali: A historical and politico-economic perspective (2008)

[26] Adhikari. Jagannath Food Crisis in Karnali: A historical and politico-economic perspective (2008)

Monitoring System[27] shows that Karnali communities are more susceptible to drought and food price increases, and that it takes longer for these households to recover from shocks (see below).

Shock Reported by Eco-Belt, and Recovery Rate



Source: Geographical Targeting. Synthesis document for Nepal Country Program 2013-2017[28]

These issues are exacerbated by inaccessibility and low-development. Connectivity to and within the area improved with the opening of the Karnali Highway in 2007, linking the region with the Tarai. However, part of the road is still a dirt track that is impassable during the monsoon and winter. Humla, Mugu and Dolpa are still not connected by road. Food is carried on donkey or sheep caravans to these districts.

The table below presents a summary of climate change observations, current coping methods, and expected future risks to livelihoods in Karnali, based on reports of The Mountain Institute (TMI) [29] and ICIMOD, [30] and field consultations carried out for the preparation of the proposed project.

Communities Perception of Change	Experienced Impacts on livelihood Systems	Coping and Adaptation	Potential Future Risks
Decrease in rainfall and unpredictable onset of monsoon	Overall decline in agricultural productivity	Replacement of rice with finger millet; purchasing rice; barter; improvising with new cash crops; delayed sowing	Increased food and livelihood insecurity
Longer dry spells, in some places drought like conditions	Drying up of springs; less flow in springs and streams	Rotational use of irrigation systems; traditional water sharing systems	Scarcity of water for drinking and agriculture; increase in health problems; increased workload for women and children; children staying away from school

[27] NeKSAP *Nepal Khadya Surakchha Anugaman Pranali* in Nepali
[28] National Planning Commission – National Food Security Monitoring Task Force Food Security Atlas of Nepal (NeKSAP) and WFP VAM Unit
[29] The Mountain Institute (TMI) conducted an unstructured community perception assessment to climate change in Humla and Jumla in early 2012
[30] Responding to Challenges of Global Change- enhancing Resilience and supporting adaptation of mountain communities. ICIMOD Project Brief 2009

		Delayed sowing in irrigated fields at far end of channel	Crop failure
Higher temperature linked with decreased water availability	Lack of fodder; in some places lack of water for animals Land becoming less productive	Sell off dairy animals, shift to smaller livestock particularly goats, barter fodder for manure Less land under cultivation, more food purchases	Risk of malnutrition; increased drudgery Dependence on cash income; food insecurity
Warmer winters and significantly less snowfall	Increased incidence of pests and diseases Changes in flowering times	Increased use of pesticides and insecticides; use of ash and salt No coping mechanism	Increase food and livelihood insecurity Degradation of Orchards, income insecurity

PROJECT OBJECTIVES:

Goal: Increasing adaptive capacity of climate vulnerable and food insecure poor households by improved management of livelihood assets and natural resources in the Karnali mountain districts of Nepal.

Objectives

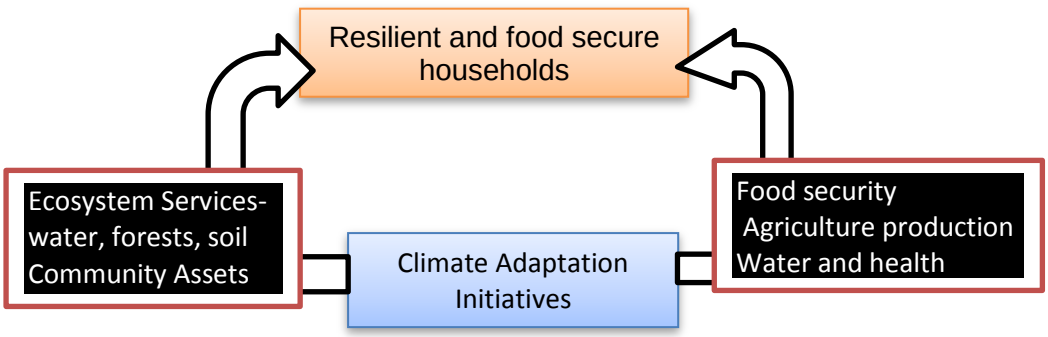
1. Strengthened local capacity to identify climate risks and design adaptive strategies
2. Diversified livelihood and strengthened food security for climate vulnerable poor households in target areas
3. Increased resilience of natural systems that support livelihoods to climate change induced stresses

Strategy

Food insecurity negatively correlates to adaptive capacity. Rural agricultural livelihoods in the project area depend on the health of forest, land and water resources. It is therefore vital, in such climate vulnerable communities, to enhance agro-ecosystem services that increase production, reduce food insecurity and also directly generate income and energy for rural people.

The project strategy is to improve household adaptive capacity and food security to current and future climate risks by:

1) Improving natural resources and building community assets; and
2) Developing climate resiliency in livelihoods and social sectors



The project will target climate vulnerable poor households as defined by 1) low income and consumption; 2) reliance on subsistence agriculture 3) social discrimination and 4) low access to technology and assets - and the capacity of state and non-state service providers supporting these populations. Targeting will be done through the planning process described in Component 1 below. This planning process is sanctioned by the Ministry of Environment, Science and Technology through the published manual for Local Adaptation Plans of Action (LAPA). It has already been field tested through a concurrent climate change project- the National Climate Change Support Project (NCCSP).

The project will bring together best practices derived from a number of past and on-going initiatives (described below in F, H and I) to deliver concrete adaptation actions. The delivery mechanism will be an adaptation of the World Food Programme's asset creation program which is implemented in 10 districts in the mid-and far western regions. Through this mechanism communities will be compensated for their engagement in asset creation and improvement through food or cash, increasing both household food security and income opportunity during the lean agricultural season.

Particular activities will focus on easing the burden of rural women and improving their living and health standards, ultimately contributing to household adaptive capacity.

Service delivery organizations at the local level - especially extension services related to agriculture, irrigation, livestock and forestry - will be the primary executing agents in implementation and monitoring. The project will focus on developing their capacity to respond to climate shocks and design long-term adaptive strategies.

An important part of the project strategy will be to mainstream project learning and outcomes into regular development processes at VDC, District and Regional levels, further contributing to national capacity and sustainability.

Target Districts and Village Development Committees (VDCs) and Communities

A recent analysis of climate change vulnerability of Karnali VDCs[31] demonstrates a strong relationship between food insecurity, access infrastructure, irrigation and vulnerability to climate change. In brief, in areas that have better irrigation and access infrastructure, climate change vulnerability is lower; and in areas that are food insecure (which are also the more remote and under-developed regions) vulnerability is higher. The VDC level vulnerability ranking demonstrates that even in districts which ranked low in the NAPA, there are VDCs that score very high in terms of food insecurity due to their relative remoteness and under-development.

The project will target 22 VDCs in three Karnali districts –Mugu, Kalikot and Jumla.

In Mugu the project will target 12 VDCs with 4,050 households; in Kalikot, 5 VDCs with 4,140 households. In Jumla the project targets 5 VDCs with 2,660 households.

The district of Mugu ranks very high (5 of 75) for overall vulnerability to climate change in the assessment conducted by MoSTE as part of the NAPA.[32] Mugu has very low development (especially with regard to women) and food security rankings, and is a district that features high malnutrition.

[31] Through the district-level vulnerability ranking exercise of the Ministry of Environment's NCCSP (National Climate Change Support Project)

[32] National Adaptation Plan of Action for Climate Change of Government of Nepal

The district of Kalikot is ranked 21st in overall climate change vulnerability. However along with Mugu, it is ranked highest in vulnerability to drought.

The district of Jumla is ranked at 31st but relatively better off in terms of production and services. However, Jumla has pockets of deep vulnerability and marginalization. Jumla is the zonal headquarters for Karnali, and more developed markets and research/technology infrastructure available at Jumla's headquarters (Chandannath VDC) will support all project interventions through knowledge and market access. A zonal service center associated with the Nepal Agricultural Research Council (NARC) and the Karnali Technical School will be established here to demonstrate and disseminate adaptive practices in agriculture, water, and forestry to the entire Karnali zone (more details are provided below).

All three districts display high levels of exposure to climatic risks, especially drought. Mugu ranks very high and Jumla ranks high on the drought index, and both districts rank very low on the adaptive capacity and combined sensitivity indices.[33] The degree of vulnerability within targeted sub-populations and areas in the low-ranked districts are often very high due to disparities. With regard to targeting of ecosystems, Jumla and Kalikot are in river basins[34], while Mugu is a lake watershed[35]. The project's livelihood strategies, assets and type of intervention will vary depending on the particular ecosystem.

The selected districts will also be among those prioritized in the World Food Programme's forthcoming Country Program (2013 to 2017). Mugu, Kalikot and Jumla are among the ten districts ranked according to a combined vulnerability index for food security developed by WFP Vulnerability Analysis and Mapping (VAM) Unit. Sensitivity and adaptive capacity for food security were determined using development data from the NAPA and associated studies (e.g. WFP food security and production deficit from NeKSAP[36], Nepal Living Standard Survey NLSS-III 2010-2011). Sensitivity was determined by exposure to natural hazards, prevalence of disadvantaged groups, frequency of disease outbreaks, recurrence of acute crisis and the market price of essential commodities. Adaptive capacity in this context measures agriculture productivity, infrastructure availability, education, water and sanitation, gender status and poverty (wealth).

District Targeting

Vulnerability Ranking for WFP Country program	Country Program Districts	Food Security Sensitivity Ranking	Food Security Adaptive Capacity Ranking	Climate Change vulnerability Ranking (NAPA)	Climate Change Adaptation Capability Index
1	Humla	1 very high	71 low	45 moderate	73 very low
2	Mugu	2 very high	72 low	5 very high	75 very low
3	Dolpa	4 very high	67 low	20 high	74 very low
4	Kalikot	3 very high	57 low	21 high	70 very low
5	Bajura	6 very high	68 low	46 moderate	72 very low
6	Bajhang	9 very high	69 low	34 moderate	67 very low
7	Jumla	5 very high	56 low	31 moderate	64 very low

[33] Combined sensitivity index measures human sensitivity and ecological sensitivity together

[34] Tila Glacial River Watershed in Jumla and Karnali River in Kalikot

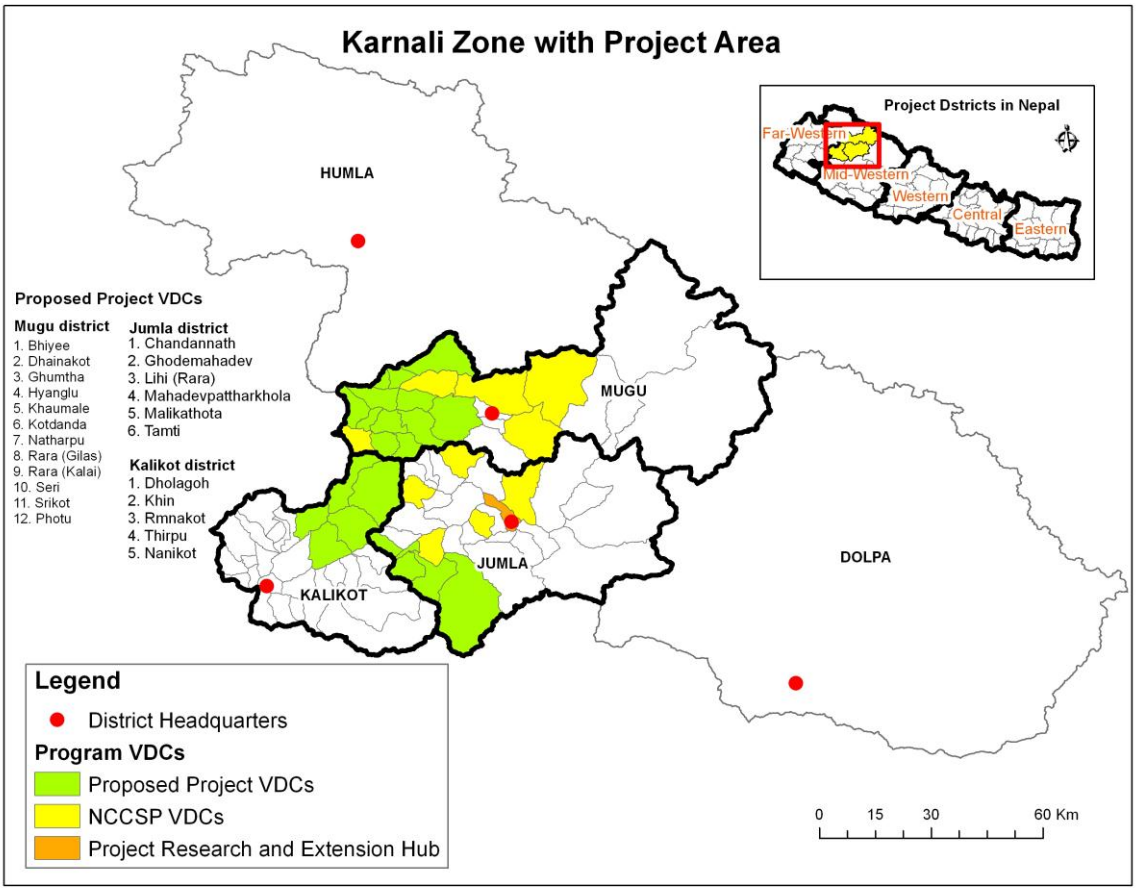
[35] Rara Lake watershed

[36] NeKSAP Nepal is an information system that provides quarterly forecasts of food availability and possible production deficits for early action and response. It is jointly administered by Ministry of Agriculture Development and WFP, through the National Planning Commission.

8	Achcham	8 very high	64 low	18 high	68 very low
10	Dialekh	12 very high	63 low	24 high	63 low
12	Doti	16 very high	61 low	41 moderate	62 low

The selection of VDCs involved extensive consultation at district and national level in order to target the most food insecure and climate vulnerable VDCs with production potential. To avoid overlapping with other on-going or planned initiatives, consultations were undertaken with the MoSTE-led National Climate Change Support Program (NCCSP), which is already developing local adaptation plans for 14 districts in the far and mid-western region. District stakeholders recommended focusing the proposed project in a ***cluster of VDCs*** with geographic proximity, with communities that exhibit similar economic and social characteristics and are vulnerable to similar climatic hazards. This will encourage an adaptive planning approach at landscape level and enhanced delivery of services in a logistically challenging mountainous environment.

Karnali Zone and Project Area



Target VDCs – Gender disaggregated Population and Households

Proposed VDCs of AFB-Proposal, Total number of household (HH) and Population						
SN	Name of Districts	Proposed VDCs for AFB	Total Household	Population		
				Male	Female	Total
1	**Mugu**	Photu	247	694	677	1,371
2		Rara (gilash)	245	874	651	1,525
3		Rara Kalai	226	788	775	1,563
4		Kotdanda	301	919	958	1,877
5		Hyanglu	339	1,041	1,028	2,069
6		Dhainakot	427	1,228	1,194	2,422
7		Bhiyee	226	497	514	1,011
8		Natharpu	278	877	836	1,713
9		Shrikot	649	1,869	1,823	3,692
10		Seri	384	1,212	1,142	2,354
11		Gumtha	433	1,311	1,287	2,598
12		Khaumale	295	951	870	1,821
	Total		**4,050**	**12,261**	**11,755**	**24,016**
1	**Kalikot**	Dholagoa	1,108	**3,692**	**3,605**	**7,297**
2		Khin	531	1,572	1,538	3,110
3		Thirpu	796	2,348	2,270	4,618
4		Nanikot	1,006	3,390	3,247	6,637
5		Ramnakot	699	1,946	1,937	3,883
	Total		**4,140**	**12,948**	**12,597**	**25,545**
1	**Jumla**	Malikathota	535	1,761	1,728	3,489
2		Tamti	750	2,319	2,175	4,494
3		Lihi (Rara)	506	1,365	1,379	2,744
4		Mahadevpattharkhola	498	1,552	1,522	3,074
5		Ghodemahadev	371	1,252	1,185	2,437
6		Chandannath**	-	-	-	-
	Total		**2,660**	**8,249**	**7,989**	**16,238**

PROJECT / PROGRAMME COMPONENTS AND FINANCING:

PROJECT COMPONENTS	EXPECTED CONCRETE OUTPUTS	EXPECTED OUTCOMES	AMOUNT (US$)
1.1 Develop local, district and national capacity to plan, implement and monitor adaptation and risk reduction actions	1.1.1 Trained and mobilized community representatives, field coordinators and technicians at village, ilaka[1] and district to design, implement and monitor local adaptation strategies	*1.1 Climate vulnerable and food insecure poor actively participate developing climate risk reduction strategies and actions*	$609,999
	1.1.2 Local food security and climate adaptation planning supported		$ 172,814
	1.1.3 Gender and social inclusion are well integrated in to the adaptation planning processes		$30,680
1.2 Strengthened ownership and management of climate risk reduction activities and replication of lessons in key livelihood sectors.	1.2.1 Local adaptation plans integrated in to sector-wise, local and district planning processes	*1.2 Strengthened ownership and management of climate risk reduction activities and replication of lessons at district/national levels*	$ 69,029
	1.2.2 Integrate climate resilience to planning processes and development projects of key national ministries		$382,591
	1.2.3 Conducte periodic assessment and document project lessons for dissemination at community, district and regional levels		$84,327
2. Build household and community resilience and increase adaptive capacity of climate vulnerable poor in 22 VDCs in Jumla, Kalikot and Mugu Districts	2.1.1 Provide increased income opportunity for vulnerable households, especially during agricultural lean - season, through building physical and natural livelihood assets	*2.1 Diversified and strengthened livelihoods, livelihood assets and improved access to food for climate vulnerable households*	$ 3,187,121
	2.1.2 Increased local availability of and access to food and nutrition through better storage and value-addition in all target VDCs		$1,058,743
	2.1.3 Improved and adapted current crops and livestock management practices to increased climate risks		$ 7,44,367
	2.1.4 Increased income through livelihood l diversification using local resources		$ 1,031,507

[1] This is a service delivery (Government extension) unit which is an aggregation of a number of VDCs with geographic proximity within a district.

	2.1.5 Renewable energy based systems introduced to support women-led enterprises		$ 1,279,847
Project/Program Execution Cost			$ 129,765
Total Project/Program Cost			**$8,780,793**
Project/program Cycle Management Fee 8.5%			$ 746,367
Amount of Financing Requested			**$9,527160**

PROJECTED CALENDAR:
Indicate the dates of the following milestones for the proposed project/program

MILESTONES	EXPECTED DATES
Start of Project/Program Implementation	January 2014
Mid-term Review (if planned)	January 2016
Project/Program Closing	December 2017
Terminal Evaluation	December 2018

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Describe the project components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience.

Component 1: Develop local, district and national capacity to plan, implement and monitor adaptation and risk reduction actions

This objective lays the foundation on which project interventions will be designed and implemented. Field surveys and stakeholder consultations conducted during project planning pointed to gaps in awareness of climate risk and capacity to plan for adaptation at local, district and national levels. The gaps are especially pronounced at the DDC (District Development Committee) and VDC (Village Development Committee) level and below.

Outcome 1.1 will support project implementation in target VDCs through improved local planning. The three outputs under Outcome 1.1 are designed to increase capacity of local actors (Partner NGOs, Government Extension Services, and Local Resource Persons) at VDC (and district) level. The outputs will follow the overall guidance for Local Adaptation Plans for Action (LAPA) set out by the Ministry of Environment, Science and Technology (summarized in Annex 7) with additional focus on food security, gender and inclusion of disadvantaged groups within VDCs.

In this process, a localized risk assessment would be conducted for each VDC, vulnerable areas and households would be identified, key risks and adaption needs listed and prioritized. The local plans would be multi-year plans with a lifespan of 5 years. It is

envisaged that the prioritized actions would be funded through government, NGO and project funds.

In the LAPA process, wards and households displaying high levels of vulnerability are identified. This is done through one or more methods prescribed in the LAPA manual. The idea is to obtain a complete view of climate risk and vulnerability for each VDC, including geophysical, environmental and social aspects. This will help target VDC-level interventions to those most in need of support. Planning at sub-VDC level or ward level is achieved through the same LAPA process, although the project does not envisage separate plans for each Ward.

Output 1.1.1 focuses on training of local actors to evaluate specific vulnerabilities at VDC and ward levels, to use participatory methods to design adaptive actions that will lead to increased community resilience, and to implement prioritized actions through local and district level partnerships.

Outputs 1.1.2 and 1.1.3 will focus on preparing plans for each VDC, identifying target households and wards most in need of intervention. To identify vulnerable areas and households, the project will follow and improve on guidelines on LAPA preparation already field tested by NCCSP in Karnali districts. Initially households will be ranked according to their level of vulnerability in a participatory manner with key informants. Criteria for vulnerability ranking include:

1) Income level and wealth ranking;
2) Landholding and type of agriculture practiced;
3) Exposure of homestead to climate-related disasters;
4) Number of income sources per household;
5) Female headed households and ethnic/caste minorities;
6) Health of head-of-household; and
7) Number of minor members per household.

At VDC level, the project team will carry out an assessment based on relative and current vulnerability against agreed criteria - mainly livelihood choice and exposure to disaster risk. This vulnerability and adaptation assessment will help identify the most vulnerable households, wards or communities within the VDC.

The outputs under Outcome 1.2 support mainstreaming adaptation actions designed in the 22 target VDCs. Throughout the project, adaptation planning and implementation in these VDCs will be integrated into the normal development agenda of the VDC and district. This follows the guidance set out by the LAPA manual and field experience of the NCCSP[37] project.

At DDC level this will mean lobbying for budgets to implement locally prioritized adaptation actions, and for specific interventions to reduce vulnerability among at-risk communities. At national level, three key Ministries will be targeted: Agriculture, Local Development and Environment.

The project aims to build capacity in these national entities for research and implementation of climate change adaptation, based on the field experience of this project and the NCCSP. A knowledge management output is included in this component to facilitate lessons and best

[37] EU-funded and UNDP supported National Climate Change Support Project Implemented through the Ministry of Environment

practices sharing at local, district and regional level as appropriate in order to generate more interest in replicable adaptation solutions.

Outcome 1.1: ***Climate vulnerable and food insecure poor actively participate in developing climate risk reduction strategies and actions***

Output 1.1.1 **Trained and mobilized** community representatives, field coordinators and technicians at village, ilaka and district **to design, implement and monitor local adaptation strategies.**

The training component primarily targets local (VDC and ward) representatives and user groups in order to support effective delivery of project activities on ground. Local resource persons from different fields and expertise will be trained to plan, implement and monitor adaptation programs. This includes per VDC:

Representative sector	Number of Persons per VDC (estimated)
Technical (agriculture, livestock, construction, roads, forestry)	05-06
Managerial	02
Social Mobilization	05
Monitoring and Evaluation	02
VDC Facilitators[38]	01
Enterprise development	05
Total per VDC	**20-21**

Training will also be provided to some sub-district and district level officials to provide comprehensive understanding of climate risks in their respective sectors, LAPA tools (a full description of the LAPA process and tools included in annex 7) which includes Participatory Rural Assessment (PRA) and cost-benefit analysis to prioritize local needs, and climate risk assessments. The training will also include a gender sensitivity analysis and a food security analysis at local level; so that decisions are also influenced by the urgent need to address gaps in these areas. This output aims to increase adaptation planning capacity of government officials at Ilaka and district level to directly support the project activities described in components 1 and 2.

Sub District Level Officials	District Level Officials
Junior technicians	Agronomist
Junior Technical Assistants	Forest Officer
Forest Rangers	Livestock Officer/ Veterinarian
	Irrigation Officer
	Energy Unit Officers
	District Technical Officer/ Engineers
	Women Development Officers
	Cottage Industry Development Officers

In addition, a training module will be developed on adapting to drought in Karnali with the NARC Research Centre in Jumla and agriculture extension office. A total of 3 Transfer of Technology trainings for government and NGO representatives on agricultural drought management practices will also be conducted. This will benefit extension officers (junior

[38] These are paid staff of the project at VDC level

technicians) of non-target districts as well. The project would use training manuals produced by MoSTE for district and national thematic experts and local trainers.

Output 1.1.2: Local **food security and climate adaptation planning** supported

This output will support detailed analysis of food security and production in relation to climate change risks in each target VDC (and the 9 wards under each VDC); detail the context specific vulnerabilities related to climatic uncertainty and variability; and provide communities with planning tools to design and prioritize adaptation actions.

Trained social mobilisers and VDC-level facilitators will support the planning processes, which will include several seminars and village-level consultative workshops and meetings. A participatory approach will ensure that the plans reflect the urgent and immediate needs of the most vulnerable and food insecure households.

The project will also produce aggregated adaptation plans on a watershed scale covering one or more VDCs. This takes in to consideration that certain livelihood assets (forests and water primarily) are not confined to village or settlement boundaries and that their conservation has to be considered through a broader lens. Spatial analysis of land (forests, agricultural land, homesteads etc.) and water resources will be conducted to complement the social analysis of vulnerability and the economic analysis of prioritized adaptive actions.

As evident from field consultations conducted for project development, VDCs do not have medium or long term development plans. An annual development plan is generated on the basis of urgent needs identified on ad-hoc basis, by only a segment of community. Adaptation planning, on the other hand will differ from this conventional practice and use LAPA framework and tools to identify and prioritize short, medium and long term development priorities. The framework envisions that local adaptation plans are well mainstreamed into local planning processes so that the whole planning process becomes bottom-up, inclusive, responsive and flexible. In this way, the project will increase both the impact and sustainability of local development actions by providing a planning framework where short and medium term actions can contribute towards long term adaptation and increased resilience.

Proposed activities under this outcome include:

- Build awareness and sensitize local stakeholders on environment, climate change and energy related issues and encourage community feedback
- Assess community vulnerability and adaptation options using LAPA framework, LAPA manual and tools[39]
- Identify the most vulnerable wards, communities and households in target VDCs; and agree on priority actions and target groups
- Conduct participatory watershed mapping in selected micro watersheds with VDC, Ilaka or district technical officials
- Develop adaptation plans for 22 VDCs and prioritize actions for most vulnerable wards, settlements and households
- Develop master plans for development, integrating climate change risks to livelihoods, infrastructure, and ecosystems in each target VDC

[39] A description of LAPA tools, process and implementation could be found in Annex 07

Output 1.1.3: **Gender and social inclusion** are well integrated in to the adaptation planning processes

As described in the baseline above, gender and social disparity is high, especially in rural areas such as Karnali regions. There are a number of ingrained social and cultural practices that discriminate against women, ethnic minorities and Dalits. This reduces their capacity to cope with and adapt to the impacts of current and future climate change. Therefore, a separate output has been introduced to ensure that the specific concerns and vulnerabilities of these groups emanating from inequality in access to economic opportunities and decision-making will be reflected in the adaptation plans prepared in Output 1.1. This output will have specific activities to ensure that women and disadvantaged groups participate fully in adaptation planning and implementation, in keeping with WFP policies that all groups have equal access to resources, training and income opportunity provided through the project. This output will deliver these set of key activities:

- Mobilize mothers' and women's group in 22 VDCs to participate fully in adaption planning and prioritizing actions
- Introduce a special segment (to the local adaptation/food security plan) for women-headed households and minorities as they are considered the most vulnerable within a ward or VDC
- Strengthen local women's savings groups and cooperatives with knowledge and information on adaptation and food security actions
- Avail women of equal opportunity to engage in income generating and asset-building activities through specific supportive arrangements if required and build in 'equal pay for equal work' principle in to local adaptation actions

Outcome 1.2: ***Strengthened ownership and management of climate risk reduction activities and replication of lessons in key livelihood sectors***

Output 1.2.1: Local adaptation plans **integrated in to sector-wise, local and district planning** processes

Each Village Development Committee (VDC) prepares annual plans through Citizens Forums for general development activity and submits to the District Development Committee (DDC) for financing through decentralized budgets. Line agencies such as Forestry, Irrigation, Agriculture and Livestock have their own extension services in target areas, especially at Ilaka level. This output will ensure that the local adaptation plans are not separate from the regular development process at local level, and aims to ensure that technical support and institutional ownership are secured for the sustainability of interventions implemented through the project.
The VDCs targeted for the project are in remote areas which lack access to resources (financial + technical). Once local adaptation plans are integrated into local and district plans, adaptation activities would be eligible to receive funds according to the current decentralized budgetary process. The institutional guidelines that VDCs have to follow to acquire these central grants include the requirement to address the sectors of environment, skill development training and local awareness raising. The fact that the project addresses all three of these required sectors provides a strong incentive for the VDCs to sustainably invest their grants / resources in it.

In addition, the project outputs and outcomes will create significant assets that the entire community will benefit from, and will build the capacity of local VDCs to run and sustain activities. In a context where resources for asset creation, and external assistance in general, are hard to secure, there will be a natural incentive to provide resources from decentralized budget allocations to ensure sustainability.

This output will also develop the project implementation and monitoring systems in each district and each target VDC. This includes the establishment of a district technical advisory group, under the District Development Committee's (DDC) District Energy and Environment Coordination Committee (DEECC). This group will provide technical support to project implementing partners and ensure there is no duplication of interventions at VDC level. The group would also provide monitoring support to the project.

Specifically, the output targets inclusion and discussion of local plans at development plan formulation committees. It aims to:

- Develop district and VDC level implementing and monitoring mechanisms for climate adaptation. A VDC-level facilitator will be appointed for each target VDC to ensure smooth delivery of interventions and regular monitoring of impacts;
- Merge local plans through VDC level sectoral and integrated plan formulation committees supported by social mobilisers; and
- Develop combined watershed level plans to be presented to District Plan Formulation Committee.

Output 1.2.2 Integrate **climate resilience to planning processes and development projects** of key national ministries

This is one of the key outputs of the project and aims to support climate-proof development initiatives developed by the Ministries working on the project. The output specifically targets national-level processes relevant to the project - such as the asset building program of the MoFALD and climate (drought and flood) resilient agriculture training for extension officials of the MoAD. The output will:

- Improve technical standards of the local asset building program of MoFALD to ensure integration of climate resilience and adaptation lessons and practices;
- Integrate climate risk reduction practices in to the national agriculture training program at NARC; and
- Support the Climate Change Unit at MoSTE to measure progress against the long and short term goals of the NAPA.

Output 1.2.3 Conduct periodic assessment and **document project lessons for dissemination** at community, district and national levels

The knowledge management component is an important part of the project. Lessons that emanate both from the adaptation planning process and field implementation will be evaluated, discussed, shared and scaled-up through this output. The project will equally focus on evaluating (i) the impact in terms of physical changes, production improvement, social and economic improvement of the target community, especially on the most vulnerable groups and (ii) the process and systems through which planning, implementation and monitoring are achieved so that the model can be replicated in other districts.

Constant knowledge sharing between the center, the district and the community will ensure feedback to policy makers and technical information flow to the community. For MoSTE and MoFALD, the project will provide a necessary validation of the integrated development and adaptation planning process. (Additional information on this Output is provided below in Section G)

At VDC level this output will:

- Train 42 key informants (2 per VDC including in Jumla HQ) in gathering and disseminating climate risk and agriculture technology-related information; and

- Establish 22 VDC level agricultural information centers linked to Jumla zonal NARC and Agro-meteorological stations to deliver climate services and extension advice to farmers. These centers will have audio-visual aides and graphic material to disseminate information from research and extension services down to the VDCs.

At district Level the output will support community information exchange through:

- 20 Exchange visits from other VDCs;
- 10 community field workshops; and
- Local/community FM radio broadcasts to disseminate best practices in 3 districts.

At National Level this output will support the Climate Change Unit at MoSTE to measure progress against NAPA's long and short term goals though the production of case studies based on:

- Implementation modalities, lessons and successes in adaptation practices; and
- Linkages between food security and improved water, land and forestry management.

Box 1: User Groups for VDC level adaptation planning and implementation

Nepal's rural development programs deliver at village level through 'user groups' or 'user committees'. This is a term used to define community organizations (COs) at grassroots level which have structure, specific mandates and are able to handle project finances.

The best known example of user groups in Nepal comes from the country's well-developed Community Forestry Program. This government-driven program to broaden ownership of forest resources has resulted in improved forest condition, better regeneration and income for forest-dependent communities.[40] Practically every village in the mid-hills and terai regions has a FUG (forest user group.

User groups or committees have also been used in other rural development projects, such as WUPAP (Western Uplands Poverty Alleviation Project). This IFAD-funded project looked at developing rural livelihoods for the most vulnerable groups. Due to its similarity in approach and target group, this project proposes to use WUPAP's social mobilization processes set out in the Project Implementation Guidelines. Where project VDCs overlap, the project will use existing WUPAP user committees.

World Food Programme also has prior experience with user committees for the maintenance of community infrastructure created through food-for-assets programs. Rural roads, irrigation systems and other rural infrastructures created through this program will each have its own user group consisting of community members directly benefiting from the assets. WFP guidelines prescribe User Groups collect a regular maintenance fee from community members and establish a maintenance fund for the upkeep the asset. Funds for upkeep are also drawn from decentralized development budgets through the DDC or Line Agencies such as Department of Irrigation.

The common indicators for strong user groups[41] are the legitimate users of the asset, common purpose and trust, and sense of ownership of the asset or process. Post-projects reviews have demonstrated that user groups continue long after the project period if the above factors hold them together.

In terms of marginalized groups, in all three projects user groups or committees have been formed with the most poor and disadvantaged communities. In this project existing user groups will be mobilized and new ones formed where necessary in accordance to the proposed guideline in Annex 15.

[40] Springate-Baginski, O et al. Institutional Development of Forest User Groups in Nepal-Processes and Indicators. Journal of Forest and Livelihood UK. July 2003

[41] Springate-Baginski, O et al. Institutional Development of Forest User Groups in Nepal-Processes and Indicators. Journal of Forest and Livelihood UK. July 2003

Component 2: Build household and community resilience and increase adaptive capacity of climate vulnerable poor in 22 VDCs in Mugu, Kalikot and Jumla districts

Component 2 will deliver concrete adaptation benefits to the most vulnerable communities. Five outputs have been organized to address specific vulnerabilities that were identified during community consultations. These relate to low agricultural productivity, low incomes, and lack of irrigation availability, food insecurity for 3 to 4 months of the year, as well as low living and health standards for women.

In the problem analysis, it was noted that the biggest challenge for target VDCs was ensuring adequate food and nutrition throughout the year. This historical problem is compounded by changing climate and irregularity of rain and snow. Agriculture is hampered by lack of irrigation and timely precipitation. Productivity is low due to technology and information gaps. Technologies for food storage and value addition are scarce and not widely adopted. Women, especially, suffer from lack of basic facilities such as privacy for bathing, water for washing and clean cooking energy. This affects household coping strategies and hence the adaptive capacity of families and communities. The project defines adaptive capacity in terms of a family's access to better living standards, water, food (in sufficient quantity and quality), and increased productivity of current livelihood and diversified income sources. Building such resilience would provide these households with the means to face and adjust to climate-induced shocks.

The outputs in Component 2, and activities within them have been designed through extensive consultation at national, district and local (VDC and ward) levels and include recommendations of sector experts, district representatives of agriculture, irrigation, forestry and livestock, community groups, especially farmers, forest users, mothers groups, and DDC officials, including Local Development Officers. The outputs also consider the lessons and practices acquired by other implementing agencies - IFAD, UNDP, DFID - for more cost-effective delivery. (See section F).

Initial identification took place through consultations at various levels and was based on LAPAs developed through the NCCSP project's work in Karnali. Therefore the activities are representative of community needs and aspirations in similar social/geographical context in the Karnali region. While the outputs and activities have been 'pre-identified', they will be implemented in target VDCs in accordance to the plans developed in Output 1.1.2. Adaptation actions identified and prioritized through this planning process will be implemented in each target VDC through Food/Cash for Assets (F/CFA) programs. As such, there will be a high level of 'tailoring' of adaptation actions listed in outputs below to local conditions through the adaptation planning processes described in Component 1.

NCCSP's experience in the five Karnali districts in terms of planning, prioritizing and executing local adaptation plans will form the key reference while planning and designing these adaptation activities. The MOSTE's District Summary Report on LAPA 2012 makes it clear that the types of adaptation actions that are prioritized by vulnerable communities are largely related to food security, livelihood, energy and infrastructure. This information and field experience has been used to plan adaptation actions in component 2 of the project.

Summary of Adaptation Action Plans developed for NCCSP high hill districts

S.No	Eco-zones	Districts	Agriculture, Food Security, livelihoods, forest, biodiversity	Capacity development: skill development and income generation, planning, monitoring	Climate induced Hazards, disasters	Water resource, alternative energy	Infrastructure development	Total
1	High Hill	Bajura	82	46	0	19		147
2	High Hill	Dolpa	655	115	44	26	16	856
3	High Hill	Humla	71	82	46	43	19	261
4	High Hill	Kalikot	40	126	18	50	40	274
5	High Hill	Jumla	36	100	51	42	7	236
6	High Hill	Mugu	33	92	47	28	16	216
	High hill-total		**917**	**561**	**206**	**208**	**98**	**1990**

Source - MOSTE, 2012

Outputs 2.1.1 through 2.1.5 provide broad areas of intervention in response to the vulnerability analysis by developing livelihood-related assets and infrastructure, improving food processing and storage to overcome lean season shortages, improving agricultural productivity, and developing alternate income and women's welfare. Within these areas of intervention, the F/CFA mechanism would be employed to enable communities to make the investments that have emerged through consultative planning while maintaining their food and livelihoods security. Without food and cash for assets, food insecure households would not be able to participate in adaptation activities, as they would be forced to engage in short term coping to secure food and income.

Output 2.1.1: Provide increased income opportunities for vulnerable households, especially during agricultural lean-season, through building physical and natural livelihood assets

Small-scale farmers eking out a subsistence livelihood are most at risk from climate hazards. In the target districts, the vulnerability of farmers to dry spells is pronounced[42] and evident in annual periods of food deficits. Typically, these districts produce only enough food for 3 to 6 months consumption[43]. With climate change, the high levels of food insecurity already experienced by these communities will be significantly exacerbated.

Lack of off-farm income opportunity during low rainfall seasons and winter has meant that many of men migrate out of villages looking for work in urban areas or in India. This practice is sometimes interpreted as a coping strategy adopted by households in times of food insecurity. [44] The absence of one or more household members is meant to save grains even if they do not send income back home. However, the practice of leaving women and children at home with limited food and savings during the most climatically-stressed period of the year exacerbates their vulnerability. During these months income is limited and food is

[42] Krishna Krishnamurthy et al: Climate Risk and Food Security in Nepal: Analysis of Climate Risk on Food Security Components 2012. WFP and CGIAR

[43] More than Roads- Using Markets to Feed the Hungry in Nepal World Food Programme 2009

[44] Passage to India- Migration as a coping strategy in Times of Crisis in Nepal. Nepal Development Research Institute and WFP 2008

increasingly hard to access. Women in rural villages, especially in mountainous areas such as Karnali, resort to extremely hard manual work to survive.
This output aims to increase adaptive capacity at household level primarily through the implementation of an asset building programme in each VDC. Assets will be identified at household, ward, VDC and VDC cluster level. The programme will focus on physical assets such rural roads and markets as well as natural assets which improve production and natural resource management such as land terracing, slope stabilization, irrigation canals, water harvesting ponds or tree plantations in catchments.

Through the asset building programme, both men and women will be engaged in productive, adaptation activities and will have the opportunity to earn food and cash during agricultural lean-season months when they need it the most. Providing employment opportunities during the lean season through cash and food for assets, will also act as an incentive for men to stay in their communities adding to the long-term positive impacts for that community. Around 60 days of work per family ensures food security for 3-4 months during the lean period where drought is common and agricultural activity low.

The assets built will be prioritized through community plans and approved by the district-level government technical officer. Asset will be created that contribute to increased local agricultural production and consumption. The illustrative interventions listed below have existing technical standards and are easily monitored for quality. [45]

- Increase availability of water through construction of an improvement to ridge ponds, community ponds, irrigation channels, check dams, etc;
- Improve connectivity of VDC to markets and emergency supplies during disaster and health facilities through strengthened feeder roads, bridges and culverts;
- Protect catchments of drinking and irrigation water sources through community-based forest plantation activities; and
- Improved structures (houses, community buildings) at local-level for storage, health posts and markets.

Output 2.1.2: Increased local availability of and access to food and nutrition through better storage and value-addition at local level in all target VDCs

Most local and nutritious food crops traditionally cultivated for generations such as buck wheat, maize, millet and potato are preferred less by communities than rice as a staple crop[46]. Problems of processing and using these traditional foods, lack of proper cooking methods and taste, and lack of value addition have gradually eroded their popularity. Rice comes at a high price and can cost twice as much in the mountains (due to transport and logistical issues) than in the plains of Nepal[47]. While farmers in the mountains cultivate rice[48], harvests are poor and water requirements are high, making rice a highly risky crop in areas with increasing drought.

The aim in this output is to introduce food value-addition and preservation methods and new recipes for traditionally grown crops, and improve household food storage. The output has a

[45] Technical Guidelines for Project Implementation and Design for Small Rural Infrastructures. WFP 2011

[46] Rijal, DK; RB Rana, PR Tiwari, LP Pant and D. Jarvis (2001). Promoting Local Food Culture as a Method to Conserve Buckwheat Diversity in Agro-ecosystem of Nepal. In. Research & Development on Buckwheat: AN important yet a neglected crop in Nepal. Proceedings of National Workshop, 2001, Kathmandu

[47] More than Roads- Using Markets to Feed the Hungry in Nepal World Food. Program 2009

[48] Jumla grows red rice at an altitude of 2500 meters, reportedly the highest rice growing location in South Asia

number of activities targeting women who would benefit from convenient cooking methods, information on low-cost and nutritious foods, and growing kitchen garden produce that can be stored for lean periods.

The adaptation benefit derives from improved seed and food storage at village level, and communities adding value to locally available and more climate resilient food, especially grains (in lieu of the expensive and rain-sensitive rice).

The output will support the development of community seed banks to increase access to preserve indigenous and newly introduced seed material which are more resistant to climatic stresses. This will contribute to reversing the trend of diminishing genetic diversity in the mountains, in favor of climate resilient and low-maintenance rice and wheat. Community-run rustic stores for potatoes will also be supported to create buffer stocks which can be used by communities during periods of climatic stress and short food supply. Specific activities in the 22 VDCs include:

- Introduce simple technologies (e.g. milling) for value addition of locally cultivated grain, vegetable and pulses
- Develop and promote easy recipes based on nutritious locally cultivated produce through Mothers' Groups
- Improve local, knowledge, skills and practices related to food preparation and storage
- Build and improve community seed banks to preserve and improve access to crop seeds of local origin and
- Develop kitchen gardens for household needs
- Build community-managed grain/potato stores as food buffer stocks to develop an improved local food markets and food distribution system in each target VDC

Output 2.1.3: Improved and adapted current crops and livestock management practices to increased climate risks

Target VDCs rely on outdated farming methods and lack the knowledge and technology to improve yields. Yet, the problem analysis showed that drought is becoming an increasingly common and a serious threat to livelihood. The adaptation benefit of this output is to prepare farmers for more frequent and prolonged drought periods. Improved methods and simple technologies can increase yields (and income) of crop and animal farming in which they are currently engaged.

In target VDCs agriculture (crop and livestock rearing) remains under-developed and under-serviced by government extension services. Extension services pertaining resilient alternative crop types, fertilizer/manure production, pest control, low-tillage farming methods and improved livestock management techniques such as corralling and stall-feeding of livestock rarely penetrate remote VDCs.

While livestock is an important component of household food and income security, free grazing livestock negatively impacts community forests and fields.[49] Drought also affects the availability of fodder for livestock.

The activities of this output have been developed with extensive consultations with experts in the Ministry of Agriculture Development (MoAD), District Livestock Development Officers (DLDO) and District Agriculture Development Officers (DADO). Using Food and Cash for Training (F/CFT) and farmer field schools the project will work with all target households to:

[49] Community and stakeholder consultations in Jumla

- Introduce water efficient irrigation and water harvest technologies such as micro irrigation
- Introduce soil conservation methods such as terracing, low-tillage agriculture and SALT (sloping agriculture land technology).
- Introduce agriculture best practices already developed and field tested such as IPM, organic farming, and drought resistant crop species
- Introduce stall feeding, corralling to prevent free-grazing livestock from degrading forests and crops; Introduce improved fodder management techniques for drought periods
- With NARC[50] in Jumla establish 10 farmer field schools with the support of District Agriculture Development Officers to carry out climate resilient cropping practices such as low tillage, water use efficiency, protecting soil moisture, intercropping systems, varietal selection for resilient alternate crops, etc.

Output 2.1.4: Increased income through livelihood diversification using local resources

During field consultations, a number of income diversification options for women were identified. It was observed that the cottage industry is virtually non-existent in target VDCs due to lack of quality products and markets. Women, especially, were keen to have more skills development and technologies to engage in home-based industries that could have local market potential (candles, pickles, drying herbs etc.). Lease-hold and community forestry were other activities that communities identified for development to supplement rural incomes. Forest-based enterprises such as medicinal, aromatic herbs are not well developed in the target areas. These could form a substantial portion of family income if markets are available.

Developing such non-timber forest products (NTFP) and their value addition could support women to engage in livelihoods that are less exposed to climatic variability. The outcome aims to reduce vulnerability to climatic stresses by broadening family and community sources of income. The idea is to use locally available resources and WFP's Food/Cash and for Training modality to improve local skills and cottage industry as a viable alternate means of employment and income generation for local women. The selected cottage industries will suffer relatively little impact from changing weather patterns and longer drought conditions.

The project's target areas also contain large areas of degraded lands which are privately and communally owned. Developing agro-forestry for food, fuel, fodder and timber is necessary in rural mountains due the large-scale degradation of forested lands to meet these basic requirements. The outcome will support communities to improve agro-forestry in lease-hold lands in identified degraded lands supporting increased tree cover and household needs.

This outcome will:

- Establish user/market groups for alternate income generation to engage in activities such as candle-making, pickle-making, growing and processing of herbs and mushrooms
- Train selected user groups within each target VDC to develop market-based produce
- Establish forest-based enterprises including medicinal and aromatic herbs
- Establish local seed production as a community enterprise
- Develop leaseholds and community forestry to increase income and food availability

[50] Nepal Agriculture Research Council Zonal office in Jumla

Output 2.1.5: Renewable energy-based systems introduced to support women-led enterprises

As described above, the comparative social and economic vulnerability of women in the project districts is high. The project will support women and disadvantaged groups in the adaptation planning process at VDC-level so that their context-specific issues are identified and prioritized within the plan, as described in Output 1.2.

Women spend much of their time sourcing basic resources for the household, such as firewood, water and fodder for animals. Their technical capacity and skill levels remain low. Within homes they also have to work in unventilated, smoke filled rooms. The lack of water within easy reach (10-15 minutes' walk from the home) and indoor smoke pollution increases drudgery and reduces quality of life. Sanitation remains poor due to lack of adequate water supply and facilities for bathing and washing.

This output will introduce renewable energy systems to ease the burden on women and improve their socio-economic status. This includes providing tried and tested models of efficient cook stoves, efficient water mills for grinding, milling, solar for lighting, cooking and water heating and Multiple-Use Systems (MUS) for water to increase water use efficiency. These measures will have a positive impact on women's workload, due a decrease in time currently spend in firewood gathering and fetching water from long distance. The activities will also reduce children's workload to support household chores and will contribute to increase the time children spend in schools.

The output will also establish novel 'service centers' for women in each VDC specifically targeting women with clean, solar heated water for washing and sanitation, clean cooking stoves powered by solar, and facilities for child care. The establishment of facilities closer to the communities and the services provided by these centers will also contribute to reduce women and children's workload. The centers would be established on state-owned or community-owned land. They would be managed by women's groups in the village. Capacity of women's groups will be developed in Output 1.1.3 and further women-led activities (including income-generating activities) Outputs 2.1.2 and 2.1.4. The service centers will provide local employment to one or two women. The centers would also demonstrate multiple-use systems for water to inform and educate rural women on domestic best practices. [51] This component will be executed by the District Environment and Energy and Committees and NGOs.

The adaptation benefit is derived from improvement of the quality of life of women in vulnerable households, and within the community. Social dimensions of adaptive capacity include the status, health and mobility of women in a community.[52] Increased incomes, better health and clean energy will lead to increased resilience at household and community level. Higher resilience improves the ability to face climatic stresses and weather-related disasters. The Service Centers are designed so that women will save both time and effort in bathing, washing and cooking, allowing them more time to engage in productive income generation.

For 22 VDCs the project will support households to establish:

- Improved water mills for food processing
- Solar dryers for food processing and drying
- Improved cooking stoves and ovens to reduce indoor smoke pollution

[51] A plan and drawing for the proposed service center and cost estimate included in annex 13

[52] Burton et al. Adaptation to Climate Change in the Context of Sustainable Development and Equity (2009)

- 22 solar-powered service centers to provide essential water-energy related services to local communities, with a focus on women. These centers will provide bathing, washing, toilets, safe cooking and child care facilities. They would be maintained as income generating ventures managed by VDC Women's Groups.

Training sessions on construction and maintenance of improved cook stoves (ICS) will be provided in two ways. Firstly, select local beneficiaries will be trained in the design, creation, marketing and technical maintenance of the stoves. National NGOs with proven professional experience engaging with cooking stove projects (such as the Centre for Rural Technology Nepal 'CRT/N') will undertake the training. Secondly, all beneficiary households receiving the improved cooking stoves will be required to attend training sessions on how the stoves are constructed and maintained. The fact that the ICS system is simple and efficient, and the stoves are constructed locally from the easily accessible resources, will further help households maintain the stoves, and create jobs through the demand for ICS production, sale and maintenance services.

Finally, experiences in community asset building programmes show that a high degree of beneficiary participation and discussion of project management before implementing the project significantly increases local ownership. The project will ensure active involvement of target communities, allowing participants to establish and be cognizant of the roles and responsibilities of different stakeholders before activities commence. Participation of the most vulnerable and marginalised group in the planning process will generate ownership and management of assets by these target groups.

B. Describe how the project / program provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and groups within communities, including gender considerations.

The project will target some of the most climatically vulnerable and at-risk VDCs in three Karnali districts - Mugu, Kalikot and Jumla. The target VDCs have already been ranked by the NCCSP[53] project as being highly vulnerable to climate-induced hazards, especially rainfall variability and drought, and they demonstrate low adaptive capacity.

The project will deliver both 'soft' support in terms of awareness, planning capacity and technology transfer and 'hard' or concrete adaptation actions that are expected to transform lives of communities at risk. As described in the strategy, the project will use Cash and Food for Work (C/FFA) to deliver income at critical times of year and providing the opportunity for communities to implement project activities. Throughout the implementation period, every target household will receive food and/or cash ensuring food security for a family of five for 3 to 4 months of each year. Activities implemented through community participation will support increased availability of livelihood resources and increase production, ensuring income and food security in the longer term.

In terms of **economic benefits**, the target VDCs will see an increased investment in agricultural production and diversification. The largest share of investment will be in water management. Water tanks[54] will be constructed on hilltops, in farms and at homes to improve water storage and maximize utilization in a variable rainfall regime. Improved irrigation will ensure that farmers have adequate water for cultivation of two cropping season a year. Crop diversification will support high-value vegetables such as local beans, carrot, cauliflower, capsicum, potato and saplings of temperate fruit species, spices and medicinal herbs. Regular extension service delivery will help farmers adjust to adverse impacts of

[53] National Climate Change Support Project

[54] Of different technical specifications and different capacity

uncertain weather conditions during planting or harvesting. Investment in post-harvest technologies and storage (buffer stock) of potatoes and grain storage will provide village families with income and food during lean agricultural seasons.

Households will have food and cash earning opportunity through local infrastructure work related to adaptation (such as irrigation channel construction, water tank construction, soil management, tree planting) during dry season when agricultural activity is low and food insecurity high. Women in villages will be given extra opportunities to earn income through food and cash for assets schemes. This mechanism will provide a direct benefit to target households, providing them with enough income and food security for them to engage in adaptation activities and invest in improving their livelihoods. Without this income, these households (who face a significant adaptation deficit) would not able to make these investments and instead would need to migrate in search of off-season labor opportunities. The outcome will be that both men and women will be engaged in productive, adaptation-enhancing activity during dry months. This is expected to reduce negative coping strategies such as migration and selling off livelihood assets (land, seed stocks).

The project will create additional livelihood assets, such as irrigation systems and community infrastructure It is expected that the assets created will create sustainable income sources to support at-risk communities and could potentially reduce ~~prevent~~ further out-migration. See the following link for available evidence: (http://www.wfp.org/content/passage-india-migration-coping-strategy-times-crisis-nepal-2008)

Socially, the project will demonstrate that supports women and other disadvantaged groups to participate in income-generating activities to enhance production. Generally the social impacts of marginalization will be ameliorated through better extension services, capacity building measures and project investment in the target VDCs. Village level information centers will connect villagers with technical data on core systems including water, forestry, crops and livestock, and weather related information. Planning and training will combine to increase community capacity to face future adverse conditions and mobilize local and district resources for their welfare and development.

A reduction in out migration would likely increase the sharing of work among men and women and reduce the workload of women. For women, the project will deliver some specific, gender-sensitive adaptation options, including livelihood-based skills development and access to new technologies. This will improve home-based income generating opportunities and reduce physical labor for women and children who spend time and energy gathering firewood, water and minding livestock. Special service centers introduced through Output 2.1.5 will cater to women-centric needs, especially energy-related technologies, water for sanitation, and strengthen women's groups and mother's groups to engage in planning, implementation and monitoring of adaptation actions.

The activities proposed in this project will enhance income and household production. These activities will reduce the risk of children dropping out of school to help with household activities. The project will also have positive health benefits for women and disabled members of the household.

As the target beneficiaries are poor and disadvantaged households including Dalits and other minorities, the project's focal user groups will consist largely of women and disadvantaged families. These families will actively participate in the adaptation planning and implementation process (see activities under output 1.1.3).

The Ministry of Environment, Science and Technology recognized the need to have special interventions that overcomes the current marginalisation and its impact on social/economic status. In ownership and management of assets created WFP already has established good

practices in the field that favour of women and other disadvantaged groups in selecting cash/food for assets beneficiaries, building their capacity to own and manage assets, and strengthening their positions within VDCs to ensure their voice is heard in local governance**.** Active involvement of vulnerable groups into the planning and implementing process ensures the creation of ownership and management responsibilities on the assets created.

Environmentally, project interventions will contribute to increased water availability and irrigation potential through ground water recharge and water harvesting; improved forest and tree cover through community forestry and agro-forestry; improved soil and slope stability through conservation techniques such as bunds, drains, live fences and improved biodiversity in terms of plant, animal and microbial life in both home gardens and community forests. These environmental benefits will improve the integrity of the ecosystem services that support community livelihoods. The combination of outputs 2.1.1 and 2.1.4 is expected to demonstrate:

- Increased vegetative cover in degraded areas with focus on catchments of local streams and water sources;
- Increased assets for landless and disadvantaged communities and therefore building their adaptive capacity; and
- Improved management of forest fires and resultant degradation of land and water sources.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project

The project's target districts remain some of the most inaccessible and remote regions of Nepal. Due to the logistical challenges of delivering development support in these areas, these areas are often deprived in consideration of investment effectiveness and efficiency. Physical assets such as rainwater harvesting ponds and tanks, irrigation systems; markets, roads, bridges and service centers are essential to push these households out of their subsistence-level farm practice; and ensure water security in the face of increasingly erratic rainfall. By conserving the natural resources that support farm livelihoods, such soil, water, and forests the project hopes to buffer community against current and future climatic threats, especially rainfall variability and temperature rise all of which will impact water availability and soil quality.

The project will invest heavily in building physical and natural assets that promote farm productivity while reducing climate risk and therefore contribute to food and income security for target households.

Field consultations reveal that the region has huge potential for a variety of high value commodities including high-priced herbs, vegetables, fruits and non-timber forest products and agro-eco-tourism. With improving communication system and road transport a variety of gateways are opening for community to market these high value commodities. In view of this, the project invests in developing appropriate skills and local value-added industry, so that there will be positive synergistic effects of infrastructure development and climate adaptation. In the selection of VDCs the factor of market access was considered, so that investments would lead to longer term change in income and livelihood.

Community asset creation in exchange for cash or food is an already tested system of ensuring household food security in lean periods without scope of agricultural activity and during a post-disaster recovery.[55] Participating households build critical infrastructure in exchange for food or cash. It is already proven[56] that community asset building has a host of

[55] More than Roads- Using Markets to Feed the Hungry in Nepal World Food. Program 2009
[56] More than Roads- Using Markets to Feed the Hungry in Nepal World Food. Program 2009

positive impacts. Infrastructure links farmers to markets, households to services and provides necessary socials security nets in times of stress. The Government and World Food Programme's food or cash for assets (F/CFA) amounts to 4kg of rice per day per participant. Each household is guaranteed 60 days of work (per year) through one member (male or female). The food is programmed to meet the cereal requirement of a household (approximately 5.6 people) for at least four months of the year. Cash transfers (CFA) are determined based on the area-specific market rate for the equivalent of rice and pulses.

However, current food and cash for assets (F/CFA) interventions are 'stand-alone' projects designed to bring in cash or food to the community. They are not part of a larger development plan of the VDC or based on the district development planning process. Often they are not integrated in to sectoral plans managed by technical agencies in charge of irrigation, agriculture, livestock or forestry. As such, the usage and maintenance of such community assets and their contribution to agricultural production and long term food security is not monitored as part of an overall plan. In this project however, a longer-term and more intensive planning process will align the benefits of food/cash for assets with concrete adaptation outcomes in targeted communities.

The effectiveness of F/CFA programs to deliver community benefits, especially food-assistance during the lean, dry months, is recognized by national and district authorities, and WFP's partners.[57] Food or cash assistance delivered through such programs are an important source of income and food security during the lean season in remote Karnali villages.[58] It is clear that F/CFW can deliver both short and long term adaptation support. In the short term, it helps communities to overcome food deficits caused by climatic stress. And in the longer term, it supports communities to develop productive assets that can improve agriculture-based livelihoods. The value addition of the proposed adaptation project is to improve on the existing asset-building model, and introduce a host of complementary activities that will ensure that the assets actually contribute to a reduction of household and community vulnerability to environmental and financial shocks.

An alternative implementation approach would be to use a contractual modality to build the productive assets for each VDC. This is the modality being followed by the NCCSP project. Priorities identified by communities though the LAPA process are financed through the project and implemented through local contracts. Contractors are from the private sector and are not sensitive to participatory development models. Therefore community participation in such a modality would be restricted.

Another alternative approach would be to implement the project entirely through government channels. This would mean that District Development Committees and their government extension services play a central role in implementing the actions, rather than the planning and monitoring roles envisaged by the project. While this may be more cost effective, the capacity of present government structures to deliver in the field, especially in logistically challenging regions such as Karnali, is restricted. The World Food Programme, on the other hand has trained and maintained a network of field-based staff as well as NGOs that have greater reach in to the VDCs and are able to immediately implement project outputs. The government will send a formal letter to the Adaptation Fund formally requesting an exception for those outputs which WFP and its partners are asked to execute.

[57] Consultations with Ministry of Federal Affairs and Local Development; Chairmen and Secretaries of District Development Councils and WFP's partner NGOs

[58] Oxfam International. Climate Change, Poverty and Adaptation in Nepal 2009

In order to analyze cost effectiveness, a brief discussion on alternate macro-level adaptation options is presented below. These options were presented by district and national stakeholders consulted during project formulation.

Shift to non-farm livelihoods – Analysis of non-farm income opportunities reveals that migration is a commonly adopted coping strategy. Migration takes many forms – some people leave for a few months during the dry season, others stay out for most of the year and others return home once every few years. India is the most common destination. Commonly, men migrate for work, leaving behind families of young and elderly to be looked after by women. Seasonal migrants remit between USD 70-340 annually, depending on the location (India or Nepali cities) and the caste, level of skill of the migrant.[59]

Seasonal migration is not a preferred livelihood option. Most villagers prefer to remainhome if productive employment is available.[60] In the Karnali region, industry or tourism is not well developed. Hence other off-farm income opportunities are non-existent except in some district headquarters. The project offers off-farm employment during the dry season, and between planting and harvesting when household food stocks are leanest.

In highly food insecure areas, the F/CFW approach has reduced negative coping strategies demonstrably. It has allowed beneficiaries to pay-off high interest local loans and reduced to need for seasonal out-migration.[61]

Large-scale irrigation or change in crop type- The mountains in the project area are the catchment areas of the Karnali and its tributaries which irrigate large areas of the downstream Tarai and Indian plains. However, due to the undulating terrain, large-scale river based irrigation is not feasible in these locations. Feasible irrigation systems are small-scale stream diversions or water ponds on hill tops. Both these options will be pursued by the project.

The Ministry of Agriculture Development through its district offices has been attempting to divert farmers from grain (rice and wheat) cultivation in the dry season; encouraging instead high value vegetables or fruits. The subsistence nature of rural agriculture in Nepal has resulted in households depending on domestic production for household consumption. It is difficult to wean farmers away from grains, especially rice, despite the larger risk of crop failure. The project aims to improve agricultural productivity by introducing drought-tolerant cultivars, and diversified crop and livestock options so that households are able to better manage climatic uncertainty. Technical services and access to markets will increase interest in farmers to cultivate high value vegetables, herbs and fruits.

Permanent migration from high-risk locations: Migration is a culturally and politically sensitive issue and the government does not endorse involuntary migration from high-risk areas. It is expected however, that some areas could become so inhospitable due to climatic factors; and comparatively far behind in development, that villagers will have to move to urban centers where infrastructure facilities are adequately available to manage risk of climate change. However, the project will focus on improving production, livelihood options and adaptive capacity *in situ* so that communities are able to face and better manage climatic hazards in current locations.

[59] Passage to India- Migration as a coping strategy in times of crisis in Nepal. Implications for WFP Responses. 2008

[60] Passage to India- Migration as a coping strategy in times of crisis in Nepal. Implications for WFP Responses. 2008

[61] Household and traders CFA survey in 2009 quoted in More than Roads- Using Markets to Feed the Hungry in Nepal World Food. Program 2009

The project will generate co-benefits through linking with other climate adaptation and development programs being implemented in the region and districts. Some of the projects implemented there include the DFID support NCCSP, World Bank supported Himali Project, Poverty Alleviation Funds of the World Bank and block grants channeled through Karnali Development Fund (a more detailed review of these projects is presented below). Linking and coordination with other projects also delivering hardware deliverables such as Rural Access Program supported by DFID, Ministry of Federal Affairs and Local Development (MoFALD) and WFP's country programme will generate significant aggregated impact to reduce vulnerability in target VDCs.

In terms of the cost-effectiveness of proposed adaptation interventions listed in Component 2 the project will only include activities prioritized through participatory planning and economic/technical assessment of the relevant government agency.

In terms of improving community livelihoods and household incomes in Karnali, community forestry and improved markets remain high on the development agenda. Realizing the importance of forestry programs and markets for the sustenance and diversity of livelihoods; the project, however, does not prioritize these actions for two reasons: 1) Forestry programs will take a longer period to provide results than the project's duration. Under Outcome 2.4 dealing with alternate livelihoods, leasehold forestry models for agro-forestry will be explored as per community requirement; and 2) Markets could be funded through community infrastructure needs in Component 2; but the focus is on alleviating drought through water management structures. Market buildings and improved access could be financed through regular district development budgets.

To improve cost effectiveness of interventions, the project builds on research and practices of key Ministries, the World Food Programme, other UN agencies and NGO counterparts. Some of these practices are:

1. Community Asset Building: the Government and WFP have implemented a cash/food for assets program to develop community assets for the past five years. The Country Program 2013-2017 will prioritize asset building as a means of bringing communities out of relief and in to sustainable production. Lessons from these programs incorporated in to project design include:

- Technical standards related to small rural infrastructures
- Delivery mechanism and payment modality for families to engage in cash for assets
- Equal pay for equal work to ensure sufficient access for women to earn food and cash through the program
- Experience in working with non-governmental partners in delivering in some of the most remote locations in Karnali region.

2. Water harvesting structures (hill-top and domestic): Agricultural extension services in Mugu, Kalikot and Jumla and a number of local and international NGOs have piloted ridge ponds, field ponds, domestic water harvesting tanks, micro irrigation, and other practices to retain and improve soil moisture. These practices will be incorporated in to adaptation plans with support from technical line agencies at district level. This will ensure that the best structural and community-accepted models are used in the project. Water harvesting ponds and irrigation a channels also will be part of the asset creation work at community level.

3. Improved management of forests and biodiversity for poverty alleviation: The IFAD-funded WUPAP (Western Uplands Poverty Alleviation Project) implemented in the far and mid-western region in the last three years has set the ground work for lease-hold

forestry as a means of improving income through sustainable agro-forestry. The lessons and practices of this project that will be adopted by the project are:

- Beneficiary targeting to ensure greater representation of marginalized households in each VDC;
- Species mix and selection to improve year-long income generating opportunities; and
- Monitoring mechanisms involving District Forest Officers.

4. Slope stabilization and soil conservation: The Department of Soil Conservation has a set of practices for effective land reclamation and management in the mountains to ensure soil quality and land productivity. The project will borrow from the field tested practices of the Department's district level extension offices, including SALT (Sloping Land Agricultural Technology). A combined program for crop and land management will be implemented through the Nepal Agricultural Research Council (NARC) research center in Jumla to support Output 2.1.4.

5. Drought resistant crops: NARC is developing and field testing a number of resistant and high yielding/short field duration crop varieties in Jumla zonal research station. Seeds and information on these recommended varieties will be part of the agricultural support package envisioned in Output 2.1.4.

6. Adaptation planning through LAPA: The National Climate Change Support Project (NCCSP) of the Ministry of Environment, Science and Technology[62] has operationalized LAPAs in selected VDCs of 14 districts in mid and far-west including Karnali Zone. The process, the lessons and the trained facilitators and trainers will be used by the project to generate local plans with validity among both community and local government.

D. Describe how the project / program is consistent with national or sub-national sustainable development strategies, including, where appropriate, national or sub-national development plans, poverty reduction strategies, sector strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

Nepal developed and submitted its NAPA to UNFCCC in 2010. The NAPA is set within the country's development objectives. The objectives articulated in the national planning strategies and are aimed at addressing the specific economic and socio-political conditions prevailing in the country. Nepal's development goals, and the NAPA framework, have the overriding objective of reducing rural poverty.[63]

Reflecting this, the Tenth Plan/Poverty Reduction Strategy Paper (2002-2007) and Three Year Plans (2007-2010 and 2010-2013) aim to bring about a sustained reduction in poverty in Nepal. These plans identify four broad development priorities: broad-based sustained growth; improvement in access and quality of infrastructure; social and economic services in rural areas, including targeted programs for social and economic inclusion of poor and marginalized communities; and good governance to improve service delivery, efficiency, transparency and accountability.

The current Three Year Plan follows the rationale of improving the living standard of people and sustainable economic growth as a means to reduce poverty.

[62] Funded by DFID and UNDP

[63] National Adaptation Program of Action to Climate Change. Ministry of Environment, Government of Nepal 2010

Project Alignment with NAPA Outcomes and Outputs

The project is aligned with the priority profiles (see annex 5 for a full list of NAPA Profiles) 1 and 2.

Profile 1: Promoting Community Based Adaptation through Integrated Management of Agriculture, Water, Forests and Biodiversity

Profile 2: Building and Enhancing Adaptive Capacity for Vulnerable Communities through Improved Systems and Access to Services related to Agricultural Development

Project Objective(s)	NAPA Long Term Outcomes
1. Strengthened capacity to identify climate risks and design adaptive strategies	Profile 1 iii. Climate adaptation modality involving public and private sector developed vi. Climate adaptation in development plans and programs integrated and mainstreamed
2. Diversified livelihoods and strengthened food security for climate vulnerable poor in target areas	Profile 1: i. Food sufficiency for poor marginalized, and disadvantaged farmers in water stressed areas attained iv. Livelihoods of the Climate vulnerable including local poor and indigenous communities improved by increasing income from natural resource based employment Profile 2 i. Changes in agricultural production in response to observed climate change ii. Agriculture based rural livelihoods in climate vulnerable areas sustained
3. Increased resilience of natural systems supporting community livelihoods to climate change induced stresses	Profile 1: ii. Climate resilient communities created within the project area and impacts demonstrated to other areas
Project Outcome(s)	**NAPA Outputs**
1.1 Climate vulnerable and food insecure poor actively participate developing climate risk reduction strategies and actions ***1.2 Ownership and management of climate***	Profile 1 iv. Community adaptive capacity and decision making power enhanced xi. Community-driven adaptation projects implemented in demonstration sites Profile 2 i. Action (LAPA) increased Profile 1 xi. National and local capacity strengthened to develop climate resilient communities

risk reduction activities and replication of lessons are strengthened in key livelihood sectors	x. Climate friendly infrastructure developed Profile 2 i. Climate smart agricultural extension and advisory related services strengthened
2.1 ***Livelihoods are diversified and strengthened, and livelihood assets and access to food for climate vulnerable households are improved***	Profile1 i. Food security for climate vulnerable enhanced ii. Option for on-and-off farm income generation widely adopted v. Sustainable resource management with focus on watershed and water conservation vii. Climate resilient soil and water conservation measures availed for wider adoption Profile 2 i. Climate smart agricultural extension and advisory related services strengthened v. Use of climate adaptive crop varieties and livestock breeds increased

In addition project outputs impact on Priority Profiles 3, 5 and 8 of the National Adaptation Program of Action. NAPA profiles are summarized in annex 5. Apart from its clear linkage to the priorities identified in the NAPA, project activities also have strong synergy with policy elements set out in the government's 10th Year Plan and development policies of National Line Ministries such Agriculture, Forestry and Irrigation.

Project Elements	Consistency with National Policies and Plans
Food Security and Agriculture	Nepal's Tenth Plan placed high priority on this sector, as does the current Three Year Plan. The Tenth Plan envisaged agricultural growth increased by 4.1% per annum and livestock growth by 4.9% per annum. Reduction of food insecurity and malnutrition were high priorities as well. The Plan identifies diversification and commercialization, enhanced irrigation, and improved markets as key strategies to achieve this growth. The Agriculture Perspective Plan (1995) recommended stronger role for private sector and communities, farmer groups and cooperatives in the management of infrastructure and assets.
Irrigation and Water Resources Management	The Tenth Plan emphasized increased irrigation through rehabilitation and creation of public and community-based irrigation systems. The use and scaling up of best-practices related to non-conventional micro-irrigation schemes and new technologies were also recommended. The Plan attached high priority to drinking water supply and rural sanitation as well as strategies to mainstream community-based approaches in decision-making, benefit sharing and cost recovery.
Community /Leasehold	Forest management was also prioritized in the Tenth Plan due to its role in promoting rural livelihoods and providing environmental services. It was recognized

Project Elements	Consistency with National Policies and Plans
Forestry	that the community and lease-hold forestry systems contribute to the rural economy and agriculture systems and make forest products available to the local and regional markets. Similarly forestry sector was prioritized for the contribution to ecosystem services and its livelihood benefits for the poor and marginalized rural people.

E. Describe how the project / program meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc.

The major portion of the project's investment will be directed to building and rehabilitating community assets. These are generally small-scale structures that do not require detailed approvals such as Environmental Impact Assessments. However, as structures such as irrigation channels, ponds and rural roads could have some impacts on downstream communities and on the local geology, especially in fragile mountainous terrain, VDC asset building projects will produce an 'environmental assessment' as part of the feasibility assessment elaborating possible impacts and some mitigation measures.

All local NGOs implementing Government-supported asset building projects in districtshave to conform to certain minimum technical standards set out in the guidelines. .[64] In this guidance technical standards are set out for all types of commonly built community assets such as water harvesting ponds, small surface irrigation channels, foot rails and foot bridges, rural roads, school and market buildings, vegetable collection centers and land improvement/slope stabilization. This guidance provides minimum standards for project management, planning, feasibility, surveys, design and review of all alternative options including quality assurance, social mobilization to involve and engage women and disadvantaged groups and future maintenance of structures. In addition to these guidelines, the project will conform to government standards and norms set out by different Ministries as described in the table below.

[64] Technical Guidelines for Project Management and Design for Small Rural Infrastructures. World Food Program 2011

Technical Standards Applicable to the Project

Activity	Applicable Standards	Application to Project	Monitoring
1. Local/small infrastructure • improved irrigation systems; - **ridge ponds,** - **community ponds,** - **check dams** etc. • land and soil management techniques; - **contour drains,** - **bunds,** - **terracing** • Construction; - **rural roads,** - **bridges and** - **culverts** • Community- - **plantation/forestation** - **nursery management and seedling production** • Infrastructure works; - **market and collection center at local-level for storage,** - **health posts** - **community center**	Technical specifications of the Department for Local Infrastructure Development and Agricultural Roads (DoLIDAR)/ Ministry for Federal Affairs and Local Development Technical Norms of DoLIDAR. Guidelines and Action Plans by the Ministry of Environment for enhanced climate resiliency of these infrastructures. Bioengineering Manual and Handbook, Department of Roads, Ministry of Physical Planning and Public Works, Nepal Geotechnical Guidelines and Manuals, Department of Roads, Nepal. Guidelines and Manuals of the Department of Water Induced Disaster Prevention (DWIDP), Nepal	District Technical Officers of the District Development Committees Project Management Offices of the respective Infrastructure Projects. Through implementing NGOs in VDCs	National Project Manager and WFP Project Coordinator External/Third Party Monitors assigned by the Implementing Agencies.
Agriculture and Food Consumption • Simple technologies for value addition of locally cultivated grain, vegetable and pulses • Recipes for nutritious locally cultivated produce through mothers groups • Local, knowledge, skills and practices related	Guidelines and Manuals as set by Department of Agriculture Cash for Work norms and standards applied by WFP	Project Management Unit and DSD Extension Officers	Natural Resources Management Division of the Department of Agriculture

Activity	Applicable Standards	Application to Project	Monitoring
to food preparation and storage • Food buffer stocks to increase community resilience to climate-related shocks • Community seed banks to preserve local genetic diversity • Community managed grain stores and rustic potato stores to develop local food markets during off-season		Project Management Unit	National Project Manager and WFP Project Coordinator
• Improved agronomic practices including; - **organic farming,** - **low-tillage agriculture,** - **integrated pest management (IPM)** • Introduce protected agriculture; - **poly-tunnels/house** - **and water efficient technologies (drip irrigation, MUS)** • Introduce stall feeding, corralling to prevent free-grazing livestock from degrading forests and crops • Introduce improved fodder management techniques for drought periods • With NARC in Jumla establish field trials for water use efficiency, soil moisture, varietal selection of drought resistant crops in project areas.	Guidelines and Manuals as set by Department of Agriculture and Livestock	Project Management Unit Project Management Unit	Irrigation Department and Forest Department through Divisional Project Monitoring Unit
• Participatory Adaptation Planning in VDCs	Framework for Local Adaptation Plans of Action (LAPA) of the Government of Nepal	Local NGOs, community mobilisers and technical assistance by DDC/VDC officials	National Project Manager, District Coordinators and WFP Project Coordinator
• Develop user/market groups for alternate			

Activity	Applicable Standards	Application to Project	Monitoring
income sources such as candle-making, pickle-making, growing herbs and mushrooms • Training and tools for selected user groups within each target VDC to develop market-based produce • Develop forest based enterprises including medicinal and aromatic herbs • Develop local seed production as a community enterprise • Agroforestry systems introduced in abandoned arable lands for diversified production • Develop leasehold and community forestry for better income and food availability	Local enterprise Development Guidelines FECOFUN guidelines on Forest Based Enterprises Forest Department Guidelines and technical recommendations on leasehold and community forestry	Implementing NGOs, Local Resource Persons,	

F. Describe if there is duplication of the project / program with other funding sources, if any.

There are several donor-funded projects that also focus on Karnali due to its low development status. In designing this project care has been taken to avoid duplication of geographical targeting. In all cases, discussions were held with project implementing agencies and donor agencies on complementarities, lessons learnt from existing projects and means of harmonizing interventions.

The Nepal Climate Change Support Project (NCCSP), funded by DFID and the EU, supports the Ministry of Science, Technology and Environment to operationalize the LAPA (Local Adaptation Plan of Action). In total, 14 districts in the far and mid-western development regions have been selected for the first phase (2012-2015) of the NCCSP. The district vulnerability profiles and VDC-level vulnerability ranking developed by NCCSP for the Karnali districts supported the selection of target districts and VDCs. In each district, NCCSP will conduct and implement LAPA in five VDCs. This proposed adaptation project will not target these five VDCs in the three target districts.[65]

However, the project will build on and benefit from the experience of NCCSP. NCCSP project planning experience and the resource persons trained through the initial phase of NSSCP will be extensively used. NCCSP developed LAPAs for 25 VDCs in the 5 Karnali Districts by the end of 2012. NCCSP will support the most immediate and urgent needs in the plans that target most vulnerable wards, communities and households.

As both projects will be managed through the Ministry of Science, Technology and Environment, and the District Energy, Environment and Climate Change Units (DEECUs), there will be national and district level coordination in implementation and monitoring of outputs and activities. This project will benefit from the district level training imparted through the NCCSP. At district level, the process of VDC-level LAPAs is already well established, allowing this project to improve on the model already field-tested by NCCSP. NGO-representatives and community mobilizers already experienced in conducting the LAPA process will be used as trainers and guides in the proposed AF project.

The existing LAPA manual, framework and process which were applied in the NCCSP will be updated through the project implementation process. The NCCSP has produced a large amount of literature on the process of adaptation planning at local level, including training manuals for mobilizers. This will be used by the proposed project to inform outputs of Component 1, especially LAPA preparation and prioritizing of adaptation actions. Both projects are institutionalized in district-level DEECC's, and the projects will likely share office space and some government personnel as well. There will be a great deal of information and knowledge sharing between these projects.

In terms of PPCR (Pilot Project for Climate Resilience), the DEECC will have close links with the district officer of hydrology and soil conservation, the implementing arm of the PPCR project. The project has already used the river basin vulnerability analysis conducted by PPCR to inform district and VDC selection.

[65] See Map above depicting NCCSP VDCs separately to the VDC clusters targeted by the project

The district officer will be part of the DEECC committee and lessons and best practices of PPCR ground level implementation will be shared with the project team. The project proposes (in Output 1.2.1) to coordinate with the Department of Hydrology and Soil Conservation to scale up the VDC-level LAPAs into the areas watershed management plan.

The PPCR planning process in Nepal began at the same time as the development of the NAPA. The PPCR aims to support higher level climate change mainstreaming at the sectoral and national level. The PPCR process is mandated to "build on" the NAPA, which is also the agreed framework for the proposed project. The institutional architecture devised for this project is aligned with the GON climate change structure which ensures complementarity, build synergies among programs, avoids duplication, and increases efficiency. The Government demands that different programs closely share information and lessons learned, and it disallows implementation of similar activities in the same VDC.

At the district level, the District Energy, Environment and Climate Change Coordination Committee (DEECCC) chaired by the Local Development Officer (LDO) and represented by the related line agencies is the main body coordinating activities in environment and climate change sector. The District Energy and Environment Section (DEES) within the DDC provide secretarial services for this Committee. The DEE is headed by an Officer who works under the direct supervision of the Local Development Officer (LDO). The DEECCC's decisions are implemented by the DEE Section within the DDC. This arrangement has been endorsed by the Government of Nepal and the DEE Section has been made responsible to coordinate all climate-related programs and initiatives to ensure functional coordination and synergies, avoid duplication and overlap and capitalize and sharing knowledge and learning for more efficient and effective delivery of services to the target communities.

The proposed AF project also proposes that the same DEE Section be responsible to coordinate activities within the respective districts with technical assistance from WFP. Since both PPCR and other institutions working in the energy, environment and climate change sectors in the district, including AF project are represented in this coordination mechanism, the possibilities of complementarities to each other and reduced chances of duplicity of activities / budget are expected to be minimal.

In addition to livelihood based projects, the PPCR (Pilot Project for Climate Resilience) takes an ecosystem-based view of climate change and adaptation taking watershed as planning units. Implemented through the Ministry of Forests and Soil Conservation, the PPCR has conducted a vulnerability assessment of 136 watershed areas in Nepal and mapped the entire river basins of three important cross-border rivers - Koshi, Gandaki and Karnali with technical support from IWMI (International Water Management Institute). This study showed that the Karnali river basin is the worst affected by current and predicted climate change. The PPCR will fund some environmental restoration activities in selected mini-watersheds of threatened river basins. The program will establish a technical consortium at district level to advise the DDC on watershed management for climate change adaptation and the key officials in the proposed program will be a part of that team

In terms of activities, the PPCR operational unit is based on watershed areas and activities supported include building local capacity on climate resilience focussed on water resources and agricultural improvements. Both these areas are critical to strengthen people's adaptive capacity to climate change for improved food security. The AF projects proposed activities however, are implemented in communities within specified VDCs and are focussed on creation

of physical and human (skill) assets. While PPCR supports building local capacity in specified areas of work, the proposed AF activities will use such capacities in creating climate resilient and pro-adaptive assets.

The institutional mechanisms developed for the PPCR at central, regional and at district level will be supported by the Alternative Energy Promotion Center (AEPC's) DEES operating in the districts, including coordination with other institutions working in sector, planning and monitoring of activities. These are the same institutions through which the proposed project will be implemented and coordinated. The District Energy, Environment and Climate Change unit (DEECCs) established within DDCs and representing AEPC in the district is the unit coordinating all energy, climate-change and environmental activities within the district. The district-level coordination committee on environment and energy (includes climate change) established within the DDC has representation of all relevant institutions within the committee where planned projects, coverage and its implementation are shared and decisions taken.

Three other projects focus on livelihood development in Nepal in the same Karnali districts as the proposed project. There are clear areas of complementarity where these projects, and the market linkages, private sector enterprises and supply chains they will develop complement the household level production-related activities envisaged through the proposed AF project. These three projects are coordinated through district development committees (DDCs). To avoid duplication on the ground, the AF project envisages that the district coordinating mechanism for climate change and environment (District Energy, Environment and Climate Change units or DEECCs) will draw in sector-wide representatives from all relevant agencies and their district implementing structures. The project provides a budget to coordinate meetings of the DEECC through output 1.1, which will align the activities of different projects at VDC level.

The GEF-UNEP project and proposed AF project will overlap in one district. The latter proposes to develop local adaptation options based on research on local crop diversity. GEF project works with the Nepal Agricultural Research Council (NARC) to develop climate resistant crop varieties for different agro-climatic regions, preserving local on-farm diversity, improved technology and processing relating to traditional cultivars. NARC also develops and tests some of these models in selected locations. The UNEP-GEF project works largely upstream in the seed supply chain with only some piloting work with farmers in different agro-ecological regions. Through Outputs 2.2 and 2.3, the AF project will scale up successful practices piloted through this GEF project. The AFB project envisages strong linkages with NARC at regional level (Jumla Regional Research Centre) and will benefit strongly from the research by NARC and its extension officers, and use this knowledge to strengthen mountain farming systems against climate risks.

A summary of some projects in the same districts, from which the proposed project will derive lessons and best practices:

Initiative	Components	Area of implementation
High Mountain Agribusiness and Livelihood Improvement (HIMALI) Project : Nepal Funded by ADB	Economic growth Environmental Sustainability Private Sector Development	Humla, Mugu, Jumla, Dolpa, Mustang, Manang, Rasuwa, Dolakha, Solukhumbu and Shankhuwashava Districts
High Value Agriculture Project IFAD and Ministry of Agriculture	• Renewable Energy Water, Sanitation and Hygiene	The project will be implemented in nine Mid-Western districts namely

Development (MoAD)	• Agricultural and Forest Products • Pro-poor Sustainable Tourism	Surkhet, Salyan, Jajarkot, Dailekh, Jumla, Kalikot, Dolpa, Humla, Mugu, and Achham of Far-Western region.
Western Uplands Poverty Alleviation Project (WUPAP) Government of Nepal (GoN) and IFAD	• Small Infrastructure Development – District Development Committee (DDC) • Leasehold Forestry and NTFP – District Forest Office with support from NGO, Dabur Nepal, HPPCL and ICIMOD • Agriculture and Livestock – District Agriculture and District Livestock Services Office with support from NARC • Micro-Finance and Marketing – Local Development Fund Board (LDF) • Institutional Development – Local Development Fund Board (LDF)	Humla, Jumla, Bajhang and Bajura Mugu, Dolpa, Jajrkot and Kalikot, Dailekh, Rukum and Rolpa
Pilot Project for Climate Resilience (PPCR) funded by ADB through Ministry of Forests and Soil Conservation	Environmental restoration and land, forest management activities carried out by communities, NGOs and National Agencies	Not yet finalized

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

The project targets selected VDCs in three districts of the most climatically vulnerable and food insecure region of Nepal. It is assumed therefore that project learning will be of interest and relevance to other regions and districts. The knowledge management elements in Component 1 are dedicated to analyzing project impact through social and economic lenses and disseminating this information to other areas of the same districts; and other mountain districts. The project will develop case studies on:

1. Analysis of the adaptation planning process at local level and institutional capacities to support such actions;
2. Evaluation of the implementing process from center (national ministries) to district DDC (LDO and DEEU) to VDCs and wards; and documentation of the roles and responsibilities of each actor involved;
3. Impacts and results of adaptation activities on food security, livelihoods and income for target households; and
4. Feedback from field implementation to policy; testing out the strategies and actions listed out in the NAPA.

These lessons and case studies will be disseminated through district workshops, one national workshop, policy briefs, media exposure visits, publications and community exchange visits.

Above all, for communities in similarly vulnerable locations, the lessons of this project will pave the way for similar interventions in their localities. Exchange visits and community radio programs generated through knowledge management activities will ensure that lessons, personal stories and case studies are disseminated widely in local languages. For some of these visiting communities it may be their first time out of their own settlement or ward.

For the Ministry of Science, Technology and Environment the project's knowledge management component is of special importance as it will enable them to track progress against Profile 1 of the National Adaptation Program of Action which is on 'Promoting Community Based Adaptation through Integrated Management of Agriculture, Water, Forests and Biodiversity'.

For the Ministry of Federal Affairs and Local Development the knowledge management component will support the integration of local adaptation priorities and local development planning processes in other VDCs and other districts in the country. Financing adaptation through normal development budgets will be another aspect of lessons learnt through the project.

For World Food Programme, the project will provide invaluable information on best practices in a project approach that combines the short term food security interventions with medium and long term improvement in resilience and adaptive capacity in vulnerable local areas.

For other technical agencies, the project will generate information on best practices in agriculture, water resources including irrigation, community development and lease-hold forestry.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations.

Project development involved a high level of consultation at national, district and local level. This included key government ministries, agencies, technical and scientific organizations, non-governmental organizations, international organizations implementing development projects in Karnali and elsewhere in the mid-and far western hills and mountains regions, research institutes, district agencies and community groups, especially farmer, forest-user and mothers' groups.

Consultations for project design were conducted between February and December 2012. This included one-on-one meetings with government officials from MoSTE and Ministry of Finance and Planning; UN agencies involved in climate change related programmes, donor agencies and international non-governmental agencies; discussion with district administration and technical officials. A list of officials consulted in included in Section H of the proposal

In July, 2013 the Secretary of Environment, Mr. Krishna Gyawali called a meeting of key national partners to review the project framework and provide comments on the project target areas and activities. The comments were incorporated in the document, and several key outputs were revised accordingly.

National Stakeholders

Organization	Persons consulted	Outcome
Ministry of Environment, Science and Technology (MoSTE)	Prakash Mathema Joint Secretary (Climate Change) Mr. Batu Uprety Joint Secretary (former) Mr. Lava KC Project Manager NCCSP Mr. Naresh Sharma Agri Economist	Agreement on proposal framework, alignment with government NAPA program profiles and recommended actions, implementation arrangements that can deliver the fastest results on the ground, priority regions/districts for project intervention
Ministry of Agriculture Development (MoAD)	Deepak Mani Pokhrel, Ph.D Senior Horticulturist	Agriculture related vulnerabilities and suitable interventions in mid hills and mountains, agriculture extension services that could support project implementation, agriculture research and on-going developments that could be field tested in farmer fields schools in selected districts
Ministry of Federal Affairs and Local Development (MoFALD)	Reshmi Raj Pandey Joint Secretary	MoFALD is the implementing arm for Local Adaptation Plans and well as WFP's focal ministry for its community asset creation program. The discussions focused on integrating these programs through the ministry's district and local level development planning process.
National Planning Commission (NPC)	Purushottam Ghimire Joint Secretary	Discussions on national planning priorities that could be addressed through project interventions; especially the reduction of food insecurity in target districts which receive annual food aid
Department of Soil Conservation and Watershed Management	Bharat Prasad Pudasaini Director General	Integrating the project's interventions on soil conservation with on-going programs of the Department and the District Soil Conservation Offices. Discussions on avoiding duplication with the ADB-funded project on watershed management in the western mountain and mid-hill regions
Institute for Social and	Ajaya Dixit	ISET has produced a number of

Organization	Persons consulted	Outcome
Environmental Transition - Nepal (ISET-Nepal)	Executive Director Tyler McMahon Representative ISET International Jayendra Rimal COO	knowledge products on climate vulnerability and is a leading researcher in the area. Discussions focused on the lessons and findings of concluded research and ability to carry out identified risk reduction activities in the field through project
The Mountain Institute (TMI)	Brian J. Peniston Director, Himalayan Programs	The Mountain Institute is an international NGO working with mountainous communities with special focus on gender and poverty. TMI is an implementing partner working with WFP Nepal and have conducted a number of field surveys on climate-related emerging local issues with communities. Discussions focused on building on existing consultations and project implementation support, especially in gender related activities
Scott Wilson Nepal Pvt. Ltd.	Shuva Kantha Sharma CEO	Scott Wilson is an engineering consultancy firm that developed the extensive guidelines for community asset creation used by WFP Nepal and MoLD to design and carry out these projects in VDCs. Discussions focused on integrating disaster and climate resilience to the guideline and conducting related capacity building through the project
National Trust for Nature Conservation (NTNC)	Siddhartha Bajra Bajracharya, Ph.D Program Director, Mountain Environment	Integrating lessons of on-going research programs related to biodiversity and natural resource management in the high Himalaya to project outputs.

International and Multilateral Organizations

Organization	Persons consulted	Outcome
ICIMOD International Organization for Mountain Development	David James Molden, Ph.D Director General Ouyang Huwa, Ph.D Program Manager Water and Hazards Neera Shrestha Pradhan Hazards and Community Adaptation Specialist Water and Hazards	Climate modeling for Eastern Himalaya; lessons and strategies adopted by on-going community projects; lessons of assessing carbon stocks in community forests and developing a sustainable financing mechanism for forestry programs
DFID	Ms.Sabita Thapa, Ph.D Climate Change and Natural Resource Adviser	Coordinating with and learning from the NCCSP project which is currently putting to test the LAPA framework in 14 districts of mid and far western Nepal. The selection of project target VDCs was based on the vulnerability assessment done at district level; and some activities are based on developed Local Adaptation Plans (LAPAs) in adjacent VDCs
IFAD	Bashu Aryal Country Program Manager	Discussion on IFAD's experience in community and lease hold forestry models and a poverty reduction strategy. Improved agro-forestry model emerges from the lessons of their implemented projects in the mountain districts of Karnali and Far-west.
UNDP	Mr. Vijay Singh Team Leader, Energy Environment and Climate Change UNDP Nepal Mr. Man Thapa Program Manager Disaster Risk Reduction	UNDP is supporting the delivery of the NCCSP project through a technical assistance package for capacity building. UNDP's Disaster Risk Management Program is rolling out a comprehensive risk reduction program for 5 years. Through this they would be mainstreaming CBDRM approach including community early warning systems in all districts through district committees. The project's district level implementation unit will have linkage with these district committees

District Consultations		
Agency	**Officials**	**Outcome**
DDC Chairman, Local Development Officer of Jumla, Humla	Shalik Ram Sharma Chief District Officer, Jumla. Arjun Thapa, Local Development Officer, DDC, Jumla Naresh Kumar Dhakal Local Development Officer, DDC, Humla	Some key area for improving economic status of the rural poor are; Linking with RCIW (Ministry of Local Development) road corridor with effective collaborative work, Potential of commercial agriculture, NTFPs and addressing drought and hazards affected VDCs. District Development Committee (DDC) will coordinate all stakeholders to develop effective implementation mechanism in the district. Some key area to be focused are; weak public resource, possibility of lift irrigation, pond irrigation (plastic pond, rain water harvest tank), promotion in energy sector and development of interconnection road in the district, infrastructure development (school / health post)
DADO (District Agriculture Development Officer)	Aita Singh Gurung, District Agriculture Development Officer, Jumla Bauwa Lal Chaudhary Sr. Agriculture Development Officer, Humla	District Agriculture Development Office in the district is one of the key sectors for the promotion of livelihoods of the poor people. Some of the key area for the program intervention are; rain water harvesting/pond irrigation, plastic pond for the vulnerable group of farmers, sprinkle irrigation, drip irrigation, introduction of drought resistant varieties (red bean of local variety is drought resistant), promotion of cellar store for apple grower farm families, rustic store for potato, possibilities for the intercropping (bean some year) with apple and walnut, plantation and domestication of some key NTFPs in the lease- hold forest, livestock improvement (small ruminants), poultry farming, bee keeping, vegetable seed production (Carrot, Rayo, Corriander, Pea, Radish and local Bean) and linkage and coordination with local resource person (LRP).
DFO	Bharat Babu Shrestha District Forest Officer, Jumla	Total community forest user group in the Jumla district are 152 (19786.36 ha) and total lease hold

District Consultations		
Agency	**Officials**	**Outcome**
	Shyam Prasad Neupane District Forest Officer, Humla	forest 127 (1916.30 ha). There are 2500 to 3000 leasehold forestry in Humla. The major area for the improvement of the forest sectors are; plantation, control of forest fire and open grazing, fencing in the lease hold forestry, promotion of NTFPS and aromatic medicinal herb, agroforestry management, forest seedling production, promotion of forage and fodder crop species, watershed management, construction of green house for medicinal high value species, rain water harvest in water scare area.
District Statistic Office ,Jumla	Om Paudyal	Statistical information available from the district statistic office.

Local NGOs/ Community Organizations

Location	Name of Organization/ Group	Outcome
Nepal Red Cross Society Local Initiative for Biodiversity Research and Development (LiBIRD)_both in Jumla and Humla	Lok Darshan Shrestha, Chairperson from Nepal Red Cross Society, Jumla Jagadish Chaulagain, Nepal Red Cross society, Jumla. Sandesh Neupane (LiBIRD) District Coordinator (Jumla) Aasha Ram Gurung (LiBIRD) District Coordinator (Humla)	Karnali is one of the most vulnerable zone in the far and mid-western region therefore focus will be on existing programs such as; developing livelihood options, water availability, fruit farming and seed production Awareness and skill development programs are important at all levels. Small-scale enterprise development, management of drinking water supply system, irrigation and intervention of hydropower, complementary of software and hardware are recommended. Development of VDC level adaptation plan through LRPs, and in coordination with the multiyear and annual plan of DDC. Coordinating committee with private sector, regional, district (LDO) and VDC level (secretary) and village level is necessary for smooth implementation.

Local Communities VDC Name	No of Community and Gender	Outcome
Talium VDC_Jumla Community already involved in the LAPA process through NCCSP.	24 people (W=9, M=15)	Interaction with community at Talium VDC they are already involved in the LAPA preparation process, some of important points are; to promote and protect environment, make natural balance, natural resource management, use and distribution of resource, create awareness for the people. Some of potential areas for development are; apple orchards, off- season commercial vegetable farming and fruit farming. Reducing emphasis on cereal crops and promotion of fruit farming with intercrops, promotion of NTFPs and aromatic medicinal plants and herbs are identified as important livelihood avenues. LAPA process: Every three wards within a VDC are one group led by VDC secretary. Identified hazards drought, torrential rainfall, flooding, landslide, delay and infrequent snowfall, disappear of water source, hail storm, conflict among group of people (resource sharing),
Haku VDC _Jumla	25 W=11, M=14)	HAKU is a very vulnerable VDC in Jumla, with a number of issues such as crop production decrease, crop diseases, hail storm, untimely and inadequate rainfall, deforestation and lack of farm yard manure are major problems. Some others are; soil moisture in the farm, insect/pest and disease infestation, out of 150 household 100 are food insecure, poor, with inadequate supply of drinking water, dried water source, poor infrastructure (school), lack of awareness and poor adaptation capacity, production of NTFPs and medicinal plants have decreased.
Dandafaya VDC of Humla	People 15 (W=5, M10)	Community perception of climate change and its impacts are; delay and reduced frequency of snowfall, untimely and erratic rainfall, prolonged dry spells that affects winter

Local Communities VDC Name	No of Community and Gender	Outcome
		crop, water stress (irrigation and drinking water), scarcity of drinking water sources, increased pest and disease incident both crop as well as livestock, early maturity of crops, decrease in crop production, limited seed availability, local crop varieties (low production), lack of fodder and forage crop species, low production, short duration of sun/day light, Change pattern in the qualitative and quantitative yield of vegetation types in community forests.
Ramnakot VDC of Kalikot	63 people (W=12, M=51)	Community perception of climate change and its impacts are; delay and reduced frequency of snowfall, uncertainty of rain (monsoon) even during the rainy season, prolonged dry spells that affects winter crop, water stress (irrigation and drinking water), decrease forest resources, inadequate production of cereal crops, decreased animal population both of small ruminant and cattle, decreased the number of wild animals but increase the population of jackal (it is due to reduce the number of tiger), scarcity of drinking water sources, increased pest and disease incident both crop as well as livestock, limited improve seed availability, local crop varieties (low production), lack of fodder and forage crop species, short duration of sun/day light, Change pattern in the qualitative and quantitative yield of vegetation types in community forests. Decrease the valuable non-timber forest product (NTFPs), red beans, mustard, black gram and some variety of local cowpea are in danger condition. Poor infrastructure of school building, health service centre, road etc. Fragile ecosystem and difficult to increase the production and income.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

Component 1: Baseline without AF support

In the baseline scenario village development planning would follow the traditional route, excluding women, lower castes and other disadvantaged groups. Climate risks would not be taken in to consideration in the planning process and financing would be allocated for projects with elite bias.

Households are represented in the VDCs through 'ward' level nominees. Social stratification does not allow disadvantaged groups to bring their livelihood concerns to the table. Women in general and households belonging to minor ethnic groups and socially excluded castes wield very little power to influence policy decisions at village level

In villages where WFP implements its current asset building program, needs are identified through focus group discussions. There is no climate risk assessment conducted to inform the decision. This approach compromises the sustainability of village infrastructure such as rural roads, foot/suspension bridges, irrigation canals, water ponds and even community buildings. Further, there are the 'creeping and slow' disasters such as dry spells and drought, shifting of timing of precipitation, and food security situation are not captured in the current local development planning process. A case study on an irrigation canal built through F/CFA in Jumla district clearly demonstrates this. While the asset created has transformed production and the life of women in the village[66] it is susceptible to flash floods or prolonged drought. As the irrigation system does not include water storage or damming, a long drought (common in this region) could seriously undermine sustainability of benefits.

Due to the lack of risk assessment and vulnerability analysis in the baseline without AF support; adaptation priorities would not be identified or prioritized in VDC development planning process. Adaptation needs, as those identified during community consultations in target districts will not be financed through normal village development planning. Technical agencies delivering support in districts and Ilaka, although aware of the larger climate-related problem, would not be sensitive to the specific climate risks faced by VDCs in their area, nor of the adaptation-based development priorities of these communities. These agencies would conduct standard programs for the area without tailoring technical information, seed supply, or marketing programs to the specific climate risks and adaptation needs. In turn, the viability of these programs and their long-term sustainability would be compromised.

Local level officers and NGOs working for development programs in districts have very little awareness on climate change issues and even less training on how to deal with grassroots problems stemming from climatic changes. There is no methodology to assess the comparative risks faced by VDCs and initiate actions in order to protect livelihoods. District development plans and budgets do not integrate climate change risks to production and food access. At national level, Ministries such as MoFALD, MoAD and MoFSC (Ministry of Forests and Soil Conservation) manage sector-specific research and development program with minimal

[66] Case Study on Jumla Talium Irrgation Canal. WFP 2012

integration of climatic foresights; which could cause serious setbacks to their own development outcomes.

In the baseline scenario, there is no mechanism to generate and share information on risks, best practices and implementation modality.

Adaptation alternative: Adaptation planning is the first and most important step of the project. While the planning process will follow broad guidelines set out by the LAPA Manual[67] there will be specific activities that will address the discrimination towards women and disadvantaged groups that prevent them from actively participating in village decision-making. Each target VDC will have a local plan for adaptation, which can be easily integrated into village development plans. This local adaptation plan will identify vulnerable households and groups (women-headed households and very poor) within a VDC and specify adaptive actions for core systems such as water, agriculture, livestock, and forestry, infrastructure. Therefore, each VDC will have its own plan for adaptation ***and*** development which could be updated locally as necessary.

Importantly, the planning process will increase community capacity to identify climatic hazards, analyze trends and anticipated impacts. Even more, the community would be able to plan adaptation actions that combine science and technical know-how of the supporting agencies. This would enable the community to take proactive decisions to increase their collective and individual capacities to face climate risks and facilitate a number of autonomous adaptation measures beyond the project scope. Through Output 1.1.1 the project seeks to develop the capacities across all local, Ilaka and district levels to plan and deliver adaptation benefits. These training programs would incorporate climate risk assessments, incorporating gender and food security concerns, participatory approach to planning and tools recommended by LAPA for prioritizing adaptation needs.

This component of the project also addresses issues of mainstreaming and coordination with the normal development processes at local and national levels, information sharing and training. A significant emphasis of the project will be building local and national capacity to fully implement these activities in the future.

The adaptation alternative in this component also seeks to address the knowledge, capacity and training gaps that exist in the district and local planning sphere. The component seeks to support replication of the adaptive practices in other VDCs and districts, and integrate adaptation needs and climate change risks in to plans and programs of VDCs, DDCs, line agencies and ministries etc.

Through Output 1.2.1, the project seeks to elevate the local adaptation plan to the development process and incorporate adaptation priorities in the funded development projects of the VDC. In addition to the local plans, the projects seeks to develop adaptation plans for a ‘cluster’ of VDCs at a watershed level so that eco-system based priorities (water, forestry) could be implemented through technical line agencies. These plans and specific projects would then be discussed at stakeholder meetings at Ilaka level and at the DDC, enabling coordination with other initiatives and government programs with similar focus.

67 National Framework on Local Adaptation Plans for Action (LAPA). Government of Nepal, Ministry of Environment Climate Management Division 2011

Output 1.2.2 is specifically designed to work with national Ministries to mainstream climate change risks and adaptive practices into areas that have direct impact on rural livelihoods, including rural infrastructure development programs (design and guidelines); and research on climate resilient crops and cropping systems (including agro-forestry, protected agriculture and high value crops). This component will also build the capacity of national government Ministries to implement best practices in climate change adaptation.

Through Output 1.2.3 the project seeks to generate and share information on adaptation practices and delivery mechanism with communities at risk, policy makers and district planners. This knowledge management component is described in more detail above, and is targeted to generate interest and awareness on cost-effective adaptation practices in the area and nationally.

Component 2: Baseline without AF Support

In the baseline scenario, activities such as community asset building and community lease hold forestry would be carried out in these VDCs without alignment to the general village development plan or being designed to manage climate risks. Agriculture production and water resources would continue to be impacted by climate variability and uncertainty, resulting in lower yields and water scarcity for crops, animals and people. Lower yields means less food availability, and less income for the most vulnerable households. As a result people tend to shift towards negative coping strategies such as consuming less food, buying more on credit, selling off livestock and other assets, migrating out for labor, and consuming seed stocks preserved for the next season. Vulnerability would be highest among women and communities minor ethnic groups and socially excluded castes along with decreased income earning opportunity, access to technology and level of skill.

Mountainous regions have fragile ecosystems and food insecurity at household level is further exacerbated by environmental change and stresses.[68] The livelihoods of mountain communities are more strongly linked to the availability and management of natural resources such as water, soil and forests. While people realize the intrinsic linkage between forests as watersheds and the availability of water, there is little incentive to protect and preserve watersheds against the more urgent needs for timber or firewood. Gradual depletion of the natural resource base combined with rainfall variability will impact on productivity and availability of water. Adverse impacts on the environmental services rendered by the mountain eco-systems will also be felt downstream in valleys and the Tarai.

Ad hoc development actions that are not designed on a platform of scientific risk assessment do not contribute to long term change in these societies.[69] They could, instead, exacerbate vulnerability and reduce coping capacities further. It has been noted that despite interventions in

[68] Responding to Challenges of Global Change- enhancing Resilience and supporting adaptation of mountain communities. ICIMOD Project Brief 2009

[69] Food for Assets Programme Monitoring Report, WFP Nepal 2011; Case Study on Jumla Talium Irrgation Canal. WFP 2012

irrigation and land management, many remote VDC do not produce sufficient crops for half the year[70].

Adaptation alternative: The five outputs of component 2 are designed to deliver concrete adaptation actions that can transform the current practices related to production and natural resources management in mountainous villages. The aim is to implement an asset building program on a scientific risk analysis, participatory vulnerability mapping and community-oriented development planning. In this respect, activities outlined in Component 2, will directly relate to individual VDC plans within the broad framework of livelihood and life quality improvement. The selected adaptation actions relate to the problem analysis (see table below) and solutions proposed by farmers, local NGOs and extension services, and officials of the DDCs during field consultations in Mugu, Jumla and Kalikot[71].

Outputs in Component 2 relate to the strategy of providing two-pronged support: 1) income and infrastructure improvement for higher adaptive capacity at community and household level; and 2) better management of soil, water and forests for ecosystem integrity.

Every vulnerable household (in the case of these VDCs around >70% of population) will benefit from F/CFA interventions. Identified assets[72] are water retention ponds, small irrigation channels, suspension bridges and roads connecting to markets and towns and community buildings. Community infrastructure needs will be prioritized during the adaptation planning exercise for its effectiveness in delivering adaptation benefits versus the costs. In each Output of the project, community assets will be developed or rehabilitated. These include grain and seed storage, soil stabilization through terracing and live fencing, pens and fences for livestock, tree planting for leasehold forestry, and construction of women service centers.

Agro-forestry introduced through the project will support landless families to own and improve degraded forests for their income. This model is already tested by IFAD in their WUPAP (Western Uplands Poverty Alleviation Project) and will contribute to added tree cover (through fruit, timber and other perennials) in the VDC. Soil management, slope stabilization and improved production methods (such as drought tolerant varieties, short duration grain types, high yield vegetables etc), and livestock keeping will increase farm incomes.

The Food/Cash for Training approach targets men and women, to develop their skill level and initiate small-scale cottage industries that are climate proof and have market potential. The selected cottage industries would not be immediately and highly impacted by weather anomalies. In support of increased adaptive capacity at household level, families would have an income source that is not impacted by climate shocks and variability. This will increase their ability to withstand climate-related crop losses and reduced harvests.

[70] Food for Assets Programme Monitoring Report, WFP Nepal 2011; Case Study on Jumla Talium Irrgation Canal. WFP 2012

[71] Please see ADAPTING TO CLIMATE INDUCED THREATS TO FOOD PRODUCTION AND FOOD SECURITY IN THE KARNALI REGION OF NEPAL. Field Consultation Report 2013

[72] Through community consultation. See ADAPTING TO CLIMATE INDUCED THREATS TO FOOD PRODUCTION AND FOOD SECURITY IN THE KARNALI REGION OF NEPAL. Field Consultation Report 2013

Women will also have equal access to cash-for-asset programs and other agricultural training programs that will be initiated through the project. Disadvantaged groups would have equal access to income and training opportunity and access to communal land.

Overall, the project outputs relate directly to problems identified through stakeholder consultation and secondary data analysis (see the table below). The outputs are designed to provide income and short term food security (during project duration), medium term production benefits and long term capacity improvement (planning, skills and social organization) for at-risk communities by following the LAPA framework and using district and VDC coordinating structures for project support.

Problem Analysis	Solutions Proposed by stakeholders National, district, community	Related Project Outputs
1. Low yield due to lack of timely rain and irrigation for crops	- Improved irrigation - Improved water storage - Better local water source protection - Drought/ disease resistant crops - Shift to perennials - Forest production increased - High value crops and medicinal crops - Soil conservation/ terrace improvement - Promote IPM, low input, organic agriculture - Strengthen farmer-farmer seed system - Promote agro-forestry to enhance ecosystem services important to agriculture - Promote multiple use of water	-Improved water management including irrigation channels, ponds and other. -Improved soil management -Local farmer seed banks -Increased agro-forestry produce -increased income from NTFP especially herbs and mushrooms -Farmer field trials for drought resistant crops and high yielding intercropping systems -Farmer field school for production related training and tools including MUS, IPM .
2. High level of seasonal food insecurity	- Income opportunity increased - Access infrastructure improves - Markets and market networks improved - Production increased - Food buffer stock storage increased - More local varieties, drought resistant crops promoted - Agro-forestry and intercropping promoted	Increased income – cash or food for assets Food storage, value addition, utilization, local markets Increased agricultural production
3. Lack of community access to information on new livelihood technology	- Improve extension services with information and training	Key informants in VDCs and wards connected to regional agriculture resource people, and district extensions services

Problem Analysis	Solutions Proposed by stakeholders National, district, community	Related Project Outputs
		VDC-level information center established
4. Lack of community access to quality services	- Increase diversity of livelihood - introduce cottage industry, high value vegetables and NTFP - Create local markets	Training for TA staff and local NGOs
5. Access to income, financial services and marketing	- Improved local markets - Greater access to regular, sustainable income sources - Access to credit and technology	Cash and food for assets Creating local food markets NTFP promotion Livelihood diversification for women
6. Lack of access to climatic information & knowledge	- Regular awareness programs - Participatory planning and prioritizing	Adaptation planning and prioritizing according to LAPA

J. Describe how the sustainability of the project/program outcomes has been taken into account when designing the project.

The proposed AF project is designed around the principle of participatory community engagement to ensure involvement of local beneficiaries in the process from planning, implementation to evaluation. The entire project formulation and execution process has been designed so that the community has been involved in decision making at an early stage. In order to identify actions and outcomes which have the highest likelihoods of being sustainably operated and maintained. Women, the landless, poor and youth will be specifically targeted to ensure inclusive implementation and sharing of benefits. A significant body of evidence shows that this increases ownership and sustainability of project outcomes.

Component 1 of the project will train community-level representatives and then develop local adaptation plans, which incorporate needs of the most vulnerable people with a VDC. By 'local resource persons' the project aims to build village level capacity to identify climate related problems and incorporate solutions to these problems in to regular development planning process.

The local resource persons will represent community interest/user groups and will have a role to play in the VDC. Government extension services targeted by the project are grassroots officers who are the interface between technical agencies of the state (Agriculture, Livestock, Forests and Irrigation) and the community. These officers also play a role in identifying development gaps and issues in their particular sectors. Government service delivery is critical for both planning and implementing adaptation actions, and their subsequent mainstreaming in to regular district development budgets. The project will help improve the capacity of these local technical staff, improving local capacity to develop and support future adaptation actions.

One of the key outcomes of the project will be increased access of households, communities and local institutions to information and local service delivery mechanisms. The project will leverage increased demand for these services to build the capacity of service providers to continue to provide services when the project ends.

In Component 2, the project will deliver both short-term income opportunity and longer-term production-related impacts for target communities. Sustainability of these interventions is assured through a proven delivery mechanism (food and cash for assets F/CFA) leveraging the capacities of existing NGO and government partners of the World Food Programme. The approach will strengthen community management of assets. Implementation and monitoring support by government extension services will ensure greater ownership and maintenance of assets created. For example, where the project constructs a ridge pond or re-plants degraded lands with food and fuel species, these interventions will be implemented and managed through relevant user groups. When technical support in species selection for agro-forestry or upkeep of the ridge pond is required, extension services will be consulted.

The sustainability of specific outputs is described below.

Output 1.1.1: The output will develop local capacity to identify and plan climate change adaptation as part of the VDC development planning process. The local resource persons trained through this output will represent community interest groups (such as Mother's group, farmers group, forest user's group) and vulnerable wards. Training will extend to district extension officers of sectors that are related to rural livelihood (and represented in DEECC). This training and the subsequent support they will extend to the planning process will enable government staff at lower levels to conduct risk assessment and recommend adaptive actions. This output would support NGO, CBO activities in the field increasing local government/ technical agency ownership of the initiatives.

Output 1.1.2: The exercise of community adaptation planning will provide a number of capacity building opportunities for local communities. Firstly, the meetings and workshops associated with the process will increase community understanding of climate change, its local impacts on life and livelihood and future challenges.[73] Secondly, the process will influence decisions that households make on crop types, livelihood choices, water usage, livestock rearing etc. It will trigger autonomous or spontaneous adaptive practices outside of those that will be promoted and funded through the project. The process will develop planning and envisioning capability among community, especially local user groups, and networks.

Output 1.1.3: Mothers groups and local women's cooperatives will be developed and strengthened through this output leading to increased participation in development decision making and productive activity

Output 1.2.1: As noted above, each Village Development Committee (VDC) prepares annual plans through Citizens Forums for general development activity and submits to the District Development Committee (DDC) for financing through decentralized budgets. Line agencies such as Forestry, Irrigation, Agriculture and Livestock have their own extension services in target areas, especially at Ilaka level. This output will ensure that the local adaptation plans are mainstreamed into the regular development process at local level, and aims to ensure that

[73] Lessons from LAPA exercise conducted by NCCSP project in 14 districts of mid and far-west. March to July 2012

technical support and institutional ownership are secured for the sustainability of interventions implemented through the project.

The VDCs targeted for the project are in remote areas which lack access to resources (financial and technical). Once local adaptation plans are integrated into local and district plans, adaptation activities would be eligible to receive funds according to the current decentralized budgetary process. The institutional guidelines that VDCs have to follow to acquire these central grants include the requirement to address the sectors of environment, skill development training and local awareness raising. The fact that the project addresses all three of these required sectors provides a strong incentive for the VDCs to sustainably invest their grants / resources in it.

In addition, the project outputs and outcomes will create significant assets that the entire community will benefit from, and will build the capacity of local VDCs to run and sustain activities. In a context where resources for asset creation, and external assistance in general, are hard to secure, there will be a natural incentive to provide resources from decentralized budget alloactions to ensure sustainability.

Output 1.2.2: Climate adaptation will be reflected in key national plans and standards relating to livelihood sectors especially those adopted by MOFALD, MoAD, MoFSC. These will be owned and updated by the technical line ministries

Output 1.2.3: Dissemination of lessons will support replication at ward, VDC, district and national levels. The agriculture technology information center will be developed in to small-scale local business by the third year, where the center would be providing information, seeds and equipment for a nominal profit to farmers. Such agribusiness centers have been trialed in previous projects in the Terai region of Nepal . As information and technology, good seeds and planting material were found to be key gaps in these VDCs these centers are expected to well utilized by farmers.

Communities are hard-pressed to locate desirable inputs and information even if they are able to pay for them. The households who are capable to invest to produce commercially are not well supported through existing service delivery. However, some private business hubs have been making good profit and customers are happy with the services they are offering. Saplings of high value apples, seeds of staple potatoes, seeds of valuable beans, goat, chicken, and piglets are in growing demand. Government agencies are not well equipped to offer services as demanded locally. Government agencies can work in partnership with the private sector which can provide services in a more effective and efficient manner. Government can provide technical back up to private hubs which can provide services widely. The area Farmer Group will run the information Center with input and support from the local agriculture extension officer.

In Component 2, there is evidence to show that community upkeep of natural assets is assured where it contributes positively to productivity. This is especially true in irrigation-related infrastructure, access roads and bridges, soil management, forestry and buildings such as schools, markets etc[74].

[74] Food for Assets Programme Monitoring Report, WFP Nepal 2011; Case Study on Jumla Talium Irrgation Canal. WFP 2012

Output 2.1.1: Community physical and natural assets built through this output will be managed by the community user group (farmer, irrigation) and technical divisions of the VDC/District authorities. The NGO/CBO contracted to design and build these assets with community members will work with technical agencies at Ilaka or district level, and with WFP's support teams in country or regional sub-offices. The community asset score tool will be employed to monitor the functionality and usage of these structures and natural resources.

Only assets identified and prioritized during the LAPA process at the VDC level will be selected. At the LAPA stage, the management and maintenance aspects of these assets are agreed between the users and the local authorities. In the case of women's facility center assets, the women's group will collect operation and maintenance fees from users for running costs and maintenance. WFP's asset building program is implemented with strong Local Authority engagement (DDC and VDC) in identifying and endorsing the choice of asset to be created. The final ownership and maintenance duties rest with the local authorities, where user groups are too poor to collect a maintenance fee.

LAPA and also WFP's C/FFA strategies have mandatory requirements of formal agreement between the users committee and the local authorities (VDC) for the management and maintenance of the assets to be created particularly on the creation of operation and maintenance fund. Such funds generally includes smaller portion from beneficiaries through household contributions and larger share through VDCs from within their annual grants received from the central government. The User's Committee established during construction phase continues to take leadership in post-construction management and operation including coordination with concerned VDC to bring pre-agreed share of their contribution.

As the AF project will support local asset building, it will be a genuine incentive for the targeted VDCs to prioritize channel part of their central government annual grant (NPR 3 million) for the maintenance of the developed assets. In past asset creation projects in Nepal there have been many instances when farmer and women's groups have been resourceful enough to maintain assets with minimum funds by putting in labour time. WFP Nepal's evaluation of its C/FFA activities between 2002 – 2007 have demonstrated several community assets (rural roads, water harvest ponds, irrigation schemes, plantations) have been successfully completed, maintained and sustainably utilized.

Output 2.1.2: Community food stores, seed banks and local value addition will be sustainably managed by local user groups, especially women focused user groups mobilized in Output 1.1.3. It is expected that these ventures would create local employment and income for women-led cooperatives in addition to creating food availability and access.

Output 2.1.3: All interventions leading to increased and cost-effective agricultural production will be sustainable because a high anticipated rate of adoption by farmer groups the ensuring economic rewards agriculture and livestock extension officers trained and mobilized through

Output 2.1.4: Income diversification for women and disadvantaged households will be sustainable provided markets and credit facilities are available to develop their full potential. Alternate income generation will be supported by local level market development through Women's Service Centers and local cooperatives envisioned in output 2.5 and 2.2 respectively.

Output 2.1.5: The project will deliver skills and information enabling women to adopt renewable energy that directly support livelihoods and household needs. The direct adoption of these will be complemented through material provision. The maintenance and up-keep will be handled by

user/community groups and local technical resource people trained. The women's service center will be run as a small business venture by local women's cooperatives, providing employment to one or two women in the VDC. The aim is to charge a very nominal fee for water-related services in order to maintain sanitary levels. In addition, training sessions for beneficiaries in design, marketing and technical maintenance of improved cook stoves are part of the project proposal. These sessions, through developing and improving skill sets and understanding of the stoves has been proven in similar projects to improve ownership and sustainability of the assets provided.

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PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project implementation.

The project will be executed by WFP with support from the Ministry of Science, Technology and Environment. WFP will implement the project because of its experience of successfully carrying out similar program activities in the remote areas of Karnali region involving food and cash. Although the government supplies subsidized food to the Karnali districts through the Nepal Food Corporation, the quantity is not sufficient and the distribution is limited to a few people around district headquarters. The government does not have its own targeted food/cash for assets program in the region, and lacks the capacity and resources to establish one. The Government therefore proposes to utilize WFP in the current project in order to deliver quick results and, in the longer-term, to strengthen the government's capacity to undertake such work.

Specific Implementation Arrangements:

Central Level

The Ministry of, Science, Technology and Environment (MoSTE) will establish a Project Steering Committee under the Chairmanship of the Joint Secretary. The Joint Secretary of the Ministry of Federal Affairs and Local Development (MoFALD) will be the National Project Director.

The Project Steering Committee will consist of members representing key GoN Ministries; especially Ministry of Federal Affairs and Local Development (MoFALD) and Ministry of Science, Technology and Environment. The World Food Programme, as the multilateral implementing agency and principal provider of technical support to MoSTE will be invited as a member of the Committee.

Joint Secretary, Environment and Municipal Management Division of the MoFALD will be a member of the Steering Committee and head the Project Coordinating Committee (PCC). The PCC is established at MoFALD to coordinate all climate change related activities implemented through MoFALD in DDCs. Project management and administration support will be provided by the PCC to Environment Management Division of the MoFALD through which project activities would be coordinated.

MOFALD will appoint a climate change officer (CCO) at national level who will liaise with district level climate change officers and coordinators, and the district administration. This CCO will be mainly tasked with coordination, monitoring and reporting at national level. WFP will hire a full time Project Coordinator who will not only provide TA but also supervise project execution through district coordinators.

A high-level central committee on climate change coordination was formed in 2011 under the chairpersonship of the Minister for Environment, involving Secretaries of the relevant sectoral ministries, academicians, experts and civil society members with a total of 20 members, initially to support the PPCR. Additionally, the Multi-stakeholders Climate Change Initiatives Coordination Committee (MCCICC), constituted in 2010 and including local governments, non-governmental organizations and development partners, ensures functional coordination, synergy among programs to ensure greater complements as well as avoid duplication or overlap of the program both in geographic areas, sectors as well as financing. The proposed AF project will be represented in the MCCICC.

At the national level, MoSTE is both the focal ministry and the program executing entity. MoSTE plays a key role in overall coordination across scales (between adaptation policy and planning and on-the-ground implementation) and across actors (coordinating between different donor agencies, different climate change projects, and initiatives undertaken by ministries under programmes of work managed by MoSTE.

Similarly, REDD (Reducing Emissions from Deforestation and Forest Degradation) and Adaptation Cells are established within the Ministry of Forests and Soil Conservation. MoFSC has taken the lead role in designing and implementing the REDD (REDD+) in Nepal. These coordination fora at the central level provide some important and useful platform to sharing information and possible complementarities between projects.

District and Village Level

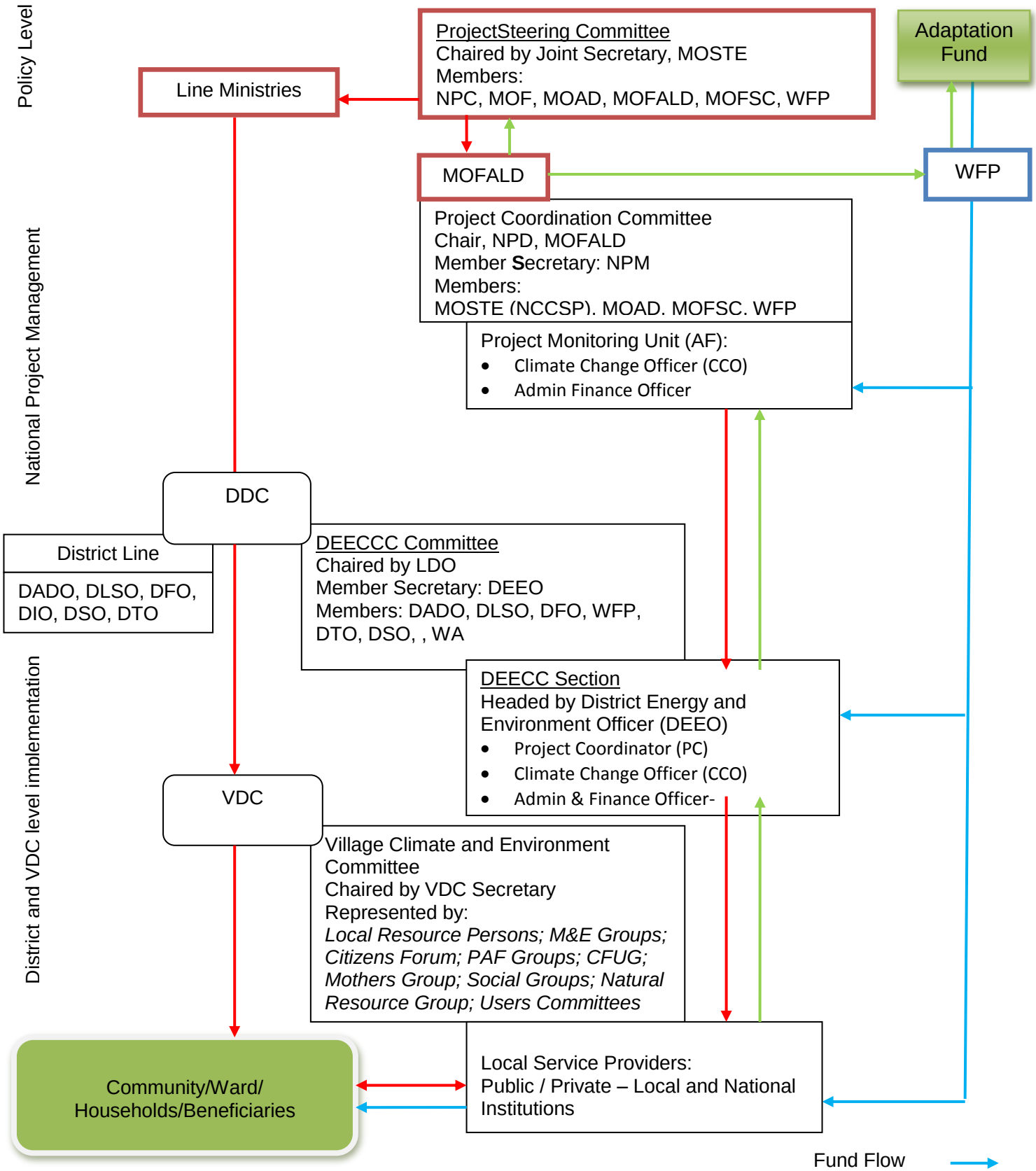
At District level, the project will be coordinated through the DEECC Section (District Energy, Environment and Climate Change Section) to support execution through government and non-government partners. Mechanisms already established for the NCCSP project would be utilized to avoid duplication and improve synergies between the projects in the target districts.

At village level it is envisioned that there will be a separate mini-VEECC (Village Energy, Environment and Climate Change) Committee in the VDC to coordinate activities of climate change projects including AFB, NCCSP and other. This village committee will include citizens groups, local technical extension officers, village leaders, local experts, VDC Secretary, etc.

The WFP Coordinator would be supported through the project implementation budget to liaise between the Project Coordination Committee and the Project Support Unit at the district level. The Coordinator would be entrusted with budget monitoring, provide implementation and logistical support to the districts, and ensure the quality and timeliness of monitoring and reporting activities related to the project. This Coordinator would also be responsible, along with the CCO, to ensure that field implementation reports are reviewed by the PCC quarterly and bi-annually and suggest any remedial actions for problems and issues in implementation.

The Environment Management Division at MoFALD will provide climate adaptation support to the DEECCs as well as the Ministry.

IMPLEMENTATION ARRANGEMENT
Adapting to Climate Induced Threats to Food Production and Food Security in The Karnali Region of Nepal



B. Describe the measures for financial and project risk management.

Financial and project risk management measures will be assessed as an on-going process throughout the project as below.

Risks and Responses

Risk		Response Measure
Lack of awareness among participating NGOs and CBOs on climate change and potential impacts	Low	The project has built-in awareness and capacity building programs for local NGOs and CBOs who will be delivering the project. This will not be a one-off intervention. Given that there is high staff turn-over rate in many of these local organizations, it is planned to provide them regular (annual) programs on climate risk and adaptation.
Delivery of interventions in logistically challenging mountainous areas with no road access	Medium to High	The World Food Programme targets districts with high prevalence of nutrition and food security. These are in the most difficult areas of the country to access, and they overlap with the project areas. Thus, delivery mechanisms are already on the ground. The project would further strengthen the current delivery modality of working through NGO partners by strengthening government service delivery and extension mechanisms.
Changes in decentralized district and VDC structures in the next three years negatively affect the project	Low	Envisioned constitutional changes are meant to strengthen and further bolster devolution of power to the districts. It is hoped that these changes will result in greater political autonomy at local level. In view of this, the project supports both adaptation and development planning with participation of women and disadvantaged groups building their capacity to fully engage in VDC planning.
Local government in project implementation areas fail to prioritize climate change policies in their strategies and plans.	Low	The project will work closely with Citizens Forums at Wards, VDC secretaries, and LDOs to ensure that adaptation priorities remain on top of the developmental agenda. This will be done through training, capacity building, and their engagement in supervising the implementation and monitoring of the project
Community are incapable of managing and maintaining assets and structures built through the project	Low	Community user groups will be strengthened and formed (where unavailable) to maintain the assets and infrastructures created through project intervention. Additionally, project implementation process will ensure ownership in assets maintenance through the definition of responsibilities in an early stage of the project with the key stakeholders. A recent survey of WFP asset building program found that functional and productive assets are sustainably managed by both community and local government.
Market access and financial assistance for alternate	Medium	By linking target VDCs to the regional center Jumla's headquarters, the project hopes to create sustainable linkages

livelihoods and crops are unavailable in the target VDCs at required time		with markets, marketing networks and financial services

C. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan. Include break-down of how Implementing Entity's fees will be utilized in the supervision of the monitoring and evaluation function.

Overall responsibility for monitoring and evaluation will rest with WFP. As WFP will implement the project, it will provide technical assistance and supervise, monitor and evaluate project in coordination with the DEECCs supported by a dedicated coordinating officer and a finance and administrative assistant. The monitoring and evaluation budget will be managed by WFP and funds will be allocated to the DEECC climate change section in each district as appropriate.

WFP will continue to strengthen the GoN and specifically the concerned monitoring units within ministries and other cooperating partners' capacity on data management and reporting through several trainings at different levels.

WFP will share the M&E tools, methods/techniques and products (reports) with all relevant stakeholders (including the Government of Nepal). This involves training of government officials at the Ministry of Federal Affairs and Local Development (MoFALD), Ministry of Science, Technology and Environment (MoSTE) who is responsible for data collection and management at the central and local level for the AF projects. This has already been started by WFP Nepal for the Ministry of Education and Ministry of Health and Population at central, regional and district levels. From 2013, WFP will continue this process, by strengthening the capacity of the Environment and Municipal Management Division within the Ministry of Federal Affairs and Local Development.

The project will conduct a baseline assessment in each VDC to establish necessary detailed baselines to measure indicators set out in the results framework. The survey will be based on household questionnaires administered by project partners or Field Monitors attached to NeKSAP Food Security Monitoring Network.

M&E will be carried out concurrently with project execution. Quarterly technical reports will be collated from each district's technical agencies. Semi-annual progress reports will be generated by the DEECC-based coordinator collating reports from all VDC-level project staff.

Annual Progress Review will be coordinated and produced by the WFP Project Coordinator and National Project Manager, with inputs and guidance from MoFALD and MoSTE. The data for monitoring will consist of financial, procurement and physical progress reports as well as compliance with the requirements of the environmental and social assessment and management frameworks, along with financial audit reports. The issues to be reviewed by NPSC on monitoring and evaluation would include the efficacy, efficiency, sustainability, acceptance by the stakeholders of project actions. Quantitative targets will be supplemented with narrative reports. Such reports would be made available in time for NPSC to review and discuss during its meetings.

WFP's Implementing Entity Fee will be used to independently monitor the program from HQ and provide the required independent audit of the project.

Include a results framework for the project proposal, including milestones, targets and indicators and sex-disaggregate targets and indicators, as appropriate. The project or program results framework should align with the goal and impact of the Adaptation Fund and should include at least one of the core outcome indicators from the AF's results framework that are applicable[75]. **PLEASE REFER TO THE LOGICAL FRAMEWORK TABLE BELOW FOR THE AF PROJECT AS WELL AS NEXT TABLE SHOWING ITS ALIGNMENT WITH AF GOALS AND IMPACTS.**

[75] Please refer to the *Project level results framework and baseline guidance* for the Adaptation Fund's results framework and guidance on developing a results framework and establishing a baseline [add link here].

Project Results Framework

Goal:	**Increasing adaptive capacity of climate vulnerable and food insecure poor by improved management of livelihood assets in Karnali mountain districts of Nepal**				
	Indicator	Baseline	Target	Means of Verification	Risks and Assumptions
Objective 1 : Strengthened local capacity to identify climate risks and design adaptive strategies	Percentage target population aware of predicted climate change impacts; and of appropriate responses Percentage of women within target population aware of predicted impacts	Less than 5% of target population aware of CC impacts and are able to devise appropriate adaptive strategies	80% of all target households display greater awareness on impacts and adaptive strategies <40% of respondents are women	-Adaptation plans -Community feedback survey -DDC budget reports	Community development priorities and adaptation priorities are easily combined to one plan Current and immediate climate risks do not undermine planned improvements in production livelihood diversification efforts are complemented by markets and technology
Objective 2: Diversified livelihoods and strengthened food security for climate vulnerable poor in target areas	Percentage of target households with stable and climate resilient sources of income No of women engaged in new income generating ventures	Livelihood and income insecurity is high. Over 25% of household income comes from uncertain sources such as wage labour. Exact baseline to be established through survey	At least 60% of target households report greater livelihood security compared to baseline 50% of new income avenues created are women-based	-Project end survey -Mid-term and end of project impact review	
Objective 3: Increased resilience of natural systems that support livelihoods to climate change induced stresses	Natural assets maintained and improved - No of households with improved access to water for agriculture and drinking	Natural resource base is severely depleted due to climatic and population stresses	At least 50% of the target households report better and greater access to natural resources	-Forest user groups annual reports -Mid-term and end of project impact review	

Goal:	**Increasing adaptive capacity of climate vulnerable and food insecure poor by improved management of livelihood assets in Karnali mountain districts of Nepal**				
	Indicator	Baseline	Target	Means of Verification	Risks and Assumptions
	-No of households engaging in Multi-Use Systems (MUS)[76] technology - No of households have access to forest products in soil quality -Status of forest resources		50% of women surveyed report better access natural resources		
Outcome 1.1 Climate vulnerable and food insecure poor actively participate in developing local climate risk reduction strategies and actions	No and type of climate adaptation strategies identified and implemented at local level	Adaptation strategies are not identified or implemented	>80% of target households have skills and knowledge to adopt adaptation strategies such as; • Greater and more stable livelihood diversity • Increased food storage and consumption • Improved soil management • Improved water management • Post- harvest technologies • Resistant crop varieties • Knowledge of climate risks and adaptation strategies • Responding to early warning and forecasting	-Project quarterly and semi-annual progress reports - Midterm and end of project impact reviews - DEECC section reports on project progress to Under Secretary, EMD, MoFALD	All section of community participate in identifying and designing risk reduction strategies The prioritizing of adaptation options are free of elitist bias but have concurrence of all groups in VDC

[76] MUS systems are commonly applied to improved efficiency of water through technologies that promote recycling, reusing and conservation

Goal:	**Increasing adaptive capacity of climate vulnerable and food insecure poor by improved management of livelihood assets in Karnali mountain districts of Nepal**				
	Indicator	Baseline	Target	Means of Verification	Risks and Assumptions
Output 1.1.1 Train and mobilize officers and community representatives at village and district to design, implement and monitor local adaptation strategies	No of CBO/User groups trained No of community mobilisers trained No of VDC/DDC officials trained No of technical staff trained	No specialized adaptation training exist	- 42 CBOs trained including local user groups -420 community mobilisers trained in three districts -50 officials (agriculture, livestock, forestry, irrigation) trained in three districts -Climate resilient agriculture manual available -NARC conducts 03 TOTs for regional agriculture extension officials	-Training programme evaluations -annual evaluation reports of NGO/CBO performance - Project quarterly and semi-annual progress reports	
Output 1.1.2 Local food security and climate adaptation planning supported	Adaptation plans available for all target VDCs available Adaptation plans identify most vulnerable wards and settlements and priority adaptive actions	No adaptation plan is available at VDC level	22 plans are prepared through community participation	-Adaptation Plans -VDC Development Plan	
Output 1.1.3 Gender and social inclusion are well integrated in to the adaptation planning processes	No of community based women's groups established and functioning Marginalised groups participate in adaptation planning process Each VDC adaptation plan identifies the **most** vulnerable HH including women-headed households	Considerable exclusion of women and some ethnic-caste minorities from development decision making process at local level	All scheduled castes and communities participate in workshops Each VDC has at least one women's group formed and functioning Women's groups have 50% participation in the planning process 22 VDC plans with vulnerable households and specific adaptive actions identified	-Adaptation Plans -VDC Development Plan	

Goal:	**Increasing adaptive capacity of climate vulnerable and food insecure poor by improved management of livelihood assets in Karnali mountain districts of Nepal**				
	Indicator	Baseline	Target	Means of Verification	Risks and Assumptions
Outcome 1.2 Strengthened ownership and management of climate risk reduction activities and replication of lessons in key livelihood sectors	Targeted institutions and community groups have increased capacity to reduce climate change risks in development practice Type of Institutions: • Local (VDC and below) • District (DDC and agencies) • Regional and National	None of stakeholders interviewed report adequate capacity to respond to climate risks and formulate strategies Adaptation plans are not integrated or funded by DDC development plans	Capacity developed of all types of mentioned institutions. Capacity for adaptive action planning, design, implementation and monitoring increased. 40% of the priority actions remaining by year 3 of project are funded by regular development programmes	-DDC development budget discussion minutes - Mid-term and end of project impact reviews -National Capacity Assessment conducted	Local and district governments recognize and prioritize climate risks as a development threat Ministries provide their fullest cooperation to the tasks identified
Output 1.2.1 Local adaptation plans integrated into sector-wise, locals and district planning process	VDC and DDC plans prioritise adaptive actions identified	VDC and DDC plans do not consider climate resilience	22 VDC and 3 DDC annual development plans incorporate climate risks and adaptive actions	-DDC plans -DEECC section reports –project annual progress reports	
Output 1.2.2 Integrate climate resilience to planning processes and development projects of key national ministries	No of sectoral projects and plans updated with climate risk information in key line ministries	Low level of support for climate risk integration in national programmes	-Revised design standards for small rural infrastructure available -Regional and national agriculture research stations invest more in climate resilient models and their dissemination -At least two demonstrations of forest carbon stock measurements and carbon financing established in two districts	-Project annual reports - Mid-term and end of project impact review	

Goal:	**Increasing adaptive capacity of climate vulnerable and food insecure poor by improved management of livelihood assets in Karnali mountain districts of Nepal**				
	Indicator	Baseline	Target	Means of Verification	Risks and Assumptions
Output 1.2.3 Conduct periodic assessment and document project lessons for dissemination at community, district and national levels	Knowledge products generated No of dissemination programmes for community	None None	-10 case studies generated -02 economic, social and environmental impact analysis conducted -20 community exchange visits organized -10 community workshops organized -04 media field tours organized -Community radio programmes developed in 02 districts	-Project annual reports -media reports -community exchange programme feedback reports	Results dissemination ensures a greater profile for adaptation actions Local and regional media interest in covering adaptation lessons and best practices
Outcome 2.1 Diversified and strengthened livelihoods, livelihood assets and improved access to food for climate vulnerable households	No of households with increased income Percentage decrease in negative coping strategies No of women-led enterprises created	Household food and income sources threatened by climate variability Households engage in a number of negative coping strategies such as; -labour migration -selling assets -consuming less -consuming seeds	> Target population report food and income availability improved by 40% >75% of target households report reduction in number and frequency negative coping strategies >50% of women in target households report increased income through new introduced venture	-Project quarterly and semi-annual progress reports -Household survey at start and end of project[77] -VAM survey report on coping strategies	Asset creation and production increase will result in greater incomes Increased income will reduce the need to engage in uncertain livelihoods
Output 2.1.1 Provide increased income opportunity for poor households, especially during agricultural lean-season, through building physical and	Community Asset Score	VDCs have no sustained programme to build and improve livelihood-related	Each VDC implements at least 03 priority (as per prepared plan) asset building programmes within project period	- Project quarterly and semi-annual progress reports -Asset score report in every VDC at start	

[77] Household survey is a part of the monitoring and evaluation framework

Goal:	**Increasing adaptive capacity of climate vulnerable and food insecure poor by improved management of livelihood assets in Karnali mountain districts of Nepal**				
	Indicator	Baseline	Target	Means of Verification	Risks and Assumptions
natural livelihood related assets		assets	These assets directly improve livelihood opportunities	and end of project	
Output 2.1.2 Increased local availability and access to food and nutrition through better storage and value-addition in all target VDCs	Food Gap reduced No food preparation and storage technologies introduced No of women using new technologies or methods related to food preparation/storage	Villagers have no access to technology and information on value addition and storage Seed banks are not available	-HHs consume more food types, locally available food -Food processing centers in 22 VDCs -Local food markets created in 22 VDCs -Local seed banks created in 22 VDCs >60% of women in target households use food preparation and storage technologies introduced by project	- Project quarterly and semi-annual progress reports - Household survey at start and end of project	Local people are willing to modify food habits Local women cooperatives are able to initiate and manage seed banks, milling centers and food storage
Output 2.1.3 Improved model of lease-hold forestry implemented in target cluster VDCs/ for sustained income and food through agro forestry	Increased income from forestry sources No of women/ disadvantaged groups participating in leasehold forestry programmes	Target VDCs have no lease-hold forestry programmes	Income from forest based NTFP increased by 30% in target VDCs	-DFO reports -DEECC section reports - Household survey at start and end of project -Project progress reviews	Department of Forests is able to identify suitable landholdings within target VDCs and provide technical back stopping for forest user groups
Output 2.1.4 Adapted current agricultural practices to new climate risks by improving crop management and animal husbandry practices	Key informants established in each VDC Field Trials conducted. Improved agricultural and livestock management practices established No. of women adopting	No such information dissemination system exists	At least 42 key informants trained and established Field trials and field extension conducted 85% target farmer households trained/ equipped (approx.. 7200 households). 50% of trainees should be women	- -Project quarterly and semi-annual progress reports - Agriculture extension office (ilaka level) annual progress reports - Household survey at start and end of project	Farmers apply knowledge from training programmes to the field Productivity increase is visible in the short duration of the project

Goal:	**Increasing adaptive capacity of climate vulnerable and food insecure poor by improved management of livelihood assets in Karnali mountain districts of Nepal**				
	Indicator	Baseline	Target	Means of Verification	Risks and Assumptions
	improved agricultural and livestock management practices		>50% of women trained use improved agricultural and livestock management practices		
Output 2.1.5 Increase adaptive capacity of women and disadvantaged groups through access to services and skills	Gender Participation in user groups and C/FFA Increased Women's well-being increased	Gender disparity high Women's skill level low and level of drudgery high	Women's groups formed for livelihood and income generating activities 22 women's service centers established.	- Project quarterly and semi-annual progress reports - Household survey at start and end of project	Women's engagement is guaranteed at all levels Women actively participate in service centre facilities

Alignment with Adaptation Fund's results framework

Project Objective(s)[78]	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
1. Strengthened local capacity to identify climate risks and design adaptive strategies	Percentage target population aware of predicted climate change impacts; and of appropriate responses	Outcome 3 Strengthened awareness and ownership of adaptation and climate risk reduction at local level	3.1 Percentage of target population aware of predicted adverse impacts of climate change and of appropriate responses	1,349,441
	Percentage of women within target population aware of predicted impacts	Percentage of target households with stable and climate resilient sources of income		
2. Diversified livelihoods and strengthened food security for climate vulnerable poor in target	Percentage of target households with stable and climate resilient sources of income	Outcome 6. Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.1 percentage of targeted HH and communities having increased access to livelihood assets	
	Natural assets maintained and improved			
3. Increased resilience of natural systems that support livelihoods to climate change induced stresses	No of women engaged in new income generating ventures	Outcome 5: Increased ecosystem resilience in response to climate change and variability induced stress	5.1 No and type of natural resource assets created, maintained or improved to withstand conditions of climate variability	**7,301,587**
	No of households with improved access to water for agriculture and drinking			
	No of households engaging in Multi-Use Systems (MUS) 80 technology			
	No of households have access to forest products in soil quality			
	Status of forest resources			
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
1.1. Climate vulnerable and food insecure poor actively participate developing local climate risk	No and type of climate adaptation strategies identified and implemented at local level	Output 3: targeted population groups participating in adaptation and risk	3.1.1 No and type of risk reduction actions or strategies introduced at local level	813,493

[78] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

reduction strategies and actions		**reduction awareness activities**		
1.2 Strengthened ownership and management of climate risk reduction activities and replication of lessons in key livelihood sectors at district/national levels	**Targeted institutions and community groups have increased capacity to reduce climate change risks in development practice** **Type of Institutions:** **• Local (VDC and below)** **• District (DDC and agencies)** **• Regional and National**	**Output 2.2 Targeted population groups covered by adequate risk reduction measures**	**2.1.2 Capacity of staff to respond to, and mitigate impacts of climate related events from targeted Institutions increased.**	535,948
2.1 Diversified and strengthened livelihoods, livelihood assets and improved access to food for climate vulnerable households	**No of households with increased income**	**Output 6. Targeted individual and community livelihood strategies strengthened in relation to climate change impacts**	**6.1.1 No and type of adaptation assets created in support of individual or community livelihood strategies**	7,301,587
	Percentage decrease in negative coping strategies		**6.1.2 Type of income sources for households generated under climate change scenario**	
	No of women-led enterprises created			

D. Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

(See Annexes 1 and 2)

E. Include a disbursement schedule with time-bound milestones.

(See Annex 3)

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT[79] *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/program, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/program proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/program:*

(Enter Name, Position, Ministry)	Date*: (Month, day, year)*

B. IMPLEMENTING ENTITY CERTIFICATION *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/program contact person's name, telephone number and email address*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (……list here…..) and subject to the approval by the Adaptation Fund Board, understands that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/program.	
Name & Signature Implementing Entity Coordinator	
Date: *(Month, Day, Year)*	Tel. and email:
Project Contact Person:	
Tel. And Email:	

6. Each Party shall designate and communicate to the Secretariat the authority that will endorse on behalf of the national government the projects and programs proposed by the implementing entities.

Annex 1: Detailed budget and budget notes

WFP Nepal: Adaptation to Climate Change - Detailed Project Budget (Output Level). Figures in USD

Outcome	Outputs	Budget Description & Codes	2013	2014	2015	2016	Total	SN
1.1 Climate vulnerable and food insecure poor actively participate in developing climate risk reduction strategies and actions	1.1.1 **Trained and mobilized** community representatives, field coordinators and technicians at village, ilaka and district to design, implement and monitor local adaptation strategies.	Local Staff (4300200)	125,368	125,368	125,368	125,368	501,472	1
		Travel (4201700)	10,212	10,212	10,212	10,212	40,847	2
		workshops (7001000)	16,920	16,920	16,920	16,920	67,680	3
	Total Output 1.1.1		**152,500**	**152,500**	**152,500**	**152,500**	**609,999**	
	1.1.2 Local food security and climate adaptation planning supported	Local Consultants (4300700)	31,596	31,596	31,596	31,596	126,385	4
		Travel (4201700)	4,212	4,212	4,212	4,212	16,847	5
		Workshops (7000000)	7,396	7,396	7,396	7,396	29,582	6
	Total Ouptut 1.1.2		**43,204**	**43,204**	**43,204**	**43,204**	**172,814**	
	1.1.3 **Gender and social inclusion** are well integrated in to the adaptation planning processes	Gender experts (4300700)	7,670	7,670	7,670	7,670	30,680	7
	Total Ouptut 1.1.3		**7,670**	**7,670**	**7,670**	**7,670**	**30,680**	

WFP Nepal: Adaptation to Climate Change - Detailed Project Budget (Output Level). Figures in USD

Outcome	Outputs	Budget Description & Codes	2013	2014	2015	2016	Total	SN
1.2 Strengthened ownership and management of climate risk reduction activities and replication of lessons in key livelihood sectors	1.2.1 **Local adaptation plans integrated** in to sector-wise, local and district planning processes	Local Staff (4300200)	9,430	9,430	9,430	9,430	37,720	8
		Travel (4201700)	2,762	2,762	2,762	2,762	11,047	9
		Meetings	5,066	5,066	5,066	5,066	20,262	10
	Total Output 1.2.1		**17,257**	**17,257**	**17,257**	**17,257**	**69,029**	
	1.2.3 Conduct periodic assessment and document project lessons for dissemination at community, district and national levels	Local Consultants (4300700)	17,650	17,650	17,650	17,650	70,600	11
		Travel (4201700)	3,432	3,432	3,432	3,432	13,727	12
	Total Output 1.2.3		**21,082**	**21,082**	**21,082**	**21,082**	**84,327**	
	1.2.2 Integrate **climate resilience to planning processes and development projects** of key national ministries	Local Consultants (4300700)	8,280	8,280	8,280	8,280	33,120	13
		Office setup (7290900)	27,950	27,950	27,950	27,950	111,800	14
		TC/IT equipment (6490900)	35,130	35,130	35,130	35,651	141,041	15
		Workshops (7000000)	24,158	24,158	24,158	24,158	96,630	16
	Total Output 1.2.2		**95,518**	**95,518**	**95,518**	**96,039**	**382,591**	

WFP Nepal: Adaptation to Climate Change - Detailed Project Budget (Output Level). Figures in USD

Outcome	Outputs	Budget Description & Codes	2013	2014	2015	2016	Total	SN
2. Build household and community resilience and increase adaptive capacity of climate vulnerable poor in 22 VDCs in Jumla, Kalikot and Mugu Districts	2.1.1 Provide increased **income opportunity** for poor households, especially during agricultural **lean-season,** provided through **building physical and natural livelihood related assets**	Local Staff (4300200)	28,010	28,010	28,010	28,010	112,040	17
		Travel (4201700)	3,742	3,742	3,742	3,742	14,967	18
		Construction materials (6590900)	166,389	166,389	166,389	166,389	665,554	19
		Labour cost (Food - 2001100)	53,400	53,400	53,400	53,400	213,600	20
		Labour cost (cash - 2005000)	462,100	462,100	462,100	462,100	1,848,400	21
		LTSH (3002000) *	83,140	83,140	83,140	83,140	332,560	22
	Total Output 2.1.1		**796,780**	**796,780**	**796,780**	**796,780**	**3,187,121**	
	2.1.2 Increased **local availability of and access to food** through better storage and value-addition at local level in all target VDCs	Local Staff (4300200)	27,670	27,670	27,670	27,670	110,680	23
		Travel (4201700)	2,346	2,346	2,346	2,346	9,383	24
		Construction materials (6590900)	-	13,560	13,560	13,560	40,680	25
		Labour cost (Food - 2001100)	20,030	20,030	20,030	20,030	80,120	26
		Labour cost (cash - 2005000)	173,290	173,290	173,290	173,290	693,160	27

WFP Nepal: Adaptation to Climate Change - Detailed Project Budget (Output Level). Figures in USD

Outcome	Outputs	Budget Description & Codes	2013	2014	2015	2016	Total	SN
		LTSH (3002000)	31,180	31,180	31,180	31,180	124,720	28
	Total Output 2.1.2		**254,516**	**268,076**	**268,076**	**268,076**	**1,058,743**	
	2.1.3 Improved and adapted current **crops management and animal husbandry** practices							
		Local Staff (4300200)	26,800	26,800	26,800	26,800	107,200	29
		Travel (4201700)	2,282	2,282	2,282	2,282	9,127	30
		Construction materials (6590900)	-	9,800	9,800	9,800	29,400	31
		Labour cost (Food - 2001100)	13,350	13,350	13,350	13,350	53,400	32
		Labour cost (cash - 2005000)	115,520	115,520	115,520	115,520	462,080	33
		LTSH (3002000)	20,790	20,790	20,790	20,790	83,160	34
	Total Output 2.1.3		**178,742**	**188,542**	**188,542**	**188,542**	**744,367**	
	2.1.4 Increased income through livelihood diversification using locally available resources							
		Local Staff (4300200)	22,500	22,500	22,500	22,500	90,000	35
		Travel (4201700)	2,342	2,342	2,342	2,342	9,367	36
		Construction materials (6590900)	-	11,380	11,380	11,380	34,140	37
		Labour cost (Food - 2001100)	20,030	20,030	20,030	20,030	80,120	38
		Labour cost (cash - 2005000)	173,290	173,290	173,290	173,290	693,160	39

WFP Nepal: Adaptation to Climate Change - Detailed Project Budget (Output Level). Figures in USD

Outcome	Outputs	Budget Description & Codes	2013	2014	2015	2016	Total	SN
		LTSH (3002000)	31,180	31,180	31,180	31,180	124,720	40
	Total Output 2.1.4		**249,342**	**260,722**	**260,722**	**260,722**	**1,031,507**	
	2.1.5 Renewable energy based systems introduced to support **women-led enterprises**							
		Local Staff (4300200)	5,140	5,140	5,140	5,140	20,560	41
		Travel (4201700)	2,392	2,392	2,392	2,392	9,567	42
		Construction materials (6590900)	-	17,480	17,480	17,480	52,440	43
		Labour cost (Food - 2001100)	26,700	26,700	26,700	26,700	106,800	44
		Labour cost (cash - 2005000)	231,050	231,050	231,050	231,050	924,200	45
		LTSH (3002000)	41,570	41,570	41,570	41,570	166,280	46
	Total Output 2.1.5		**306,852**	**324,332**	**324,332**	**324,332**	**1,279,847**	
Component 1			**337,230**	**337,230**	**337,230**	**337,751**	**1,349,441**	
Component 2			**1,786,232**	**1,838,452**	**1,838,452**	**1,838,452**	**7,301,587**	
Project/Programme Execution Budget			**31,852**	**32,635**	**32,635**	**32,643**	**129,765**	
TOTAL IMPLEMENTATION COSTS			**2,155,314**	**2,208,317**	**2,208,317**	**2,208,846**	**8,780,793**	
Indirect Support Cost (ISC) -8.5%							**746,367**	
TOTAL PROJECT BUDGET							**9,527,160**	

** LTSH is Landside Transport, Storage and Handling*

Annex 1 (Continuation).

BUDGET NOTES: Adapting to Climate Induced Threats to Food Production and Food Security in the Karnali Region of Nepal

(Budget Notes correspond to SN numbers in the last column of Budget Table)

1. Training 515 officials from technical agencies (forestry, agriculture, irrigation), community mobilizers, community leaders from 22 VDCs and three districts. Trainers for trainers will also be conducted for 45 key government staff and community leaders.
2. Travel days for trainees and resource person (9% of staff budget)
3. 40 training sessions 5 days each session involving 2 local resource persons
4. Total of 528 person days with the involvement of 3 national experts (239 USD/day) for the preparation of VDC Food Security Plan addressing community vulnerability and adaptation options with reference to LAPA framework, manual and tools in 22 VDCs. 22 VDC Adaptation Plan prepared and adjusted according to the field requirements.
5. Travel for project consultants. The travel budget is estimated at 9% of national consultant fee.
6. Budget for workshop and meetings organisation. Local Workshops are budgeted at US$ 379/event for 78 events involving 30 participants per event.
7. Total of 120 person days planned for the gender experts in order to integrate gender and social inclusion into the planning and implementation process.
8. 420 person days (28 persons from national, 3 districts and 22 VDCs)
9. Travel (11 % of the staff costs)
10. 56 meeting involving 30 participants from line agencies, NGO and INGO
11. 3 districts level 12 review meetings involving consultants, line agencies, partners, and stakeholders from each VDC
12. 9 % of the review meeting costs
13. 180 person days of consulting services for the integrated climate resilience and planning process and development of projects jointly with key national ministries
14. This includes the set up costs for government offices at central and district level, including the office rent, utilities, furniture, and equipment. 25,000 USD has been budgeted for each district office, and 66,800 USD has been budgeted at the central level.
15. This line includes IT and telecommunications equipment, including laptops, projectors, printers and inverters. It includes WFP's standard per capita IT costs for 10 people charged at 2,250 USD per annum. These facilities will be used to support reporting, monitoring, and project communications and coordination. This package covers recurring costs WFP's financial, communication, payroll, knowledge management and other IT systems.
16. 42 person days of international seminars/workshop for two staff.
17. NGO staff for the implementation of activities related to the adaptation through the building of physical and natural livelihood related assets (25 days/year involvement to implement the asset creation activities).
18. Project implementation related travel by NGO staff from one project sites to other within a district
19. Materials (cement, reinforcements, gabion wires) for the construction of community assets (120 ha of irrigation; 195 ha of plantation and mini watershed development; 5 ha of agriculture land improvement; 22 water harvesting tanks).
20. Labour cost equivalent food for the distribution to the beneficiaries.
21. Labour cost equivalent cash for the distribution to the beneficiaries
22. Internal transportation and handling of food in the warehouses located at 4 extended delivery points and 22 small transhipment locations.
23. This budget line covers the cost of NGO support and local staff for the improvement of local storage and value addition in targeted VDCs. While rates and engagement in each VDC will differ. It is assumed that in each VDC staff will spend an average of 3 days per month or 36 days per year at a rate of approximate 34-35 USD per day
24. Project implementation related travel by NGO staff from one project sites to other within a distric.
25. Materials (cement, reinforcements, aggregates) for the construction of 22 community storage facilities and 63 value addition related activities including 3 research activities.
26. Labour cost equivalent food for the distribution to the beneficiaries.
27. Labour cost equivalent cash for the distribution to the beneficiaries
28. Internal transportation and handling of food in the warehouses located at 4 extended delivery points and 22 small transhipment locations.
29. This budget line covers the cost of NGO support and local staff for the use of crop varieties that are resilient to climate change and for improved poultry, goat and pig farming. While rates and engagement in each VDC will differ. It is assumed that in each VDC staff will spend an average of 3 days per month or 36 days per year at a rate of approximately 33 USD per day
30. Project field visits by NGO staff to support the improved husbandry.
31. Construction materials for improved sheds, drainage system, grass and fodder trees plantation.

32. Labour cost equivalent food for the distribution to the beneficiaries.
33. Labour cost equivalent cash for the distribution to the beneficiaries
34. Internal transportation and handling of food in the warehouses located at 4 extended delivery points and 22 small transhipment locations.
35. NGO staff to support the communities to implement the agriculture diversification and application of different cash crop varieties, intercropping and off farm activities including seed, medicinal plants and herbs productions (3 days/year involvement).
36. Project site visits by NGO staff
37. Construction materials (poly house, vegetable production, processing, fencing, seeds and training and orientation materials, IPM related materials)
38. Labour cost equivalent food for the distribution to the beneficiaries.
39. Labour cost equivalent cash for the distribution to the beneficiaries
40. Internal transportation and handling of food in the warehouses located at 4 extended delivery points and 22 small transhipment locations.
41. NGO staff to support the communities to implement the renewable energy based systems to support women-led enterprises (12 days/year involvement).
42. Staff 'travels to supervise the construction activities and installation of solar panels.
43. Construction materials (22 women facilities, solar panels, improved cooking system)
44. Labour cost equivalent food for the distribution to the beneficiaries.
45. Labour cost equivalent cash for the distribution to the beneficiaries
46. Internal transportation and handling of food in the warehouses located at 4 extended delivery points and 22 small transhipment locations.

ANNEX 2: Project Execution Budget

Type of M&E Activity	Responsible Parties	Budget (US$) does not include staff time	Time Frame
Project Inception Workshop (PIW)	Project Manager and WFP Coordinator	5,000	Within first three months
Inception Report	Project Manager and WFP Coordinator	2,000	Two weeks after PIW
Household survey for results monitoring- income, coping strategies, consumption and assets	Project Manager	8,000	At beginning (Quarter 1) and end of project (Quarter 4/year 3)
Quarterly Technical Reports from District Implmentation Committee	District Coordinator	8,000	End of each quarter
Semi-annual Progress Reports (SAPR)	Project Manager	4,000	End of every Six Months
Annual Progress Reports (APR)	Project Manager/ WFP Coordinator/ JS MOFALD	7,500	End of each year
Meetings of Project Steering Committee	Project Manager/ WFP Coordinator/ JS MOFALD	5,000	First after PIW and thereafter to review SAPR
Meetings of Technical Advisory Panel at MoFALD	Project Manager/ WFP Coordinator/ JS MOFALD	2,500	At least six monthly to review divisional and basin reports
Tehcnical Reports	Technical Consultants	-	As required
Mid-term Evaluation (MTE)	External Evaluator/ Technical Consultants/ Project Coordinator	27,273	At mid point of project execution- 18-20 months
Final Evaluation (FE)	External Evaluator/ Technical Consultants/ Project Coordinator	29,000	End of project cycle
Final Report	PPD MoE, Project Coordinator, WFP Coordinator	-	At least two months before project cycle ends
Financial Information Audit	WFP	12,000	Yearly
Travel	WFP	19,492	Yearly

Total (USD) 129,765

ANNEX 2 (continuation): Total Indirect Support Cost

Total Indirect Support Cost	USD
Headquarters:	Total
Indirect Support Cost (4%)	351,632
Country Office:	
Staff Salary - WFP CO Staff (10% of Int'l Head of Prog and 1 full time NOA)	245,400
Travel	40,547
Utilities	25,000
Office Supplies	15,000
Communications and IT Services	68,788
Total Indirect Support Cost	**746,367**

ANNEX 3: DISBURSEMENT MATRIX

	Upon Agreement signature					**Total**
Scheduled Date	January 2014	January 2015	January 2016	January 2017		
Project Funds	2,967,559	2,967,559	2,967,559	494,718		**9,397,395**
Implementing Entity Fee	32,441	32,441	32,441	32,442		**129,765**
Total	**3,000,000**	**3,000,000**	**3.000,000**	**527,160**		**9,527,160**

[a/]Use projected start date to approximate first year disbursement
[b/]Subsequent dates will follow the year anniversary of project start
[c/]Add columns for years as needed

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT[1] *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/program, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/program proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/program:*

Lava Bahadur KC, Under Secretary, Ministry of Science, Technology and Environment	Date: *08-23-2013*

B. IMPLEMENTING ENTITY CERTIFICATION *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/program contact person's name, telephone number and email address*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, understands that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/program.	
Nicole Menage Ms. Nicole Menage Representative/Implementing Entity Coordinator United Nations World Food Programme (WFP) Nepal	
Date: 08-23-2013	Tel. and email: +9771-5260607 (ext. 2100) *Nicole.menage@wfp.org*
Project Contact Person: LeelaRaj Upadhyay Marco Cavalcante Kishor Aryal	
Tel. And Email: + 9771 - 5542607 ext 2401 leelaraj.upadhyay@wfp.org +9771 – 5260607 ext. 2400 marco.cavalcante@wfp.org +9771 – 5260607 ext. 2403 kishor.aryal@wfp.org	

6. Each Party shall designate and communicate to the Secretariat the authority that will endorse on behalf of the national government the projects and programs proposed by the implementing entities.

Government of Nepal

Ministry of Science, Technology and Environment

Ref. No : 556

23rd August 2013

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for the project proposal entitled "Adapting to Climate-Induced Threats to Food Production and Food Security in the Karnali Region of Nepal"

In my capacity as designated authority for the Adaptation Fund in Nepal, I confirm that the above project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Mugu, Kalikot and Jumla districts of the Karnali region of Nepal.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be executed by the Ministry of Science, Technology and Environment (MoSTE) and implemented by the UN-World Food Programme (WFP).

Sincerely yours,

Lava Bahadur KC
Under Secretary
Climate Change Management Division/DA for AF

CC:

Ms. Nicole Menage
Representative/Implementing Entity Coordinator
United Nations World Food Programme (WFP)
Nepal
nicole.menage@wfp.org

Office Address :
Singhadurbar
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Tel. No.
4211734, 4211641, 4211996
4211946, 4211894, 4211737
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Website :
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Government of Nepal
Ministry of Science, Technology and Environment

Ref. No : 555

23rd August 2013

To:
The Adaptation Fund Board
C/O Adaptation Fund Board Secretariat
Email: secretariat@Adaptation-Fund.org
Fax: 202 525 3240/5

Subject: Functions of WFP in the proposed adaptation programme.

Dear Members of the Adaptation Fund Board,

The Government of Nepal endorses the submission of the project entitled **Adaptingto Climate Induced Threats to Food Production and Food Security in the Karnali Region of Nepal** and kindly requests the Adaptation Fund Board to duly consider its approval in its twenty – second meeting. The Government of Nepal agrees, on an exceptional basis, the implementation of the above project by the United Nations World Food Programme (WFP) in close coordination with various government Ministries and Departments within the roles and responsibilities specified in the project document. Kindly note that suggested outputs and budgeted amounts to be executed by WFP are shown in section D in the project document.

WFP has been working in the Karnali region since 2002 and has excellent operational experience and links with local communities, local government and NGOs – all of whom will play key roles in the project, and all of whose capacity will be significantly enhanced through partnership with WFP.

It has been agreed that the District Energy and Environment Section (DEES), working under the supervision of the District Development Committee and Alternative Energy Promotion Centre of the Ministry of Science, Technology and Environment will be the Government's focal units for the project at district level. It is proposed that WFP district based staff assist DEES and the Village Development Committees (VDC) in the selection and contracting out of services to local NGOs (WFP's principal means of execution) and partners, provide technical assistance to the VDCs, local authorities and partners, and share (with the Ministry) in monitoring and supervising the project.

The Government of Nepal acknowledges WFP's capacity to provide assistance and recommend WFP for the implementation of the project activities in the region. We are confident that WFP's execution will enhance the VDC and district capacities to implement future interventions in the region.

Sincerely yours,

Lava Bahadur KC
Under Secretary
Climate Change Management Division
Designated Authority (DA) for Adaptation Fund

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Website : www.moste.gov.np

WFP

World Food Programme

wfp.org

विश्व खाद्य कार्यक्रम

23 September, 2013

To: **Adaptation Fund Secretariat**

From: **Piet Vochten, OIC WFP Nepal**

Re: **Improved cook stoves**

Reference is made to your query regarding the improved cook stove (ICS) activities, highlighted in the technical review sheet on 17.09.2013. The explanations below provide additional information regarding the sustainability of the proposed activities.

After the first introduction of ICS in Nepal in the 1950s, significant institutional efforts have be invested to ensure their adequacy for different geo-climatic areas in Nepal – from the Terai to the High Mountain. Up to now, more than seven different models of stove have been tested and disseminated; these are primarily – but not exclusively – suitable for mid hills populations. Most of these models are made of locally available materials, i.e. clay, brick and some iron bars for reinforcement. Further, special emphasis has been put on capacity building and technical backstopping of ICS promoters for after-sales service to end users.

Recently, the Alternative Energy Promotion Center (AEPC), a government agency, has been focused on the promotion of ICS in areas where forests are being degraded year after year, with special emphasis on the mountainous regions. AEPC works in collaboration with various agencies, including WFP Nepal, to promote suitable models of ICS. In this context, the project proposal submitted to the Adaptation Fund intends to utilize available technologies including specific models of ICS to meet the household needs of energy for space heating and cooking.

The project will promote two types of cooking stoves that have been tested for public acceptance and promotion by AEPC: a) an all-metal stove with cooking, space & water heating possibilities; b) an elevated mud stove that is lower in cost and with less space heating, but with a water heating option. Project beneficiaries will be able to choose between models depending on their needs and affordability. The Government of Nepal has a policy of subsidization for cook stoves in the high mountain regions. Given the government prioritization and provision of a subsidy for the installation of metallic ICS, the AF project will work intensively to raise local awareness on the benefits of the technology. The capacity building component within the AF project will be a further incentive to beneficiaries, which aims to develop local skills in construction, operation and maintenance of the cook stoves. It is therefore fair to expect that the beneficiaries in the project area, who face difficulty meeting their daily needs for biomass (for the purposes of heating and cooking), would accept the installation of these specifically tested models of ICS.

Further information on the models of the cook stoves and types of ICS promoted by the AEPC for high mountain and Terai regions in Nepal can be found in the following links:

http://www.aepc.gov.np/images/pdf/RE%20Subsidy%20Policy%202013%20-%20English.pdf
http://aepc.gov.np/index.php?option=com_content&view=category&layout=blog&id=73&Itemid=9
http://aepc.gov.np/index.php?option=com_docman&Itemid=307

Should you have any further queries, please do not hesitate to contact me.

With kind regards,

UN World Food Programme, Chakupat, Patan Dhoka Road
P.O. Box 107, Kathmandu, Nepal
Tel : 5542607, 5535694, Fax : 977-1-524101,
Email: name.surname@wfp.org