ADAPTATION FUND

FULLY DEVELOPED PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Improving food system resilience of vulnerable communities in Nepal through community-based adaptation.
Country:	Nepal
Thematic Focal Area:	Agriculture and Food Security
Type of Implementing Entity:	Multilateral Implementing Entity
Implementing Entity:	World Food Programme (WFP)
Executing Entities:	Ministry of Forests and Environment, Ministry of Agriculture and Livestock Development
Amount of Financing Requested:	US$ 10 million (in U.S Dollars Equivalent)
Letter of Endorsement (LOE) signed:	Yes ☒ No ☐

NOTE: The LOE should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities

Stage of Submission:

☒ This proposal has been submitted before including at a different stage (concept, fully-developed proposal)

☐ This is the first submission ever of the proposal at any stage.

In case of a resubmission, please indicate the last submission date: 12/20/2024

Please note that fully-developed proposal documents should not exceed 100 pages for the main document, and 100 pages for the annexes.

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List of Acronyms

ADS	Agriculture Development Strategy
AFOLU	Agriculture, Forestry, and Other Land Use
ASDP	Agriculture Sector Development Programme
ASHA	Adaptation for Smallholders in Hilly Areas
AWS	Automated Weather Station
BCR	Benefit cost-ratio
CbA	Community-based Adaptation
CBA	Cost-benefit analysis
CBP	Country Portfolio Budget
CCA	Climate Change Adaptation
CCAFS	CGIAR Research Program on Climate Change Agriculture and Food Security
CCMD	Climate Change Management Division
CEA	Cost-effectiveness analysis
CER	Cost-effectiveness ratio
CFM	Community Feedback Mechanisms
CIS	Climate information services
CLEAR	Consolidated Livelihood Exercise for Analyzing Resilience
COMET	Country Office Tool for Managing Programme Operations Effectively
CRF	Corporate Results Framework
CSA	Climate-smart agriculture
CSP	Country Strategic Plans
CSV	Climate Smart Villages
DEQAS	Decentralized Evaluation Quality Assurance System
DHM	Department of Hydrology and Meteorology
DRR	Disaster Risk Reduction
E&S	Environmental and Social
EC	Evaluation Committee
EE	Executing Entity
EFT	Electronic fund transfers

EIRR	Economic Internal Rate of Return
EPR	Environmental Protection Regulation
ERG	Evaluation Reference Group
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Safeguards
EWS	Early warning systems
FAO	Food and Agriculture Organization
FFA	Food Assistance for Assets
FGD	Focused group discussions
FPIC	Free, Prior and Informed Consent
FRA	Global Forest Resources Assessment
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEDSI	Gender equality, disability, and social inclusion
GESI	Gender Equality and Social Inclusion
GEWE	Gender equality and women empowerment
GFW	Global Forest Watch
GHG	Greenhouse gas
GLOF	Glacial Lake Outburst Floods
GRID	Green, Resilient, and Inclusive Development Framework
GRM	Grievance Redress Mechanism
HDI	Human Development Index
HGSF	Home-grown school feeding
HH	Households
IASC	Inter-Agency Standing Committee
ICS	Improved Cookstoves
IFIs	International Financing Institutions
IPs	Indigenous Peoples
IPSAS	International Public Sector Accounting Standards
IRR	Internal rate of return
KII	Key informant interviews
LAPA	Local Adaptation Plans for Action
LDC	Lead Developed Country
LDCF	Least Developed Countries Fund
LG	Local Government
LI-BIRD	Local Initiatives for Biodiversity, Research and Development
LISP	Local Infrastructure Support Programme
LNOB	Leaving no one behind
LPCCs	Local Project Coordination Committees
LPMC	Local Project Management Committee
LSI	Layering, Sequencing and Integrating
M&E	Monitoring and Evaluation
MAIC	Municipal Agrometeorological Information Centres
MHP	Micro-hydropower
MIE	Multilateral Implementing Entity
MIS	Management information system
MoALD	Ministry of Agriculture and Livestock Development
MODA	Mobile Operational Data Acquisition
MoEST	Ministry of Education, Science and Technology
MoF	Ministry of Finance
MOFAGA	Ministry of Federal Affairs and General Administration
MoFE	Ministry of Forest and Environment
MoITFE	Ministry of Industry, Tourism, Forests, and Environment
MoWERI	Ministry of Energy, Water Resource and Irrigation
MTR	Mid-Term Review
MUS	Multi-use water services
NAP	National Adaptation Plan
NBS	Nature-based Solutions
NCCP	National Climate Change Policy

NCCSP	Nepal Climate Change Support Programme
NDC	Nationally Determined Contributions
NDRRMA	National Disaster Risk Reduction and Management Authority
NNRFC	Natural Resource and Fiscal Commission
NPSAS	National Public Sector Accounting Standards
NPV	Net present value
NTFP	Non-timber food products
O&M	Operations and maintenance
OAGN	Office of the Auditor General of Nepal
ODA	Official Development Assistance
OEV	Office of Evaluation
OWL	Other wooded land
PAMS	Public Asset Management System
PC4	Provincial-level Climate Change Coordination Committee
PCCMIS	Provincial Climate Change Management Information Systems
PFM	Public financial management
PMU	Project Management Unit
PPCC	Provincial Project Coordination Committee
PPMO	Public Procurement Monitoring Office
PPR	Project Performance Report
PRA	Participatory Rural Appraisal
PSC	Project Steering Committee
PSEA	Prevention of sexual exploitation and abuse
PTC	Project Technical Committee
PV	Present value
RAM	Research, Assessment, and Monitoring
ROI	Return-of-investments
SDG	Sustainable Development Goals
SEAH	Sexual Exploitation, Abuse, and Sexual Harassment
SGBV	Sexual Exploitation, Abuse, and Gender-Based Violence
SHGs	Self-help groups
SuTRA	Sub-national Treasury Regulatory Application
TA	Technical assistance
UC	User committees
UNSDCF	United Nations Sustainable Development Cooperation Framework
USP	Unidentified sub-projects
VRA	Vulnerability and Risk Assessments
VSLG	Village Savings and Lending Groups
WFP	World Food Programme
WMO	World Meteorological Organization

PROJECT/PROGRAMME BACKGROUND AND CONTEXT

General Context

Location and Climate

Nepal is a landlocked country bordering China to the north and flanked by India on the other three sides with a total land area of 147,516 km^2 that extends over 800-850 km from east to west and 144-240 km north to south. It lies between 80º04' – 88º12' E and 26º22' -30º27' N. Nepal's geography is divided into three distinct ecological zones running from east to west: the Terai with fertile, alluvial grasslands; a temperate hill region; and the mountain region hence the geographic landscape is highly diverse ranging from flat and relatively low-lying in Terai in the South to the highest mountains in the North. Nepal has a wide range of climatic zones and possesses rich biodiversity.

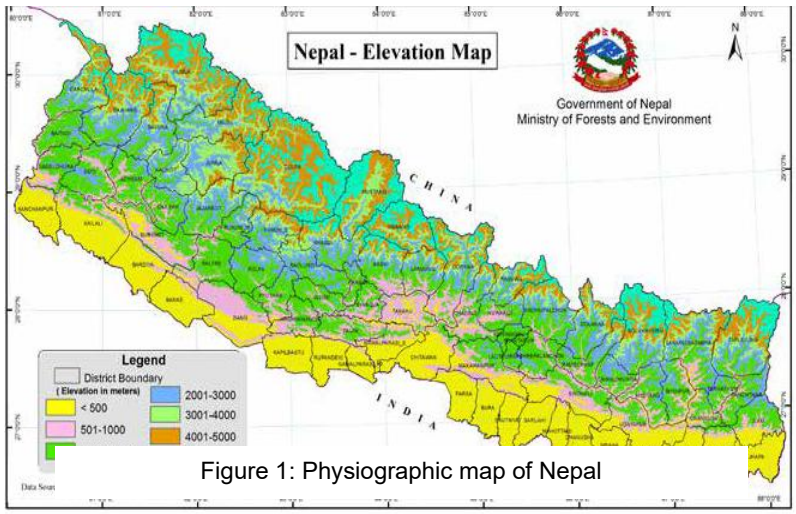


Figure 1: Physiographic map of Nepal

Federal, provincial, and local governments were enshrined in Nepal's 2015 constitution, which took effect in 2017 and gave each administrative structure responsibility for implementing policies, plans, and programmes that promote sustainable and inclusive development in line with Nepal's commitments to national and international goals, including the Sustainable Development Goals (SDGs). The annual temperature varies from -4°C to 19°C while the maximum temperature ranges from 4°C to 31°C[1]. The average annual precipitation of Nepal accounts for 1600 mm. It receives more than 70 % of the precipitation in monsoon (June-September). The distribution of the rainfall is not equal to all the altitudes, varying from place to place[2].

Environmental and agro-ecological conditions

Nepal is divided into three ecological regions i) Terai (<1000 m), ii) Hills (1000-3000 m), and iii) Mountain (>3000 m) (MoSTE, 2014). Due to its diverse topography, it is rich in biodiversity. According to the national report to the Convention on Biological Diversity, Nepal is the habitat for more than 13000 flora and more than 17000 faunas. It has 75 vegetation types and 35 forest types. In 2019, Nepal's forest cover increased to 41.69% (6,166,766 hectares) from 39.99% (5,915,518 hectares) in 2000. Other significant land covers included cropland and grassland, with cropland seeing a decrease from 26.31% in 2000 to 24.21% in 2019, and grassland from 13.95% to 13.27% over the same period. Other wooded land (OWL) covered 3.62% (535,179 hectares) of Nepal in 2019, a slight increase from 3.57% (527,915 hectares) in 2000. Less significant land covers like snow, bare rock, glaciers, riverbeds, built-up areas, water bodies, and bare soil collectively comprised less than 18% of the land in both years. At the provincial level, forest cover was predominant in all provinces except Madhesh, where OWL saw a significant increase, and other provinces showed mixed trends. The built-up area increased in all provinces, while cropland decreased consistently across them. Physiographic regions such as the Terai and Siwalik

[1] Ministry of Forests and Environment (MoFE) 2021, Vulnerability and Risk Assessment and Identifying Adaptation Options: Summary for Policy Makers. Kathmandu, Government of Nepal

[2] Ministry of Science, Technology and Environment (MoSTE), 2014, Economic Impact Assessment of Climate Change in Key Sectors in Nepal. Kathmandu with technical support from IDS Nepal, Global Climate Adaptation Partnership and Practical Action.

maintained dominance in cropland and forests, respectively, while built-up areas grew, and grassland areas generally decreased.

Between 2000 and 2019, forest cover increased by 1.70%, whereas cropland and grassland declined by 2.10% and 0.68%, respectively. According to Global Forest Watch (GFW)[3], Nepal experienced a net gain in tree cover from 2000 to 2019. Specifically, the data shows an increase in forest cover in various regions, including the Terai and Siwalik. GFW data also shows changes in land use, indicating a decrease in cropland and grassland during the same period. The Food and Agriculture Organization's (FAO) Global Forest Resources Assessment Report 2020 indicated a positive trend in forest cover in Nepal[4]. During this period, land cover transformations included significant shifts from forest to OWL and vice versa, along with conversions involving cropland and built-up areas. The data from these studies indicated a classification accuracy of 84.80% and a kappa statistic of 0.73, reflecting a reliable assessment of land cover changes. In practice, most of the population still depends on agriculture and other natural resources available in their community. While an increase in forest cover in Nepal's Terai and Siwalik regions is encouraging, it is essential to consider the quality and context of this increase and not overlook potential land degradation issues. Even with increasing forest cover, soil erosion can still be a significant issue, especially in mid-hills.

Due to its geography and environment, Nepal is among the countries most highly affected by ongoing extreme climate events, with four out of every five people at risk from hazards including intense heatwaves, flooding, and air pollution. The 191 events recorded between 2000 and 2019 caused losses averaging 0.39% of GDP[5]. While earthquakes and floods have historically been the most destructive events, floods, storms, erosion, and landslides have seen a sharp increase in the recent past. These kinds of severe weather events regularly cause extensive human and economic losses. Heavy rains, floods, and landslides have claimed hundreds of lives, destroyed crops and hundreds of homes, and damaged infrastructure. For example, in 2020, landslides and flooding in western Nepal left 300 dead and 223 injured, causing economic damage of over US$ 393,000[6]. Due to unseasonal rainfall, there was significant loss of livestock, agricultural damage, and damage to houses and other infrastructure.

In 2021, heavy rainfall led to more floods and landslides. The Kathmandu Valley and other areas suffered considerable impacts, emphasizing the ongoing risk that such weather events pose to both rural and urban areas. Further into 2022, the monsoon season again brought significant challenges. Nepal saw one of its deadliest floods and landslides in years, triggered by continuous heavy rainfall. These events led to substantial loss of life and damage across multiple districts, highlighting the increased frequency and intensity of such disasters. In the Terai, the floods caused extensive damage to agricultural lands and settlements, while in the mid-hills, landslides disrupted communities and infrastructure. These incidents underscore the escalating impacts of climate change in the region, which include not only increased rainfall during monsoons but also heightened risks of landslides and floods exacerbated by altered snow cycles that continue to threaten lives and livelihoods.

[3] Global Forest Watch. (2021). Global Forest Watch Open Data Portal. World Resources Institute.
[4] Food and Agriculture Organization of the United Nations (FAO). (2020). Global Forest Resources Assessment 2020: Main Report.
[5] Eckstein, David, Vera Künzel, and Laura Schäfer. 2021. Global Climate Risk Index 2021: Who Suffers Most from Extreme Weather Events? Weather Related Loss Events in 2019 and 2000–2019. Berlin: Germanwatch,
[6] DCA. (2021). When Climate becomes a Threat, Evidence of Climate Change Induced Loss and Damage in Nepal.
World Bank, GFDRR. 2022. "Melamchi Flood Disaster in Nepal: Damage and Risk Quantification with Drone Survey, Satellite-Based Land Displacement Analysis, and 2D Flood Modeling" https://www.gfdrr.org/en/publication/melamchi-flood-disaster-nepal-damage-and-risk-quantification-drone-survey-satellite

Risks associated with climate change and hydrometeorological disasters are predicted to increase. Compared to the 1981–2010 reference period, temperatures are expected to rise by 0.92–1.07°C in the medium term (2016–45) and by 1.3–1.8°C in the long term (2036–65)[7]. Similarly, it is anticipated that yearly precipitation will rise by 2–6% to 8–12% over the medium and long term. Monsoon summers are predicted to be wetter with up to a threefold increase in rainfall, while winters are predicted to be drier[8]. By 2030, 350,000 people are expected to be affected by river flooding brought on by climate change each year, up from 157,000 in 2010[9].

Altered snow cycles, characterized by earlier snowmelt and reduced snowfall, contribute significantly to the flooding risks. As temperatures rise, snow in the Himalayas melts earlier and more rapidly, increasing the volume of water in rivers during seasons already prone to heavy rainfall. This exacerbates flooding, particularly in the monsoon season, when rivers are already swollen from rainfall. These altered snow cycles, combined with heavy monsoon rains, lead to more severe and frequent floods. The Terai region, with its low-lying plains, is particularly vulnerable to such flooding. Additionally, the Siwalik region, with its hilly terrain, faces increased risks of soil erosion and landslides due to these changes.

Gender, Inclusion and Socio-Economic Context

Gender and Inclusion dynamics analysis:

Social power dynamics in Nepal are shaped by complex intersections of gender, caste, ethnicity, and disability, resulting in unique vulnerabilities for different groups. Women face multiple layers of discrimination than their male counterparts. For example, while Janajati women may have more mobility and labour opportunities, they still face significant social marginalization compared to Brahmin women, who have higher social status but face restrictions, including limitations on work. Similarly, a Dalit man might face greater marginalization than a Brahmin woman due to persisting untouchability practices.

Women and children are disproportionately affected by extreme weather events and are 14 times more likely to die in disasters due to limited access to resources and decision-making power. Climate change displacement also affects them the most, with estimates suggesting that around 4 out of 5 displaced individuals are women and girls.[10.] The unique challenges faced by women, girls, marginalized groups, and persons with disabilities in Nepal, along with their potential to strengthen food security and disaster resilience in rural areas, highlight the importance of prioritizing gender and social inclusion in resilience-building efforts. The project focuses on analyzing community dynamics, empowering women while fostering harmony with other groups, and promoting social cohesion. It also emphasizes the critical role of gender-disaggregated data in climate change adaptation and resilience efforts.

Population, economy and poverty:

Nepal's population (as of April 2024) is over 29 million and comprised of 51.13% female and 48.87% male with an annual growth rate of 0.92% as per the national census of 2021. Its socioeconomic landscape is predominantly rural, although two-thirds of the population now live in urban municipalities per the 2021 census[11]. More than 45% of the population resides in hills and mountains with fragile and remote physiography and low economic productivity. Likewise, 66%

[7] MoFE (2019. Climate Change Scenarios for Nepal for National Adaptation Plan (NAP). Kathmandu: Ministry of Forests and Environment), Government of Nepal
[8] ibid
[9] World Bank Group and Asian Development Bank 2021
10 https://www.un.org/en/climatechange/science/climate-issues/women#:
[11] GoN. 2022. National Population and Housing Census 2021. The increase in the share of the urban population has more to do with the reorganization of local governments after federalization than with actual urbanization.

population lives in urban municipalities, and the rest of the population lives in rural municipalities. The population density was 212 per square kilometre in April 2024, up from 180 in 2011. The population density is higher in the city and decreases with remoteness[12]. About two-thirds of the population is employed in the agriculture sector itself, remarkably higher compared to other South Asian Countries[13].

Nepal's economy largely relies on agriculture (57.3% of the country's population)[14], followed by remittances, natural resources use like forest, pastureland and so on. The economic growth rate is not stable and usually varies year on year. The agriculture sector, which is experiencing a declining labour force, only contributes about 24.12% of the gross domestic product (GDP) in 2022/23. The service sector is the highest contributing sector (62.7%) to the country's GDP. About two million people migrated abroad and remitted about NPR 1220 billion (Approx. US$ 9.3 billion) in 2022/23 and contributed 22.7% to the country's GDP[15]. Nepal is highly dependent on imports, including food, medicine, petrol, and other essential goods, overwhelmingly from India[16]. Moreover, males (91.5%) out-migrated as migrant workers to earn their living, which results in the increase of female-headed households and an overburden of the responsibility of agricultural work (73% of the female workforce), in addition to household chores and other social responsibilities[17].

Poverty is still widespread in Nepal and is strongly associated with gender, ethnicity, caste, and region. According to the recent data, there are 20.27% of the population who live below the poverty line[18]. According to the government, 4.98 million people in Nepal live in multi-dimensional poverty, accounting for 17.4 % of the population, a significant decrease from a previous 30.1% in 2014. This decline represents a significant number of individuals, nearly three million, rising out of multidimensional poverty. While Nepal is on track to achieve its commitment towards SDGs 2030, the country remains one of the poorest in the world, with a GDP per capita of US$ 1,336.5 in 2022[19]. Nepal is categorized as a Least Developed Country (LDC), ranking in the Human Development Index (HDI) at 146th out of 193 countries in the 2023-2024 period[20], which is a slight improvement of its position from 149th previously. However, the HDI value itself experienced a minor decline from 0.602 to 0.601, attributed to the ongoing effects of the pandemic and other socio-economic factors.

Poverty and food insecurity rates are higher in the hills, more so in the western hills and mountains than in the Terai due to the limited availability of arable land and low agricultural productivity. It is highest in Karnali Province with 51.2 % and the third highest in Sudurpashchim Province with 33.6 % of the population experiencing multi-dimensional poverty[21], though there are significant pockets of poverty nationwide (28.6 %). Within the Sudurpashchim and Karnali Provinces, Bajura, Achham and Kalikot have HDI scores below 0.4. Overall, Sudurpashchim and Karnali Provinces have relatively poor infrastructure, low levels of agriculture productivity, limited access to markets and opportunities for non-agricultural activities compared to other provinces in Nepal.

Agriculture production, nutrition, food security and livelihoods:

According to agricultural statistics published by the Ministry of Agriculture and Livestock

[12] National Statistics Office, Nepal 2023, National Population and Housing Census 2021 (National Report)
[13] Biodiversity, Climate Change and Adaptation, Nature Based Solutions from the World Bank Portfolio, World Bank, 2008.
[14] National Statistical Office, 2023, National Population and Housing Census 2021: National Report
[15] Nepal Rastra Bank's Annual Report of Fiscal Year 2022/23 published in November 2023.
[16] World Bank. 2024. Crisis Preparedness Gap Analysis (CPGA), Nepal
[17] MoLESS 2020 retrieved from National Adaptation Plan report of Nepal 2023.
[18] National Statistics Office, 2024, Nepal Living Standard Survey IV 2022-23 1707800524_89.pdf (giwms.gov.np)
[19] The World Bank Data (https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=NP)
[20] UNDP, Human Development Report 2023/2024
[21] Government of Nepal National Planning Commission, The 15th Five Year Plan (Fiscal Year 2019-2020, 2023-2024)

Development (MoALD), the trend in agriculture production varies from year to year depending on rainfall variability and natural and climate-related disasters. In the hills and mountains of Karnali and Sudurpashchim provinces, insufficient rainfall, prolonged drought, and poor land management have led to increased soil erosion, making the land more prone to landslides and the loss of arable areas. These degraded lands are less resilient to climate change impacts, such as altered rainfall patterns and increased temperatures, which further threaten agricultural productivity and food security[22]. These issues are coupled with the disease infestations in crops and livestock attributed to climate change. Over 50% of households in these areas reported new crop diseases, which pose emerging threats to local agriculture as a result of changing climate conditions. [23].

Farmers face several additional interconnected challenges, primarily due to poor rural infrastructure and market dynamics. Inadequate roads and transportation networks hamper their access to markets, resulting in high transportation costs and reduced competitiveness. Limited access to real-time market information makes it difficult for farmers to make informed decisions about what and when to sell, stifling their negotiation with intermediaries and often leading to lower prices and loss of income. Dependence on intermediaries further reduces their share of the final market price, as these intermediaries exploit the lack of direct market access to, and information to, offer lower farmgate prices, reducing farmers' profit margins.

Post-harvest loss is another significant issue, with inadequate storage facilities leading to spoilage, pest infestations, and damage from weather conditions. Traditional storage methods are often insufficient to preserve the quality of produce, and the lack of modern processing and handling facilities exacerbates quality deterioration and reduces market value. Poor transportation infrastructure contributes to these losses, as long distances and rough roads lead to damage and spoilage, particularly for perishable goods.

Furthermore, inadequate extension services mean that farmers often lack knowledge of modern agricultural practices, pest management, and post-harvest technologies[24]. Moreover, farmers face constraints related to quality control and certification. They often lack access to training and resources needed to maintain quality standards, limiting their ability to meet market requirements, especially for export markets. The limited availability of certification processes, such as organic or fair-trade certifications, restricts their access to markets that could offer premium prices. Financial constraints also play a significant role, with limited access to affordable credit preventing farmers from investing in improved inputs, technology, and infrastructure. The lack of crop insurance options increases their vulnerability to climate-related risks and disasters.

Nepal's 2015-2035 Agriculture Development Strategy (ADS) aims to transform the agricultural sector by enhancing food security, reducing poverty, and promoting inclusive economic development, with emphasis on pregnant and breastfeeding women, youth, Janajatis, Dalits, and inhabitants of disadvantaged regions (i.e. Karnali). The ADS focuses on increasing agricultural productivity sustainably, strengthening farmers' rights, and bolstering rural incomes. Since women make up the majority of the labour force in the agricultural sector, the ADS indicates that social sustainability will depend on increasing women and other marginalized groups power and capacity to control decisions about the use of resources (i.e. land ownership and co-ownership); recognizing women as independent farmers; ensuring their access to means of production; enhancing their leadership, and improving women's positions in different structures of government, non-government entities, and the private sector (i.e. micro, small medium agro-

[22] National Climate Change Survey 2022
[23] ibid
[24] Statistical Information in Nepalese Agriculture 2021/22

enterprises).

The ADS emphasizes the need for climate-resilient agricultural practices and better access to markets and quality inputs for farmers. The strategy seeks to address challenges through governance reforms, productivity enhancements, and the promotion of commercial and competitive agriculture while ensuring social and geographic inclusiveness. Despite efforts to modernize agriculture and improve food security through various programs, the initial five years of implementation revealed that significant improvements are still needed to meet the set objectives effectively. Key focus areas include livelihoods, food security, and inclusiveness, with an emphasis on developing agro-enterprises, especially those led by women, youth, and other marginalized groups, to drive economic growth in rural areas. To support these goals, the ADS includes measures for disaster preparedness, agricultural insurance, and improved infrastructure, such as irrigation systems and rural electrification, to enhance the resilience and productivity of the agricultural sector. The achievements of the first five years show that there are still many interventions needed, especially in livelihoods, food security, and inclusiveness.

Table 1**:** Agriculture Development Strategy indicators and achievements adopted from Agriculture Development Strategy (ADS) Joint Sector Review (JSR) Fourth Annual Report, 2022, Ministry of Agriculture and Livestock Development.

ADS vision component	Indicators	Baseline (2015)	Mid-term Targets (2025)	Achievements (2021/22)
Self-reliance	Food grains self-sufficiency	16% food grain trade deficit	0-5% additional export business	14.59% food trade loss NPR 79.59 billion import NPR 5.4 million export (2022 July 15)
Sustainability	Land productivity/ha	US$ 3,278	US$ 5,339	US$ 3,510.21
Livelihood	Agricultural GDP (US$)	835	1,268	931
	Rural Poverty (%)	24.3	15	18.7
Agricultural growth	Average GDP growth (%)	2.23	5	2.3%
Food and Nutrition Security	Food-based poverty (%)	27.6	13	23.1 in 2011 10% of the households were severely food insecure and 22% were moderately insecure in 2016
	Nutrition stunting-below 5 years child (%)	37.4	20	25%
	Underweight below 5-year child (%)	30.1	13	19%
	Wasting below 5-year child (%)	11.3	2	8%
	BMI-women of reproductive age having 18.5% or less.	18.1	13	16 in FY 2017/18
Inclusiveness	Women or jointly owned agricultural land (%)	16	30	19.7% in FY 2020/21
	Farmers' access to agricultural services and programmes (%)	18.2	26	20% in FY 2017/18. No estimation was found thereafter

Source: ADS - Joint Sector Review (JSR), Fourth Annual Report, 2022

Aligned with the goals of the ADS, effective watershed management in Nepal's mountainous regions is essential due to their unique geography and climate. Degraded land relies on proper watershed management to sustain agricultural productivity, prevent flooding, and combat deforestation. Community forestry programs have successfully engaged local communities in forest management, leading to increased forest cover and soil stabilization. Soil and water conservation techniques, such as terraces, ponds, and check dams, help reduce erosion and

improve groundwater recharge. Integrated watershed management projects promote sustainable practices and enhance climate resilience. However, rapid urbanization and infrastructure development, along with deforestation for agriculture and fuelwood, continue to challenge these efforts. Climate change exacerbates these issues, altering precipitation and temperatures, and increasing flood, landslide, and water scarcity risks. Poor watershed management can lead to sedimentation, raising flood risks in downstream areas.

Nepal is a food-deficit country with about 4.4 million food-insecure people. According to the World Food Programme's (WFP) 2024 Food Security Survey in Nepal, nearly 14.2% of people are moderately food-insecure and 1% are severely food-insecure. Especially in the Karnali Province, 18.2% of the population is in a state of moderate or severe food insecurity, with 3.9 % experiencing severe food insecurity making it the most food insecure among the 7 provinces. In Sudurpashchim Province, 20.5% are moderately food insecure and 1.3% are severely food insecure[25]. Rural residents more often experience moderate or severe food insecurity (16%) than urban residents (11%)[26]. Furthermore, WFP data shows that approximately 36% of Nepali children under 5 are stunted, 27% are underweight, and 10% suffer from wasting due to acute malnutrition[27]. Efforts to improve food security in Nepal include the implementation of the ADS and related programs aimed at modernizing agriculture and increasing food production. However, these initiatives face significant hurdles due to the dependence on monsoon rains, which affect nearly two-thirds of farming activities. The introduction of climate-resilient crop varieties and better irrigation practices are seen as vital steps towards adapting to these challenges. Despite these efforts, the overall food security situation remains precarious, and substantial improvements are needed to ensure that all segments of the population have reliable access to sufficient food. According to a report published by the Government of Nepal (GoN)/National Planning Commission (NPC) and WFP: Consolidated Livelihood Exercise for Analyzing Resilience (CLEAR) in 2024[28], Nepal's livelihood profile is highly diverse and dynamic, influenced by its varied topography, climate, socio-cultural diversity, and limited resources. Households typically depend on multiple livelihood sources, engaging in small-scale, subsistence, rainfed agriculture due to small landholdings and diverse soil types within short distances.

[25] World Food Programme, Food Security Survey of Nepal 2024
[26] Ministry of Health and Population, USAID, New ERA, 2022 Nepal Demographic and Health Survey (NDHS)
[27] https://www.wfp.org/countries/nepal#:~:text=One%20quarter%20of%20Nepal's%20population,wasting%20due%20to%20acute%20malnutrition.
[28] https://www.npc.gov.np/content/6476/consolidated-livelihood-exercise-for-analysing-resilience/

Figure 2: Livelihood zones of Nepal, NPC-WFP CLEAR Report, 2024.

Climate Change Vulnerability, Impacts and Risks

Temperature trend:

Recent climate studies in Nepal continue to show significant changes affecting the country's temperature and precipitation patterns, impacting water security and hydrological systems. The annual maximum temperature in Nepal has been increasing at a rate of approximately 0.056°C per year from 1971 to 2014, with more noticeable warming trends in the high mountains and high Himalayan regions. This has led to an increase in warm days and nights, while cool days have been decreasing across the country. The Climate Division (Climate Analysis Section) of the Department of Hydrology and Meteorology (DHM) under the Ministry of Energy, Water Resource and Irrigation (MoWERI) states in its Nepal Climate Summary 2023 that the country received 91.2% of the normal precipitation which was about 1570.4 mm. The average maximum temperature was 27.9°C (0.6°C above than normal annual maximum temperature) and the average minimum temperature of Nepal was 15.6°C (0.5°C above than normal annual minimum temperature) in 2023.

Precipitation trend:

As highlighted above, issues related to changing snow patterns, including in areas bordering Nepal, could significantly affect the country. According to the Observed Climate Trend Analysis of Nepal published by DHM, precipitation trends observed in 2017 continue to be reflected in recent data up to 2024, showing similar patterns across Nepal's regions. However, there has been a noted decrease in the annual average precipitation, particularly in the high mountain and high Himalayan districts, though specific annual figures are not provided in the latest summaries. Seasonal variations present a complex picture: during the monsoon season, precipitation is on the rise in the mid and central high mountain areas, suggesting a shift toward wetter conditions.

Conversely, both the post-monsoon and winter seasons have experienced significant decreases in precipitation across all regions, with the western mid-mountain region being particularly affected.

These trends illustrate the multifaceted impact of climate change on Nepal, affecting water resources and agriculture and highlighting the need for adaptive strategies for future sustainability. Changing snow patterns, particularly in the bordering areas of Nepal, further complicate the situation. Reduced snowfall and altered melt cycles can lead to reduced river flow and water availability in the dry season, impacting both agricultural practices and hydroelectric power generation. Increased glacial melt can contribute to more frequent and severe flooding during the monsoon season. This dynamic exacerbates the challenges faced by the Terai and Siwalik regions, where watershed management is already critical. Addressing these issues requires integrated land and water management strategies to ensure that both highland and lowland areas can adapt to the changing climate and maintain their agricultural productivity and overall environmental health.

Current and future impacts of climate change on livelihood, food security and nutrition:

The changing climate conditions exacerbate Nepal's vulnerability, particularly affecting agriculture due to increased frequency and intensity of climate-induced hazards like floods, landslides, drought, forest fires, and epidemics. In Nepal, floods impact around 71% of the population, making it the most devastating hazard, followed by landslides, which affect 9.5%[29]. The Karnali and Sudurpashchim provinces face high risk of landslides and floods[30]. These hazards predominantly affect the poor and marginalized populations, the vulnerable groups[31], who suffer most due to limited access to resources and information. Climate change impacts are disproportionately experienced by women and marginalized populations due to longstanding social, economic, cultural, and political inequalities. These disparities often result in limited access to the resources and capacities required to address climate challenges effectively. Furthermore, intersecting factors such as age, class, race, ability, and sexuality further influence the extent of vulnerability. Socially and geographically excluded groups, including Dalits, Indigenous Peoples (IPs), persons with disabilities, children, and the elderly, are particularly susceptible to the adverse effects of climate change[32].

The trends of extreme climate events and natural disasters pose significant threats to food security and economic stability. Despite efforts to tackle these challenges, there remains a pressing need for more targeted strategies to reduce vulnerability and enhance adaptive capacity. The recent Vulnerability and Risk Assessment Report of Nepal[33] indicated that both temperature and precipitation are projected to rise continuously through 2100, with estimated increases of between 1.3°C to 3.58°C and 7.9% to 12.1%, respectively. Climate change is causing a marked reduction in water resources in the hills and mountains of Karnali and Sudurpashchim provinces. Notably, more than 90% of the households have observed a significant decrease in water levels in water sources such as *Padhero/Kuwa*[34]/spring/stone spout. Furthermore, over 70% of households have observed a complete drying up of these water sources over the past 25 years. Nearly all households reported a decrease in the flow of rivulets and streams during this period. Insufficient rainfall and prolonged drought are the main reason identified for these changes.

[29] Ministry of Forest and Environment, 2021, The Vulnerability and Risk Assessment Report
[30] Enhancing Disaster related Statistics in Nepal: Mapping Population Exposure to Flood and Landslide Hazards.
[31] Vulnerable groups/communities include poor, unemployed and food insecure households headed by single women, persons with disabilities, and the households having older people, persons with disabilities, pregnant and breastfeeding mothers, malnourished children etc, and socially marginalized households.
[32] MoFE. (2021). Vulnerability and Risk Assessment and Identifying Adaptation Options in GESI, Livelihood and Socio-Economic Sector in Nepal. Ministry of Forests and Environment, Government of Nepal. Kathmandu, Nepal.
[33] Ministry of Forest and Environment, 2021, The Vulnerability and Risk Assessment Report
[34] *Pandhero and kuwa:* Local terminology for natural spring. It is the source of drinking water at remote Nepal.

These changes are expected to affect food security. Communities, mainly farmers, are experiencing limited accessibility to climate services for end-users and a lack of awareness of what kind of information is available, where it can be found and how it can be used in adaptation planning decisions. Climate projections for Nepal indicate rising temperatures throughout the 21st century, with varying changes in precipitation—ranging from a 10% decrease to a 30% increase. The GoN/NPC-WFP CLEAR Report 2024 highlights significant climate changes, including warming across all seasons, particularly at higher altitudes, leading to earlier glacier melt and altered river flow. Precipitation patterns will vary, with wetter monsoons and drier winters, increasing the frequency and severity of extreme events such as floods, landslides, droughts, storms, heatwaves, and Glacial Lake Outburst Floods (GLOFs). These changes will impact agriculture, water resources, and infrastructure, particularly in Karnali and Sudurpashchim provinces, which are highly vulnerable to climate impacts due to reliance on climate-sensitive sectors like rainfed agriculture, livestock rearing, and forest resources. This underscores the urgent need for effective climate adaptation measures in these areas.

The GoN/NPC-WFP CLEAR Report 2024 also outlines three scenarios for Nepal's climate in the 2050s, based on regionally downscaled global models under two greenhouse gas concentration pathways (RCP4.5 and RCP8.5). These scenarios are not exact predictions but offer a range of possible outcomes to help understand potential impacts on future food security. They also account for natural variability, which will continue to cause variations in temperature and precipitation annually.

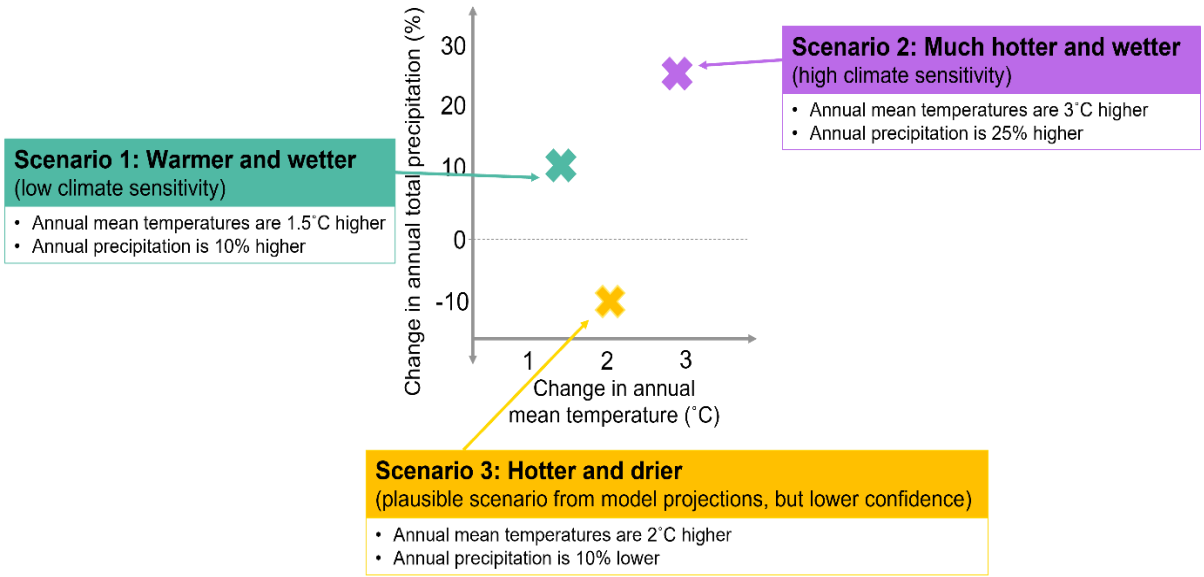


Figure 3: The three scenarios of future climate change for the 2050s considered in CLEAR report.

The heightened risk of drought, landslides, decreased availability of water resources, shifts in plant species distribution and increased risk of local extinctions, loss of soil moisture, land degradation, and increasing risks of insect pests is significant in the hills and mountainous districts of both Provinces. These challenges demand the development and adoption of new resistant crop varieties and a focus on increasing biodiversity and crop diversification. Karnali and Sudurpaschim provinces are highly sensitive to the effects of climate change as the livelihood of people is dependent on highly climate-sensitive sectors such as rainfed agriculture, livestock

rearing, and the collection and sale of medicinal herbs from forests[35].

Evidence of impacts of climate change/risks in the context of food security, agriculture, and livelihood:

Climate change and extreme weather events are negatively impacting agricultural production and food security, further deteriorating food and nutrition insecurity and exacerbating poverty in priority areas. Increasing biodiversity and promoting crop diversification are crucial strategies to enhance resilience against climate change, improve soil health, and reduce dependency on a limited number of crops.

In 2020, climatic events had a direct economic cost for agriculture equivalent to almost 2% of GDP[36]. Rising temperatures and erratic rainfall affect crop growth, while prolonged droughts result in productivity losses and crop failures. Given the changing snow and rainfall patterns, heavy rains contribute to erosion, landslides, and floods, resulting in the loss of productive land, soil degradation, and reduced fertility. Altered precipitation patterns, including increased rainfall during the monsoon season and decreased snowfall during winter, exacerbate these issues.

The shift from snow to rain accelerates snow melt, leading to earlier peak flows in rivers and increasing the risk of flooding. These changes undermine soil stability, promote erosion, and heighten the occurrence of landslides, further compromising the productivity and fertility of agricultural lands. These effects are compounded when droughts are followed by high rainfall. Climate impacts increase the burden on women involved in agriculture. Climate change affects women through the degradation of assets (in Nepal, women own only 20 % of land and other agricultural assets), particularly as male migration leaves women increasingly responsible for agricultural production[37]. In addition, smallholder farmers, have poor access to technology, inputs, and credit.

Approximately 50% of households in Nepal own less than 0.5 hectares of land, and 80% of households own less than one hectare, 29% have no land at all, whereas 7% of households own 31% of the land[38]. Livestock accounts for over one-quarter of agricultural GDP. Livestock is the main source of food, nutrition, and cash income for about 70% of households engaged in agriculture. Women provide much of the labour required for livestock management[39]. The ADS (2015–2035) highlights the role of livestock in agricultural and economic growth, poverty reduction, and improved food security. Climate impacts affect livestock productivity through pasture degradation, heat stress, and changes in reproductive behaviour.

Agriculture in Nepal contributes nearly half of the country's greenhouse gas (GHG) emissions, with the livestock subsector responsible for approximately 75% of these emissions. Between 1990 and 2014, agricultural GHG emissions increased by 38%, largely due to factors like unproductive livestock, high mortality rates, and inefficient feeding and manure management practices. In 2024, climate vulnerability continues to cost the agriculture sector around 1.5-2% of Nepal's GDP annually. Climate impacts such as rising temperatures, erratic precipitation, and increased pest and disease incidences negatively affect crop growth, while reduced soil moisture leads to prolonged droughts, resulting in productivity losses and crop failures. There is an urgent need to

[35] NPC and WFP CLEAR Report, 2024 (https://www.npc.gov.np/content/6476/consolidated-livelihood-exercise-for-analysing-resilience/)
[36] GoN, National Accounts Statistics of Nepal (2021–22).
[37] Poudyal B.R. et al 2019, Gender Integration in Climate Change and Agricultural Policies: The Case of Nepal.
[38] Nepal, R. M. 2019. "Factors Affecting Inclusive Development in Nepal." *Nepalese Journal of Development and Rural Studies* 16: 66–74.
[39] Government of Nepal, Ministry of Agricultural Development. 2015. "Agriculture Development Strategy (ADS) 2015–2035."

enhance farmers' capacities to adapt to natural disasters, mitigate climate impacts, and strengthen food system resilience during crises. Nepal's cereal production relies heavily on an increasingly unpredictable monsoon season, while the livestock sector faces challenges from climate change, including pasture degradation, disease risks, heat stress, and altered reproductive behaviours, all of which reduce productivity. The agriculture sector presents significant potential to drive inclusive socio-economic development and enhance resilience to climate change and other shocks. Strengthening agricultural returns can improve rural livelihoods and stimulate investment, given agriculture's substantial role in employment. However, while the government's policies aim to integrate green, resilient, and inclusive strategies, challenges remain in implementation and oversight.

The ADS 2015-2035 aims to build a self-reliant, sustainable, competitive, and inclusive agricultural sector by improving governance, increasing productivity, and promoting commercialization and competitiveness. The government is committed to advancing climate-smart agriculture, focusing on improving productivity, enhancing adaptation and resilience, and reducing GHG emissions. Additionally, the National Adaptation Plan (NAP) emphasizes the need for strategic investments to transform the agriculture sector and improve food security.

According to the GoN/NPC-WFP CLEAR Report 2024, the resilience of livelihoods across Nepal remains varied, as presented in Figure 4. The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management[40].

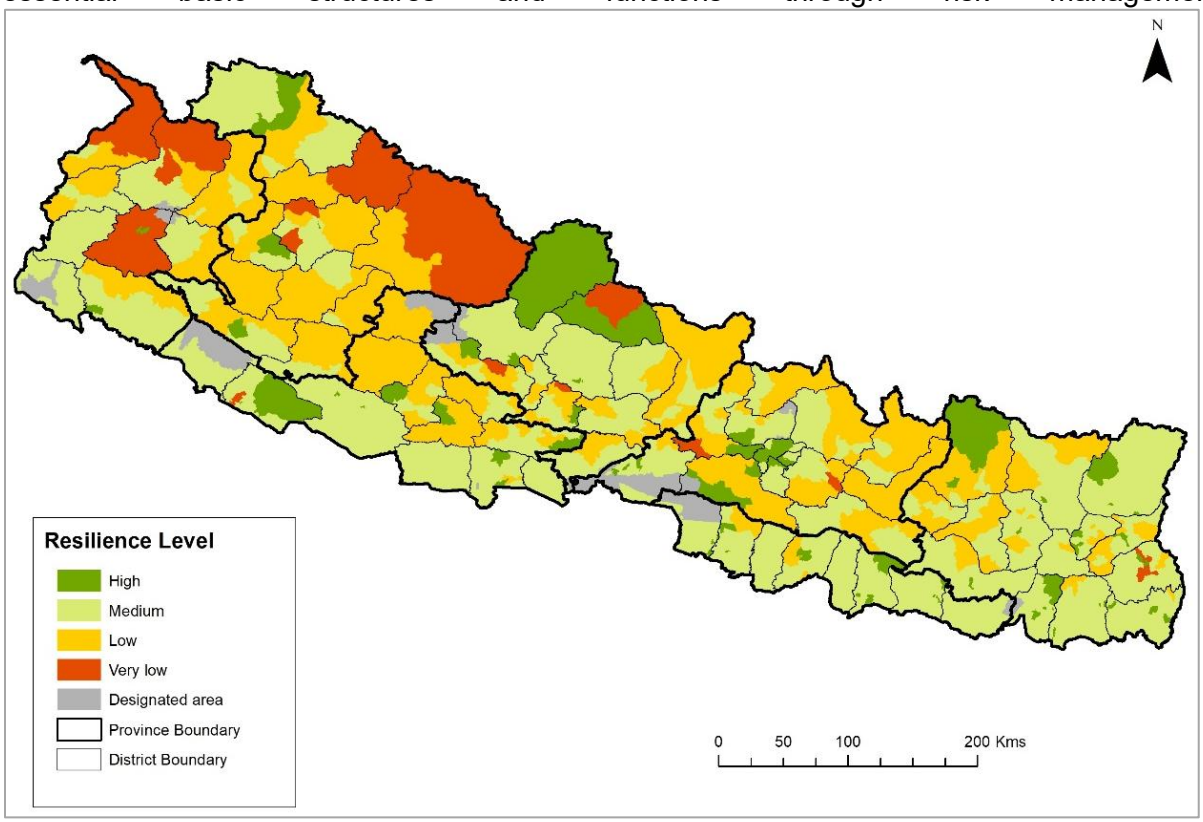


Figure 4: Resilience of the main livelihoods of Nepal, GoN/NPC-WFP CLEAR Report 2024

[40] Definition: Resilience | UNDRR

A summary of the key impacts of climate change/risks on food security, agriculture, and livelihood enhancement is provided below:

Table 2: Summary of climate risks and impacts on food security, agriculture, and livelihoods

Climate hazards and projected trends	**Risks and impacts**	**Contributing factors**	**Core Problem and Why**
Both temperature and precipitation are projected to rise continually leading to changes in precipitation distribution/erratic rainfall, and drought (all seasons are warmer than the current climate, temperature increases are higher at higher altitudes, and glaciers start to melt earlier in the season, affecting river flow seasonality and increasing snowpack melt, the pre-monsoon, monsoon, and post-monsoon seasons are wetter or drier, and winter is drier.[41]) and increased evapotranspiration	Decreased availability of water resources, loss of soil moisture, and nutrients due to moisture loss leading to lower incomes, crop loss causing food insecurity, infestation of pest and diseases in the agriculture and livestock sector leading to reduction of agriculture and livestock production and productivity, prolonged dry spells increase the risk of forest fire. Heat stress, wetter monsoon season, risk of landslide and soil erosion in highlands; riverside-cutting and sedimentation in riverbanks and valleys; dry winters with more frequent and intense droughts, making winter crops difficult to cultivate..	Pre-existing high multi-dimensional poverty, chronic food insecurity, low levels of human capital development, geographic remoteness and, challenges in accessibility, ecological fragility, youth outmigration. Discriminatory practices / exclusion, and socio-economic marginalization in accessing and using productive and natural resources, affecting women and other marginalized groups. Human actions, particularly land-use changes and deforestation, contribute to erratic rainfall and drought. Lack of rural enterprises, limited employment opportunities, limited capacity to invest in productive enterprises, low community engagement. “Chaupadi”, students dropping out of school, child marriage. Lack of awareness among communities and local governments of tangible impacts from climate change to economies, agricultural productivity, and rural-based livelihoods.	Communities in poverty and vulnerable to climate change face limited adaptive capacity and skills. Inadequate adaptation measures, such as insufficient water management infrastructure, further constrain agricultural water availability, particularly in mid-hill regions. The impacts of climate change vary across localities and are compounded by intersectional dimensions of oppression, including caste, sex, gender identity, age, disability, ethnicity, and socio-economic status. Structural discrimination, socio-cultural and gender norms, and harmful practices—such as unequal domestic and care work burdens and gender-based violence—further restrict access to resources, rights, and means of production. Rural communities have limited capacity to design and implement adaptive and resilient practices, including the development and application of tools and sustainable production methods that enhance diversification and resilience against climate change. . Last-mile communities have limited access to climate information and lack the capacity to use it for effective adaptation planning. There is also inadequate access to women-friendly and labour-saving tools and practices. Additionally, communities and local governments have low capacity in adaptation planning, and women and marginalized groups often have limited participation in decision-making processes related to local climate ada*pt*ation.
Heavy rainfall events are expected to be more intense than in the current climate, more precipitation falls as rain rather than snow and increased frequency, duration, and intensity of floods/landslides, droughts, storms, heatwaves etc including increased risk of GLOFs in high hills[42].	Increased soil erosion, loss of crops, property and human life, loss of agricultural land, drying up of water resources and decreasing surface water flow and groundwater recharge affecting water availability and access, reduced water discharge in rivers thus affecting irrigation and energy production and damage of productive/protective infrastructure.		

Facing overlapping crises like climate risks, unemployment and economic downturns, GoN and its development partners including bilateral donors, International Financial Institutions (IFIs), and UN agencies have adopted the Green, Resilient, and Inclusive Development (GRID) framework.

[41] NPC-WFP CLEAR report, 2024 - Nepal (climate change scenario projections/modelling).
[42] ibid

This strategic approach marks a shift from reactive responses to proactive, sustainable, and inclusive recovery strategies for long-term growth and climate action. Officially embraced with the Kathmandu Declaration on September 23, 2021, Nepal is the first country to formally implement the GRID strategy. This initiative focuses on transformative priorities that leverage past successes to alter Nepal's development path, especially as the country prepares for its 2026 transition to Middle Income Country status. The four main priorities of GRID include: creating jobs through sustainable natural resources, developing infrastructure for clean power and resilient services, enhancing environmental cleanliness for urban areas and tourism, and reducing vulnerabilities to build greater resilience. This collective approach aims to shift Nepal towards a green economy beneficial for all citizens.

Project Area and Target Groups

Project location targeting:

The project will be implemented in 2 hilly and mountain districts of Sudurpaschim province (Bajhang, and Bajura) and 3 districts of Karnali province (Humla, Kalikot, and Mugu). According to the Vulnerability and Risk Assessment (VRA) and Identifying Adaptation Options report of the MoFE in 2021, the proposed districts are highly vulnerable and sensitive to the effects of climate change and have a low adaptive capacity and face food insecurity. The report further shows that the capacity to cope or adapt is limited due to socio-economic and technological limitations. All the mid-hills and mountain districts of Karnali and Sudurpashchim Provinces are extremely vulnerable to severe weather events. Similarly, vulnerability in sectors such as agriculture, forestry, health, water resources, energy, transportation, and tourism is significant, yet inadequately reflected in Gender Equality, and Social Inclusion (GESI) indicators of VRA, with women and marginalized groups bearing disproportionate impacts. This project targets districts and local governments in the Karnali River basin watershed for integrated watershed management. While risks from floods and fires are low, drought, landslides, water scarcity, soil erosion, and depletion of water resources remain significant threats, particularly in mountainous areas.These provinces are highly vulnerable due to livelihoods dependent on climate-sensitive sectors. Climate change impacts, including altered rainfall patterns, water shortages, and increased pest and disease threats, have exacerbated food insecurity and poverty. Based on the Ministry of Forests and Environment's (MoFE) 2021 Vulnerability and Risk Assessment, 11 Local Governments (LGs) across five (5) districts have been selected for targeted interventions.

WFP implemented a previous AF-funded project entitled, Adapting to Climate-Induced Threats to Food Production and Food Security in the Karnali region of Nepal (CAFS-Karnali), from 2018 to 2022 in seven (7) LGs of Kalikot, Mugu and Jumla Districts from Karnali Province. GoN intends to scale up the best practices and successful interventions of the CAFS-Karnali project in other geographic areas which are equally impacted by climate change, are highly vulnerable to climate change risks and have low adaptive capacity. Hence, separate geographic areas within the Karnali and Sudurpaschim provinces have been targeted for the proposed project. The proposed project will build on the best practices and lessons learned from the CAFS-Karnali project and include additional context-specific and need-based interventions that are identified through community consultation. The project particularly focuses on gender equality and social inclusion, as women and socially excluded groups are disproportionately affected by climate risks.

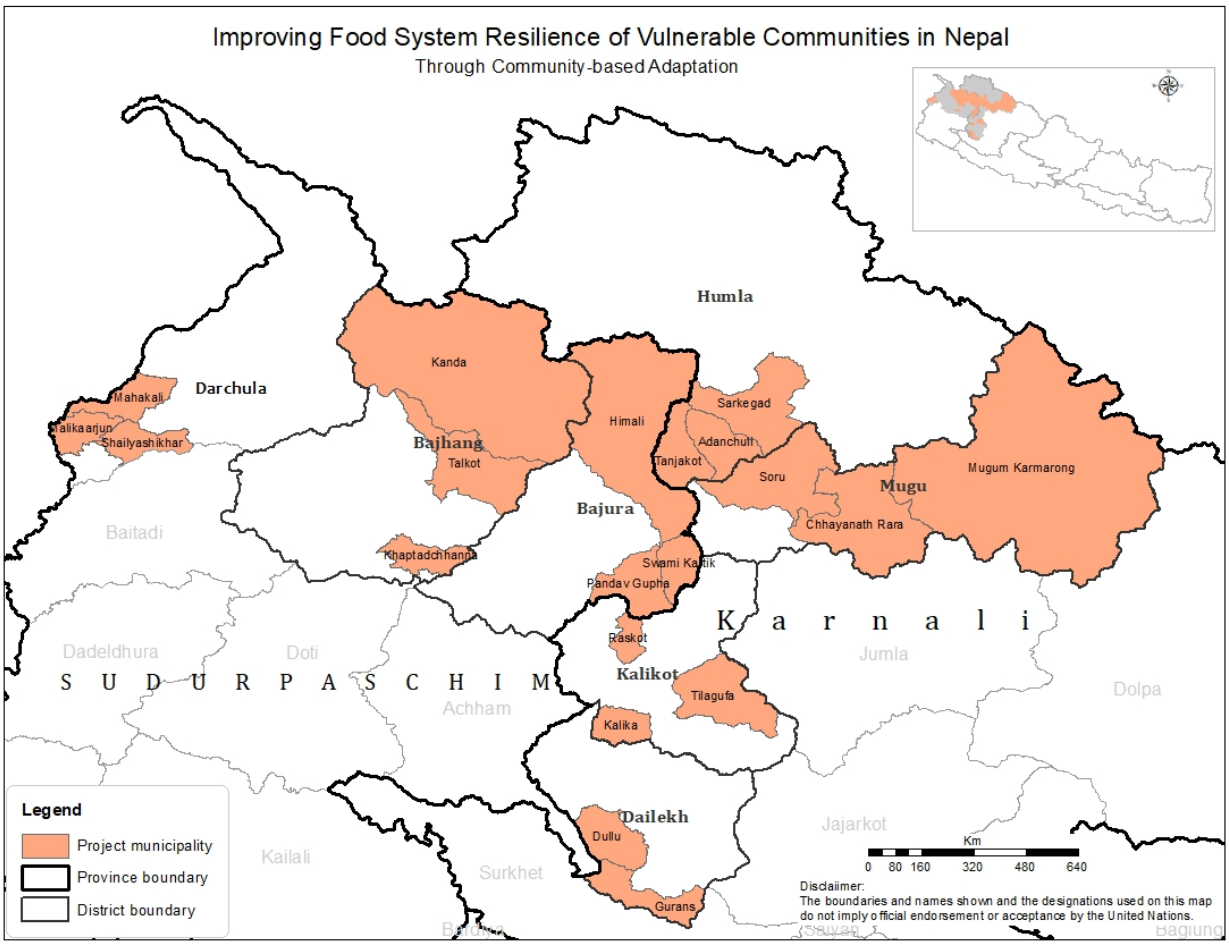


Figure 5: Project location map

Project beneficiaries targeting:

An estimated 12,100 households (with a total of 60,654 population/household members comprising at least 60% women) from 11 Local Governments across five (5) districts of Karnali and Sudur-Paschim provinces will directly benefit from the project. Building on the success of the community-based targeting approach, as recognized by the Decentralized Evaluation of the Adaptation Fund-funded first project, a similar strategy will be employed and further reinforced. WFP primarily focused on improving food security and resilience to climate and other shocks by 2030 in vulnerable communities in remote food-insecure areas to improve food security and access to infrastructure thus strengthening their adaptability to climate change. This approach will continue to utilize community-based targeting to identify economically poor, socially marginalized, and highly climate-vulnerable households, with priority given to women-headed households, households having vulnerable members, including persons with disabilities, to uphold the principle of leaving no one behind (LNOB). Hence, the project will apply a targeting approach focused on poor and vulnerable households. In doing so, it will apply a social inclusion approach that ensures that the target group members can be fully involved in and benefit from project activities, in a way that does not exclude other members of the communities who may act as leaders, early adopters, or risk takers whose involvement may also benefit the targeted communities and poor and vulnerable groups within these communities. There will be a particular emphasis on women's participation.

Vulnerable communities were provided with special facilities to ensure their meaningful participation during project design phase, and it continues while implementation. Separate meetings and group discussions were organized to capture their voices and needs. The project will also focus on both de-jure and de-facto female-headed households with special priority given to poor and vulnerable female-headed households.

Using the Participatory Rural Appraisal (PRA) tools, the vulnerability assessment, and households (HHs) classification will be carried out to identify climate-vulnerable HHs for project activities based on well-being and climate vulnerability ranking. The PRA tool will be used to collect information on each HH focusing on (i) income level and wealth ranking; (ii) landholding and type of agriculture practised; (iii) exposure of homestead to climate change-related hazards/disasters; (iv) number of income sources per household; (v) female-headed households and ethnic/caste minorities; (vi) health of head-of-households; and (vii) number of minor members per household. The households will then be grouped into four categories based on their composite scores which include (a) highly vulnerable HHs as V1 (b) vulnerable HHs as V2 (c) moderately vulnerable as V3 and (d) less vulnerable HHs as V4. The categorization will help the project target the right beneficiaries with the right interventions they need based on their vulnerability status. The project will mainly target the HHs from V1 and V2 categories and few additional HHs from V3 can also be targeted. Women will form two-thirds, approximately 60 %, of the project beneficiaries and socio-economically marginalized households i.e., Dalits, Janajatis, persons with disabilities, and the poor, will be specifically targeted for project inclusion (25 % target). Among the targeted households, detail beneficiary selection criteria are presented in the project/programme justification section, table 7. The estimation of the project beneficiaries is as below:

Table 3: Beneficiary numbers

District	Local Government	Total HHs	Total population	Men (%)	Women (%)	Others (%)	0-17 years (%)	18-59 years (%)	60+ years (%)	Persons with disabilities (%)	Population of Indigenous people (%)
Kalikot	Tilagupha Municipality	1,500	7,703	49.4	50.6	0	48.2	43.8	8	2.4	0.15
	Shubhakalika Rural Municipality	1,300	6,483	48.2	51.8	0	51.1	40.3	8.6	3.2	5.09
Mugu	Chhayanath Rara Municipality	1,400	6,937	50.5	49.5	0	47.3	46.4	6.3	2.6	1.27
	Mugum Karmarong Rural Municipality	700	3,174	47.6	52.4	0	40.4	48.1	11.5	2	63.18
	Soru Rural Municipality	1,000	4,950	49.2	50.80	0	37.9	51.9	10.2	2.4	1.16
Humla	Adanchuli Rural Municipality	800	4,468	48.9	51.1	0	51.4	41	7.6	2.9	7.58
	Tajakot Rural Municipality	600	3,156	49.3	50.7	0	47.8	44.2	8	2.8	0.41
Bajura	Himali Rural Municipality	1,000	5,160	49.4	50.6	0	47.2	43.6	9.2	4.5	3.03
	Swamikartik Rural Municipality	1,200	6,389	48.9	51.1	0	49.2	41.6	9.2	2.5	0.63
Bajhang	Khapthad Chhanna Rural Municipality	1,500	6,489	44.9	55.1	0	45.8	41	13.2	3.2	0.30

	Talkot Rural Municipality	1,100	5,745	46.6	53.4	0	49.9	39.9	10.2	1.9	0.98
Total	**11**	**12,100**	**60,654**								

Table 4: Socio-Economic and Land Resource Profile of the project location

District	Local Government	Total Area (sq.km)	Agricultural Land (ha)	Irrigated Land (ha)	Forest Cover (sq.km)	HHs with DWS	HHs with Electricity	HHs with access to agri-insurance
Kalikot	Tilagupha Municipality	262.6	1,550.5	930.6	170.8	491	572	935
Kalikot	Shubhakalika RM	97.3	821.0	397.7	75.3	491	751	88
Mugu	Chhayanath Rara Municipality	480.7	2,215.2	200.6	319.3	1,330	3,185	674
Mugu	Soru RM	365.8	891.1	264.5	268.3	171	173	21
Mugu	Mugum Karmarong RM	2,107.0	617.2	1.5	411.5	75	472	0
Humla	Adanchuli RM	150.6	659.8	229.8	106.9	108	19	7
Humla	Tajakot RM	180.0	361.3	69.7	121.7	117	46	6
Bajura	Himali RM	830.3	502.3	44.7	405.0	245	320	11
Bajura	Swamikartik RM	110.5	558.9	193.3	62.2	715	1,886	15
Bajhang	Khapthad Chhanna RM	113.5	440.0	257.6	74.0	334	3,133	23
Bajhang	Talkot RM	335.3	458.5	80.5	258.1	1,227	1,621	0
Total		**5,033.6**	**9,075.7**	**2,670.6**	**2,273.1**	**5,304**	**12,178**	**1,780**

The table below presents a summary of climate change observations, current coping methods, and expected future risks to livelihoods in Karnali, based on the GoN/NPC-WFP CLEAR 2024 report, field-level observations, and discussions with communities during the implementation of CAFS-Karnali and other projects and field consultations carried out for the preparation of the proposed project.

Table 5: summary of climate change observation, future risks and coping mechanism

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 Delayed sowing in irrigated fields at the far end of the channel	Scarcity of water for drinking and agriculture; increase in health problems; increased workload for women and children; children staying away from school. Crop failure
Higher temperatures 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, and barter fodder for manure. Less land under cultivation, more food purchases	Increased risk of malnutrition and drudgery Dependence on cash income; food insecurity

Warmer winters and significantly less snowfall	Increased incidence of pests and diseases Change 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

The differences in how communities adapt to the impacts of climate change are often influenced by their specific local conditions, availability and access to resources and information and socio-cultural and gender norms. While some communities might have access to alternative income sources that help buffer the impacts of agricultural disruptions, others may not have such options available or accessible. This variance highlights the need for tailored approaches in addressing the challenges faced by each community. However, despite these differences, there is a common thread that runs through all communities: concerns about water scarcity, the viability of traditional agriculture, and the health and economic risks posed by climate change. These shared concerns underscore a universal need for support in adapting to these changes through technology, training and sectoral policy coherence. Understanding these dynamics is crucial for tailoring interventions that not only address the immediate impacts of climate change but also align with the long-term goals and capacities of the communities. This approach ensures that support is both effective and sustainable, addressing the root causes of vulnerability while promoting resilience.

Project/Programme Objectives:

The project aims to address key gaps and barriers to adaptation and resilience identified below:

- Due to increasing temperatures, altered precipitation patterns, moisture loss, increased severity and frequency of climate extremes, there is increased loss of production, productivity, and nutrients, shifts in altitudinal zones, flowering and fruiting times, species composition, and cropping pattern; infestation by pest and diseases in the agriculture and livestock sector; loss of agricultural land and forests; drying up of water resources; and damage to infrastructure and assets, within the watershed areas under the Karnali river basin in Karnali and Sudurpashchim Province.
- Limited access to climate information for last-mile services. Communities require capacity to utilize climate risk information for adaptation planning and taking risk-informed decision-making and early action for farming practices.
- Limited technical and financial capacity for communities to adapt existing livelihood practices in agriculture and livestock.
- Limited technical and financial capacity to restore and conserve ecosystems.
- Lack of awareness and capacity among communities and local governments on existing and potential impacts of climate change scenarios, to carry out early action and adaptation planning.
- Limited capacity of rural communities to design and implement risk-informed adaptive practices and resilient livelihood strategies.
- Limited capacity in the development and implementation of tools and sustainable production practices to contribute to diversification and improvement of the resilience of production systems to climate change effects.
- Limited capacity of local governments to formulate climate-sensitive and climate-specific policies on climate change adaptation (CCA), particularly in the absence of adequate support for Local Adaptation Plans of Action (LAPAs).

The project aims to enhance the resilience of 12,100 smallholder farming households (around 60,654 people) in the selected watershed areas under the Karnali River basin by promoting community-based adaptation activities, climate-resilient agricultural practices, and access to reliable early warning and climate information, adopting an integrated watershed management and integrated risk management approach. Utilizing a community-based Adaptation (CbA) approach, the project focuses on community-led adaptation tailored to local priorities, knowledge, and capacities. This strategy specifically targets reducing vulnerabilities among female-headed and marginalized households, empowering them to effectively manage climate change impacts. The project is designed to enhance resilience and environmental sustainability through several core objectives.

Figure 6: Community based adaptation approach

Source: King S., 2009. Poverty Environment and Climate Change Network (PECCN) for CARE International

The specific objective of the project is to "Enhance community resilience through community-based adaptation, integrated risk management, resilient natural resource management and strengthened government and community capacities for risk-informed locally led adaptation." To achieve the project objective, the project will be guided by the following roadmap/framework which is based on the community-based adaptation approach:

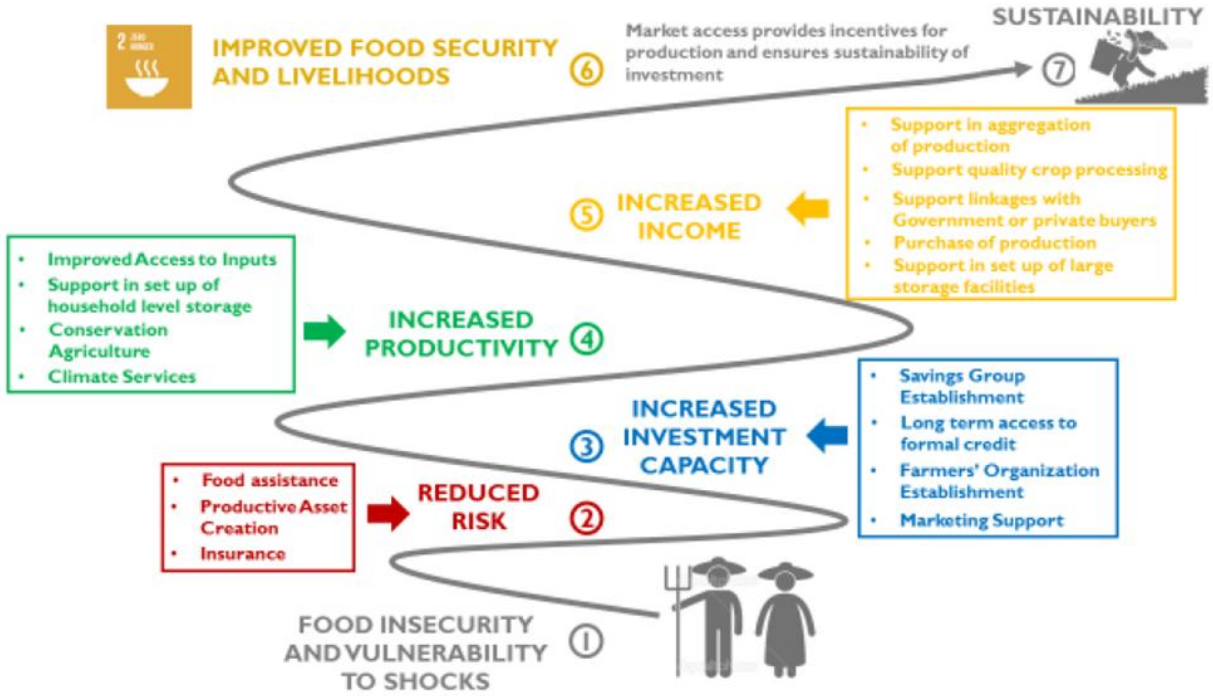


Figure 7. Roadmap for building integrated resilience against food insecurity and vulnerability to shocks. Source: Developed by WFP

Project/Programme Components and Financing:

Table 6: Programme components and financing overview

Project/Programme Components	Expected Outcomes	Expected concrete outputs	Amount (US$)
Component 1: Community and ecosystem resilience: Enhancing community-based participatory climate resilient strategies for adapted livelihoods and sustainable natural resource management.	Outcome 1: Enhanced resilience of livelihoods of the vulnerable communities through adapting to climate change sustainably.	Output 1.1: Climate-resilient agroforestry and livelihood improvement actions implemented for coping with extreme events through climate-resilient agriculture, climate-smart villages, and other nature-based solutions.	2,077,275
		Output 1.2: Capacity of smallholder farmers and value chain actors increased for market readiness and access, reducing post-harvest losses, value addition and managing the marketable surplus by applying climate-resilient practices.	1,230,565
	Outcome 2: Strengthened eco-resilience through nature-based protective and productive climate-smart community assets.	Output 2.1: Restoration-based actions implemented through rehabilitation of the degraded areas (agriculture and forest), climate-resilient, productive, protective, and green recovery assets to enhance communities' resilience to shocks and stressors.	3,332,205
Component *2:* Climate governance and system strengthening: Capacity/system strengthening for improved last-mile climate information services and local adaptation planning to enable early/adapted actions and informed disaster management of climate risks/disasters.	Outcome 3: Strengthened climate governance and institutional system (policies, plans, institutions, and services) to sustain climate adaptation and disaster risk management actions.	Output 3.1: Capacities of key government institutions, local stakeholders and last-mile communities increased to co-produce, deliver/disseminate, and utilize tailored climate information services.	673,245
		Output 3.2: Capacities of local governments and communities increased to plan and implement adaptation solutions and effective climate-induced disaster risk reduction and management through climate-risk-informed local adaptation planning instruments (e.g., Local Adaptation Plan of Action - LAPA) and climate-hazard/disaster preparedness planning and response.	759,800
		Output 3.3: Knowledge and learning on community-based climate adaptation for vulnerable groups, including women, indigenous peoples, and marginalized communities enhanced.	268,000
6. Project/Programme Execution cost (9.5%)			875,500

7. Total Project/Programme Cost	9,216,590
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable) (8.5%)	783,410
Amount of Financing Requested (US$)	**10,000,000**

Projected Calendar :

Milestones	Expected Dates
Start of Project/Programme Implementation	June 2026
Mid-term Review (if planned)	June 2028
Project/Programme Closing	June 2031
Terminal Evaluation	March 2032

PART II: PROJECT/PROGRAMME JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

This project aims to address climate change-related threats to agriculture, food security, nutrition, and livelihoods in Karnali and Sudurpashchim Provinces. These areas are noted for their fragile ecosystems, climate-sensitive hill and mountain landscapes and have been severely impacted by hydrometeorological disasters such as floods, landslides, and droughts, particularly affecting the agriculture and food security sectors. Communities in these regions depend heavily on agriculture, yet face limited employment opportunities, poor infrastructure, and widespread nutritional challenges. These challenges are intensified by changing climatic conditions, including temperature increases and more frequent extreme events. With few resources and limited capacity to adapt, local populations often rely on traditional knowledge to cope. Environmental degradation, driven by deforestation, difficult terrain, and shrinking livelihood options, is becoming a major concern. However, the specific issue of land degradation and its close connection to climate impacts and food insecurity have not received sufficient attention. To ensure the project's focus on watershed management and nature-based solutions is effective, it is essential to recognize and address the broader problem of environmental decline.

WFP has experience in executing and implementing the CAFS-Karnali project in Mugu, Kalikot and Jumla in the past, introducing innovative ideas to adapt to climate change impacts. The project's remarkable results were sustained through several key measures: funding allocation coordinated with local governments to ensure continued utilization, repair, and maintenance of the developed infrastructure; management training for communities to handle minor and routine repairs; and the handover of the infrastructure to user committees in the presence of local government representatives. This process was further reinforced by deploying highly competent and accountable district-based local service providers, enhancing collaboration and partnerships with local authorities. Building on this experience and leveraging WFP's insights from previous

successful projects, the project wishes to tackle climate vulnerability in targeted areas by introducing community-based adaptation measures to reduce climate risk and enhance resilience. It aims to establish a platform that promotes active participation and benefits for all local inhabitants, including the most vulnerable, thereby creating an equitable food system within the region. The project's theory of change is included as Annex 1 to this proposal.

Box 1: Gender and inclusion considerations:

The project will focus on integrating gender equality, disability, and social inclusion (GEDSI) in its interventions. The project will understand and analyze community dynamics, empower women and marginalized groups, including the indigenous peoples (IPs), and foster social cohesion. WFP conducted Free, Prior and Informed Consent (FPIC) consultations with five indigenous communities or the Indigenous Nationalities[43]: Byasi, Bhote, Mugal (Karmarong), Tamang, and Magar residing in the project areas, as part of the project design phase. IPs primarily rely on subsistence agriculture and livestock, with informal wage labour and seasonal migration as coping strategies. Youth report limited local economic opportunities. Women carry the primary responsibility of agricultural production and animal husbandry, yet decision-making power over land and water resources is predominantly male driven. Agricultural productivity is constrained by limited access to quality seeds, lack of irrigation, limited access to finance to procure improved seeds, and challenging and degraded topography. Unsustainable practices such as open grazing contribute to land degradation and loss of biodiversity. Communities also face limited access to safe drinking water and poor transport infrastructure.

IPs demonstrated a strong awareness of climate change impacts, noting erratic rainfall, delayed monsoons, unseasonal heavy rains, rising temperatures, and shorter winters, as well as anthropogenic pressures like deforestation and pollution. The IPs requested support broadly categorized under natural resources management and agriculture-based livelihoods. Key priorities include sustainable management of forests and Non-Timber Forest Products (NTFPs), land and water resource restoration, integration of Traditional Ecological Knowledge (TEK), and access to clean energy. In agriculture and livelihoods, they emphasized promoting climate-resilient crops, climate-smart agricultural practices, homestead gardening, vocational training for youth and women, strengthening Self-Help Groups (SHGs), and improving market access and financial inclusion. Timely climate information was highlighted as critical across all sectors. The detailed FPIC document is provided in Annex -6. The project proposal has incorporated the recommendations of the IPs.

The key strategies to address GEDSI issues are informed by the detailed gender assessment and consultation with the IPs and FPIC process with the IPs, include:

- Empowerment: project aims to empower women, girls, and marginalized groups by addressing their specific needs and vulnerabilities across three interdependent pathways: (i) increasing access to financial, physical, and natural resources; (ii) improving human capital by providing knowledge, skills, and information; and (iii) strengthening social and political capital through better access to social networks, decision-making structures, market systems, and governance institutions, including safety nets.
- Access: the project will ensure equal access to resources by engaging women and marginalized groups in participatory community outreach and sensitization processes to avoid gender bias and social exclusion. Gender and social inclusion modules will be integrated into all training activities. The roles of different social groups in disaster resilience will be analyzed and addressed, focusing on barriers such as access to information, resources, mobility constraints, and influence within associations.
- Mitigating Sexual Exploitation, Abuse, and Gender-Based Violence (SGBV): the project will mitigate SGBV risks through identifying risks and mitigation measures; designing activities that reduce exposure to violence; addressing potential indirect violence (e.g. family disagreements over women's participation); and monitoring gender sensitivity and establishing complaints and feedback mechanism for participants.
- Participation in project activities through a gender analysis of men's and women's time, the facilitation of understanding and sharing of time-use data between men and women, create a space for dialogue on shared responsibilities and adjusting daily routines, and introduce time-saving technologies like multi-use water systems to reduce women's workload and exposure to violence.
- Social and cultural cohesion: In the face of climate change, social and cultural cohesion among Indigenous Peoples in Nepal serves as both a strength and a community having social vulnerability (inequality, poverty, marginalization, lack of access to resources and political structure, historical injustices, unequal social hierarchies, weak social, physical, economic and symbolic capital, weak agency and non-recognition of cultural ecology). Preserving their cultural practices, supporting community solidarity, and integrating Indigenous knowledge into climate adaptation strategies are essential not only for their survival but also for fostering equitable and sustainable resilience at a national level.
- Community Feedback Mechanisms (CFM)/Grievance Redress Mechanism (GRM): The project will implement the CFM/GRM administered by respective Local Governments in addition to WFP's existing CFM to allow beneficiaries and stakeholders to raise concerns and complaints and ensure a conflict-sensitive approach and "Do No Harm" principle for equitable benefit distribution. A protection risk assessment will be conducted to manage risks. The detail of the mechanism is explained in the annex 8 as a grievance mechanism of the project.

Building on the climate rationale and the theory of change of this project, the project's two programmatic components, three outcomes and five outputs are described below.

Component 1: Community and ecosystem resilience: Enhancing community-based

[43] In Nepal, the Indigenous Peoples are legally known as Indigenous Nationalities as per the National Foundation for Development of Indigenous Nationalities (NFDIN) Act 2002.

participatory climate resilient strategies for adapted livelihoods and sustainable natural resource management.

All five districts exhibit a limited adaptive capacity and exceptionally high vulnerability (0.9-1)[44] to the impacts of climate change. These districts are predominantly remote, with most of their populations relying heavily on agriculture and natural resources for livelihoods. Karnali Province boasts 287,962 hectares of cultivable land, while Sudurpashchim Province has 367,649 hectares. However, merely 10% of Karnali's cultivable land has access to irrigation, with 53.3% (15.8% in Bajhang and Bajura) having irrigation facilities in Sudurpashchim Province. The remaining cultivable land relies solely on seasonal irrigation[45]. Karnali and Sudurpashchim provinces possess 44% and 56.9% of forest land, respectively.

Considering this context, the project aims to enhance the resilience of rural communities, strengthen environmental sustainability, and promote integrated and sustainable natural resources management. This will be achieved by implementing an integrated model for rural climate change adaptation (including the initiation of up to 11 new climate-smart villages), by supporting community-led ecosystem restoration using nature-based solutions and promoting renewable and improved energy solutions.

Component 1 addresses the critical issue of land degradation in the target regions. By implementing sustainable land management techniques, reforestation, and soil conservation methods, and by introducing sustainable agricultural practices, the project aims to restore degraded lands, enhance soil fertility, and improve water retention. This component also focuses on strengthening the adaptive capacity of vulnerable populations and their natural environment to climate-induced disasters through ecosystem restoration and sustainable natural resource management practices through an integrated watershed management approach. It aims to enhance communities' resilience by developing gender and disability-inclusive resilient assets and support livelihood diversification by enhancing their access to markets.

These efforts will not only mitigate the adverse effects of climate change but also enhance agricultural productivity and food security in targeted areas and foster a conducive environment for the creation of new employment opportunities across the agricultural value chain. To further consolidate food security and nutrition co-benefits, the project wishes to raise awareness on nutrition among smallholder farmers in marginalized communities through farmer field schools and nutrition field schools. These schools will promote nutrition-sensitive agriculture and drive social and behavioural change, focusing on the production, consumption, and marketing of local nutrient-dense foods. This component also tackles short-term food insecurity through cash transfers, supporting asset creation participants to ensure they meet their immediate food security needs.

To further enhance communities' resilience, this component also promotes risk transfer and risk mitigation strategies. According to the Final Evaluation Report of the Adaptation Fund's CAFS-Karnali project[46], past interventions around access to climate risk insurance and agro-advisory services had successfully contributed to transfer and reduce part of the climate risk faced by

[44] Government of Nepal: Vulnerability and Risk Assessment and Identifying Adaption Options, 2021

[45] Karnali Province Planning Commission, 2020, Nepal Provincial Planning: Baseline and Strategic Options for Karnali Province; and MoLMAC, 2018. Interprovincial dependency for agricultural development. Ministry of Agriculture, Land Management and Cooperative. Department of Agriculture, Retrieved from https://nepalindata.com/resource/interprovincial-dependency-agricultural-development/.

[46] https://www.adaptation-fund.org/project/adapting-to-climate-induced-threats-to-food-production-and-food-security-in-the-karnali-region-of-nepal-3/

rural communities. Building on this experience, the project will enhance farmers' access to climate risk insurance, promote the establishment of community banks and raise awareness on the benefits of community-based lending systems and village savings.

This component consists of two outcomes and three outputs as detailed below:

Outcome 1: Enhanced resilience of livelihoods of the vulnerable communities through adapting to climate change sustainably

Under this outcome, the project will support communities that are vulnerable to climate-induced shocks to enhance the resilience of their agricultural production and to diversify their livelihoods. This outcome will promote climate-smart agriculture practices and increase the smallholder farmers' capacity to produce and aggregate marketable surpluses, reduce post-harvest losses, access markets and other financial services for long-term climate adaptation results feeding into resilience gains overall. An integrated approach will be adopted, notably through the support to local governments to establish climate-smart villages.

Output 1.1: Climate-resilient agroforestry and livelihood improvement actions implemented enabling women and marginalized groups to cope with extreme events through climate-resilient agriculture, climate-smart villages, and other nature-based solutions.

This output aims to improve the resilience and food security of rural communities by introducing climate-resilient agricultural practices, by promoting agroforestry, and by enhancing rural farmers' access to agro-advisories, climate insurance and financial services. It also seeks to integrate these interventions by expanding the Climate-Smart Villages approach, successfully implemented in the previous Adaptation Fund project, to further incorporate integrated climate-smart practices into local governance.

Key activities under this output are:

1.1.1 Climate-resilient agriculture: Conduct 200 farmer climate/nutrition field schools, benefiting 5,000 smallholder farmers. These schools will promote climate-resilient and agricultural technologies and practices, including conservation agriculture, and familiarize farmers with climate-resilient cropping practices such as minimum tillage, improve water use efficiency (non-conventional irrigation technologies, such as drip and sprinkle irrigation), conserving soil moisture, intercropping systems, varietal selection for resilient alternate crops, precision nutrient management etc. This activity will benefit women from diverse social groups (60% of total farmers targeted) and will be implemented ensuring meaningful and equal participation of women and vulnerable groups, including persons with disabilities and IPs. The project will also facilitate farmers' access and use of agro-advisories produced under output 3.1 and disseminate through the facilitator during FFS. The ultimate use of the climate advisory will not be limited to the targeted beneficiaries of this output. However, the wider population of the community can be benefitted from the agro-advisories.

1.1.2 Climate-resilient agroforestry practices, seed banks and nurseries: Establish 200 agroforestry enterprises (around 20 in each LG), mostly led by women (at least 80% of 4,000 targeted households) from marginalized groups and indigenous peoples. Activities will include the production and commercialization of medicinal and aromatic herbs, local seed production, and the establishment and management of nurseries for the fruits and NTFP saplings. Establish and manage 10 community seed banks to conserve local drought-resilient crop varieties. These seed banks will support agroforestry and climate-

resilient agriculture by supplying seeds and seedlings to farmers participating in Farmer FFS and CSVs. The initiative will facilitate the conservation of indigenous crop varieties, preserve their genetic diversity, and contribute to increased income and food availability. The seed banks will serve as buffer stock, ensuring the long-term preservation of local crop varieties. This activity seeks to address the concern raised during the community consultation and FPIC process that women take the lead in forest resources management, yet their work is not acknowledged from the community. Indigenous peoples are stewards of biodiversity, using traditional agroforestry to sustainably manage land and support food security. This activity fosters their knowledge on preserving native species, enhancing soil health, and climate resilience. This activity aims to support them in starting small enterprises that allow them to diversify their income, while promoting agroforestry in the targeted communities.

1.1.3 Financial inclusion: Enhance access to finance for locally viable businesses, including through the promotion of 200 Village Savings and Lending Groups (VSLGs) (around 20 per LG). VSLGs enable members, particularly women and youth, to enhance their financial stability and self-reliance by generating savings and providing access to credit for non-farming income-generating activities. The beneficiaries targeted by activities 1.1.1, 1.1.2 and 2.1.1 will benefit from this activity.

1.1.4 Awareness raising on climate insurance: Raise awareness among all the targeted farmer beneficiaries and facilitate access to agricultural insurance, including weather-index-based insurance and livestock insurance products that are already being provided by the Government of Nepal and private sector service providers. It is estimated that approximately 2,000 individual farmer HHs that are already engaged on the above activities will be targeted by this activity. The weather-index-based insurance will be linked to drought and other climate-related risks in line with the Crop and Livestock Insurance Premium Subsidy Guideline, 2024.

1.1.5 Climate-Smart Villages (CSV): Based on the past experience from the CAFS Karnali project, one village from each LG will be selected in close coordination with LG. In total, 11 Climate-Smart Villages will be established among the targeted local government, scaling up the national initiative that had already been successfully implemented in the previous Adaptation Fund project to further incorporate climate-smart practices into local governance. The framework presented below (fig. 6) will be adopted to establish the climate smart villages[47].

This project will use seven smartness criteria for designing interventions in CSVs. The smartness criteria have been developed and verified by previous projects – globally by The CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS), and 'Piloting and Scaling up Climate-Smart Village in Nepal' project by LI-BIRD (a Nepali NGO). The government of Nepal has also developed a guideline for Climate-Smart Village in Nepal. Those seven criteria are:

- Weather smart: being able to minimize loss during unfavorable weather and maximize gains in favorable weather (output 3.1).
- Water smart: being able to conserve water (creating time and place value of water), reduce water use, increase water efficiency, productivity, and multiple uses (output 2.1).
- Nutrient/carbon smart: increasing carbon sequestration, promoting soil conservation and carbon storage, reducing emission through tillage, improving nutrient management, increasing nutrient use efficiency, and rationing use of nitrogenous fertilizers (output 1.1).
- Biodiversity smart: being able to assess and use the local/resilient biodiversity resource, support in conservation and use of biodiversity (output 1.1 and 2.1).

[47] The components of the figure are referred from the "Best practices and lesson learned report of AF- funded CAFS Karnali project".

- Knowledge smart: being able to access usable knowledge of climate change and climate risks, knowledge of adaptation options; and knowing the source information which may be required in future (outputs 3.1, 3.2 and 3.3).
- Energy/labour smart: being able to increase energy use efficiency, and promote renewable energy in farming, reduce energy/labor consumption (output 2.1).
- Market/policy smart: being able to have greater access to financial, technical, or marketing facilities contributing to increased adaptive capacity (outputs 1.1, 1.2 and 2.1)

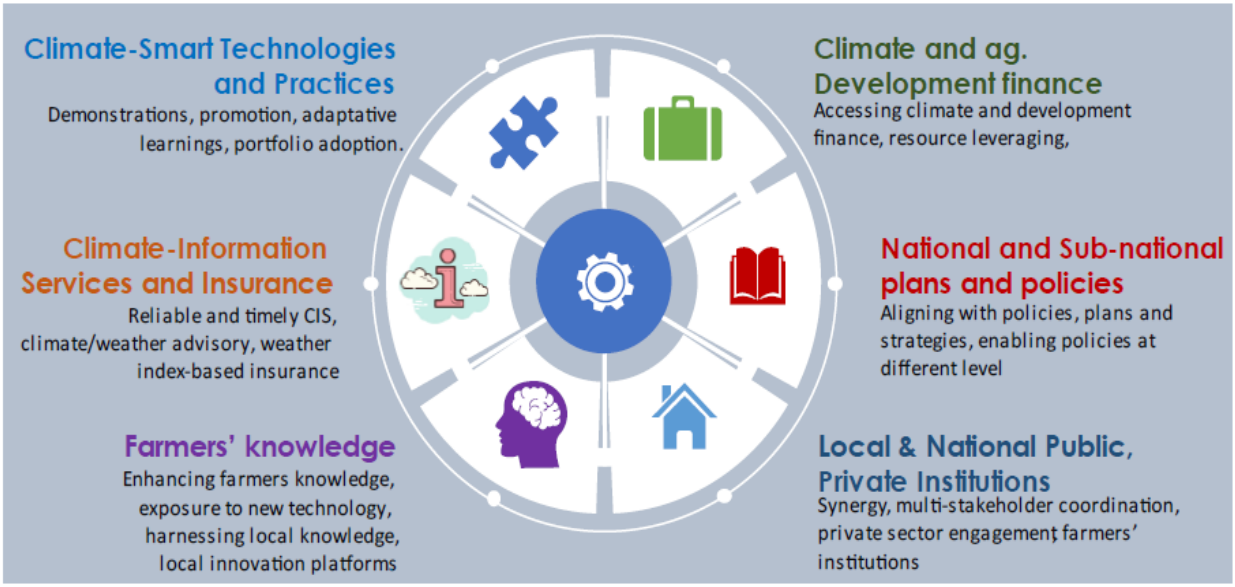


Figure 8: Components of Climate Smart Village

Output 1.2: Smallholder farmers and value chain actors have increased capacity for market readiness and access, reducing post-harvest losses, value addition and managing the marketable surplus by applying climate-resilient practices.

This output aims to boost smallholder farmers' adaptive capacity by reducing post-harvest losses in key agricultural value chains - including maize, millet, buckwheat, barley, wheat, beans, vegetables and rice - improving farmers' market access and diversifying their livelihoods. Interventions will focus on improving agricultural storage, processing, marketing, and training in value addition and packaging. In Karnali and Sudurpashchim Provinces, technologies like solar dryers will enhance local product processing. Special training for marginalized groups will focus on non-timber forest products and small agroforestry enterprises. Financial literacy training will improve farmers' investment capabilities. The project also seeks to promote the consumption of nutritious locally grown products within targeted schools, notably by linking producers with the home-grown school feeding program implemented in the selected local government.

To strengthen agricultural value chains and improve rural livelihoods, public-private partnerships will be leveraged to invest in local processing and storage facilities including community storage units, seed banks and nursery (established under output 1.1) which enable value addition and market expansion for farmers. Seed banks and nursey will supply produce to private sector buyers, while storage facilities will be operationalized in close collaboration with private actors. NTFPs and produce from on-farm businesses will be marketed through linkages with local suppliers, and the HGSF value chain will be developed in coordination with private partners. Smallholder vegetable and fruit producers will be connected directly with local market suppliers,

improving market access, income, and value chain participation. These investments will be complemented by targeted training programmes that build capacity in post-harvest handling, storage, and quality control, while modern technologies will be introduced to minimize losses and improve efficiency. To further protect farmers from climate and market risks, crop insurance schemes promoted under Output 1.1 will offer financial safeguards, encouraging greater resilience and long-term sustainability in agricultural production.

Key activities under this output are:

1.2.1 Post-harvest solutions: Train 5,000 smallholder farmers (the same targeted by output 1.1) on post-harvest management, including modern storage systems, value-added processing, and effective marketing. Provide inputs such as improved on-farm storage equipment for grains (like metal drums, hermetic bags, etc.) drying and processing tools, solar dryer for fruits and NTFPs and 4 solar-powered community storage facilities for safe collective storage for perishable goods. Community storage facilities will be set up in each LG or shared by 2-3 LGs, based on local needs. This activity will allow farmers to diversify their income and thus increase their resilience to climate and market shocks and improve local food availability and nutrition.

1.2.2 Community food banks: Establish 10 community food banks to support food storage during lean periods. These food banks will act as buffer stocks for communities during lean seasons, while seed banks will provide access to climate-resilient local seeds and support community enterprises. Approximately 600 households will benefit from cash-for-work payments (40 days at local wage rates) for constructing seed banks, food banks, and storage facilities. The cold storage facilities will be used for perishable goods, whereas the food banks will store staple foods for lean periods or disasters. The project will also support local governments in developing operational guidelines for the food banks. These banks will stock surplus food during harvest periods, which can later be distributed during disasters or climate shocks, used for Food-for-Assets (FFA) activities, or sold at subsidized rates. Food will be sourced through purchase, donation, or credit. Home-grown school feeding: Support 5,000 smallholder farmers, including 60% women (the same farmers targeted by outputs 1.1.1 and 1.2.2) to aggregate into farmer groups/cooperatives and sell their produce to the national mid-day school feeding programme implemented in the community schools. The agricultural training and inputs provided under output 1.1 and the support extended on post-harvest losses under activity 1.2.1 will enable farmers to enhance their agriculture production and productivity, thanks also to enhanced access to local climate-resilient seeds through the seed banks established under activity 1.1.2. These interventions will also increase the nutritional value and quality of their food baskets. By linking these farmers with the national school feeding programme, the project will contribute to create a reliable market for farmers, therefore creating a stable source of income and increasing their adaptive capacity to climate-related shocks and stressors. At the same time, this activity will contribute to enhancing schoolchildren’s access to nutritional and local meals. In addition to local schools, farmers will also be linked with other structured markets with required market information and marketing skills.

1.2.3 Capacity strengthening: Organize training to demonstrate and promote post-harvest management technologies. Conduct training for marginalized groups on non-timber forest products and small agroforestry businesses. Deliver financial literacy training to improve farmers' investment capabilities. At least 5,000 farmer HHs engaged in the activity 1.1.1. to 1.2.3 to benefit from this activity.

Outcome 2: Strengthened eco-resilience through nature-based protective and productive climate-smart community assets.

Climate change impacts, notably increasingly erratic rainfall and snowfall, exacerbate environmental degradation and threaten local biodiversity. Ensuring ecosystem resilience is, therefore, a crucial prerequisite underpinning sustainable and resilient livelihoods for rural communities in Nepal. Outcome 2 aims to address vulnerabilities identified during the community consultations by tackling ecosystem degradation and supporting the creation of community assets to restore local ecosystems through nature-based solutions. The project will enhance the adaptive capacity of local communities by restoring natural habitats, improving soil health, and increasing vegetation cover, contributing to climate regulation and water retention. Interventions include reforestation, wetland restoration, and sustainable land management practices. Additionally, the project will engage communities in conservation efforts, ensuring that restored ecosystems provide benefits such as improved water quality, enhanced biodiversity, and stronger natural barriers against extreme weather events. The project will integrate these efforts with other sectors like agriculture, tourism, forestry, water, sanitation, health, and education. Engaging women and marginalized groups including IPs in small-scale agriculture and forest-based enterprises (Output 1.2) will enable sustainable resource use, improving their living standards and adaptive capacity while reducing pressure on natural resources. By supporting the creation of assets, communities will be able to enhance the resilience of their communities while maintaining food and livelihood security due to cash-based transfers, without which food-insecure households would struggle to engage in adaptation activities, prioritizing short-term coping strategies.

Output 2.1: Restoration-based actions implemented through rehabilitation of the degraded areas (agriculture and forest), climate-resilient, productive, protective, and green recovery assets to enhance women and vulnerable communities' resilience to shocks and stressors.

Smallholder farmers in target areas face severe food insecurity due to climate hazards. Men often migrate to work and earn money during the lean season, leaving women and children vulnerable. To retain the men workforce within the community, the project will support local communities to build physical and natural assets engaging local workforce, such as irrigation canals and land terracing, through a cash or food-for-assets scheme, thus ensuring their food security for 3-4 months during droughts. The project will also promote sustainable management of water resources, improving water harvesting systems and irrigation techniques.

Key activities under this output are:

2.1.1 Food Assistance for Assets (FFA) Plus: Create 90 climate-resilient, productive and protective assets through the FFA Plus modality, with dual objectives of enabling food-insecure and vulnerable households to meet their basic food security and nutrition needs while creating resilient and productive community assets for long-term resilience. The direct beneficiaries of this activity (wage employment recipients) will be socio-economically marginalized groups, and more than 60% beneficiaries will be women. An estimated 5,600 targeted HHs will receive cash transfers for their engagement in community assets creation work as wages through bank accounts, average of 40 days of employment as per the local wage rate. These 5,600 HHs include some of the beneficiaries from output 1.1 and 1.2 and additional households who are landless and from the marginalized group and poor. As described below in the Environmental and Social Safeguards (ESS) and Environmental and Social Management Plan (ESMP) (Part II-section K and Part III-section C), a list of proposed assets has been identified during the community consultations. These are still unidentified sub-projects (USPs), as the specific asset that will be built in each LG and ward will be identified and prioritized through a community-based participatory planning process at the beginning of project

implementation. The assets, which will be specified for each LG at the time of annual planning, include but not limited to small nature-based structures such as reforestation, contour planting, vegetative strips, and live fascines, green belts, watershed management, and spring shed conservation to reduce landslides and flood risks. In particular:

- ✓ Restoration of degraded land: Around 120 ha of degraded land will be restored enhancing biodiversity, soil moisture, carbon sequestration, and water availability through community water holes linked to pipes systems. Forest resource management will be supported through community-based afforestation, fruit farming, establishment of community nurseries (output 1.1), etc. The biodiversity of vulnerable forests and grassland ecosystems will be restored through the removal and re-use (productive) of invasive species.
- ✓ Irrigation and water harvesting systems: efficient technology will be introduced, such as drip and sprinkler irrigation, and wastewater reuse in kitchen gardens. Where feasible, irrigation-based multi-use water services (MuS) will be integrated with water mills, micro-hydropower, and drinking water systems. These interventions will support 3,000 households to irrigate approximately 600 ha of farmland, increasing crop production, intensity and year-round water availability. Output 1.1 will also introduce non-conventional irrigation solutions (drip and sprinkler) in upper mountain and hill areas where surface irrigation is not feasible integrating with the farmers field school.
- ✓ Access to drinking water: The project will construct drinking water systems to provide communities with safe drinking water and meet other household water needs. An estimated 700 households will benefit through a 'one household, one tap' system. This will reduce the burden of water collection on women, enabling them to dedicate more time to education, care work, and economic activities. In addition, greywater from households will be reused for irrigation purposes.

2.1.2 Promotion of renewable energy solutions technology: The project will promote renewable energy solutions such as improved water mills, micro-hydro rehabilitation, solar lifting, solar lighting, improved cooking stoves mainly targeting women. These interventions are expected to benefit 1800 households, with 1100 improved cooking stoves reaching 100% women beneficiaries. These interventions will reduce firewood use by 30–40% (~0.8 tons/HH/year), cut indoor air pollution by 60–70%, and save women 2–3 hours daily, thereby easing pressure on forests and improving health outcomes. Rehabilitation or construction of micro-hydro systems will also support agro-processing, lighting, refrigeration, and post-harvest value addition, enhancing the productivity of agricultural productivity, food security and resilience as envisioned under output 1.1 and 1.2.

Component 2: Climate governance and system strengthening: Capacity/system strengthening for improved last-mile climate information services to enable early/adapted actions and risk-informed climate-induced disaster management.

This project has a strong emphasis on the capacity strengthening of the provincial and local government agencies through improved last-mile climate information services to enable decision-making and risk-informed and risk-induced disaster management. The project envisages building climate risk-informed and climate risk-responsive policies, plans, and local livelihoods through developing the capacity of the key government institutions, local stakeholders and last-mile communities to co-produce, access, understand and use tailored climate services information. These climate services will be useful during the preparation of the climate risk-informed, responsive, inclusive and gender transformative LAPAs and climate risk/disaster preparedness and response.

The project also builds the capacity of local governments to design tools, technologies, and manuals to effectively deliver the climate-resilient, labour-intensive, small productive infrastructures and technologies envisaged by this project. The project will also support system strengthening in defining and establishing roles of key actors including public and private to work in partnership with local government, various user groups, and community people, for the design and delivery of services and activities for climate change response, building organizational capacities and leadership strengthening, particularly in areas of increasing farmers access to agriculture insurances, the extension of climate-smart agriculture practices and technologies, value addition, and market linkage.

Outcome 3: Strengthened climate governance and institutional system (policies, plans, institutions, and services) to sustain climate adaptation and disaster risk management actions. This outcome seeks to enhance the capacity of provincial and local governments by improving climate change management information systems, advancing local adaptation planning, and ensuring the production and dissemination of climate-related information to last-mile users. It also focuses on developing knowledge management products that support informed decision-making. By reinforcing policies and systems at the subnational level, this outcome will serve as a catalyst for achieving broader program objectives and amplifying the impact of other outcomes.

Output 3.1: Capacities of key government institutions, local stakeholders and last-mile communities increased to co-produce, deliver/disseminate, and utilize tailored climate information services.

The project enhances the capacity of the Ministry of Industry, Tourism, Forests, and Environment (MoITFE) and 11 local governments in Karnali and Sudurpashchim Provinces to produce and disseminate climate information. Building on the results achieved during the first AF-funded project, thanks to which a Provincial Climate Change Management Information Systems (PCCMIS) was established in Karnali province, this project will create a PCCMIS in Sudurpashchim, while updating the one in Karnali. PCCMISs facilitate risk-informed decision making and adaptation planning at the provincial level. Moreover, the project will support the 11 targeted LGs to establish a Municipal Agrometeorological Information Centre (MAIC) in each municipality. MAICs facilitate the production of locally tailored agro-advisories, supporting LGs and farmers' decision-making on a seasonal basis. This output will be implemented in close synergy with Output 3.2 to ensure strong integration with LAPAs, as well as adequate training of government staff and farmers, fostering collaboration for continuous improvement. An online portal and alternative dissemination methods will be established to ensure that all stakeholders have access vital climate information, building agricultural resilience and supporting sustainable development.

Key activities under this output are:

3.1.1. Support the provincial governments to establish a PCCMIS in Sudurpashchim province and operationalize the previously established PCCMIS in Karnali province. By establishing provincial level information systems, the project envisions the host provincial ministry (MoITFE) as a one stop climate solution for Karnali and Sudurpashchim provinces, centralizing data, resources, and services to support climate resilience and informed decision making.

3.1.2. Support targeted Local Governments in setting up 11 MAICs (one in each LG) to enable the production and dissemination of last-mile climate services to farmers, scaling up the innovative initiative piloted through the CAFS-Karnali project. The technical service provider will support to establish and operationalize the PCCMIS and MAICs with provision of required equipment, training, manual and guidelines.

3.1.3. Strengthen the capacity of 22 technical staff from 11 local governments to produce and disseminate tailored climate services for the end users.
3.1.4. Disseminate the climate advisories, agro-meteorological, early warning, forecasting, etc for the training delivered under the outcome 1 to the beneficiaries through various localized channels of communication i.e. SMS, FM radio, website, social media, public notices etc.

Output 3.2: Capacities of local governments and communities strengthened to plan and implement adaptation solutions and effective climate-induced disaster risk reduction and management through climate-risk-informed and inclusive local adaptation planning instruments (e.g., LAPA) and climate risk/disaster preparedness planning and response.

Building on the activities under Output 3.1, Output 3.2 focuses on strengthening governance and decision-making capacities of Nepal's local governments and communities by integrating climate adaptation and disaster risk reduction strategies into their planning processes. It builds on the LAPA framework introduced by GoN in 2019, aiming to enhance local capacity through training, awareness programmes, and inclusive participation with special focus on women, marginalized and under-privileged groups, and people living with disabilities. Through this output, activities under outcomes 1 and 2 will be mainstreamed into the local government's planning. The project also supports evidence-based disaster preparedness initiatives by providing reliable information and technical oversight, ensuring effective response mechanisms are in place for potential disasters.

Key activities under this output are:
3.2.1. Support 11 local governments to formulate, mainstream and implement the GEDSI-integrated and climate-risk-informed LAPAs and promote locally-led adaptation.
3.2.2. Support 11 local governments to formulate risk-informed, evidence-based and needs-based (specific needs of women, children, persons with disabilities, pregnant and breastfeeding mothers, older people, etc) costed disaster preparedness and response plans, linked with the government's annual planning and budgeting system.
3.2.3. Sensitize local stakeholders and communities on predicted climate change scenarios/impacts and formulate and implement locally led adaptation strategies/actions. This will be done through SMS, radio, hoarding boards, pamphlets, brochures etc.

Output 3.3: Knowledge and learning on community-based climate adaptation for vulnerable groups, including women, indigenous peoples, and marginalized communities enhanced.

This output will enhance knowledge management across all project components, facilitating the replication and scaling of adaptation actions in climate-vulnerable regions of Nepal. Project resources will be allocated to establish a robust evidence base for climate-resilient governance in 11 local governments within Karnali and Sudurpashchim Provinces. This will involve systematic documentation of implementation processes and outcomes, supported by targeted dissemination through knowledge exchange missions, strategic communication initiatives, and the development of an information portal to deliver climate services to the most remote and underserved communities.

Key activities under this output are:
3.3.1 Document evidence-based best practices of the project and produce a learning document.
3.3.2 Develop one (1) communication material with universal accessible language so as to inform persons with disabilities about the climate change adaptation actions.
3.3.3 Produce three (3) video documentaries to be shared with the global adaptation forums]

3.3.4 Hold four (4) learning exchange/exposure visits for the sectoral ministries, provincial and local governments and experts/practitioners to the project areas to showcase the adaptation actions.

The above explained project interventions will follow the Layering, Sequencing and Integrating (LSI) approach for resilient livelihoods and ecosystem services – achieving optimal impact at multiple levels, ranging from individual to system levels. Below is a typical example of how different project activities are integrated, layered and sequenced for the same project beneficiaries in the same geographic location.

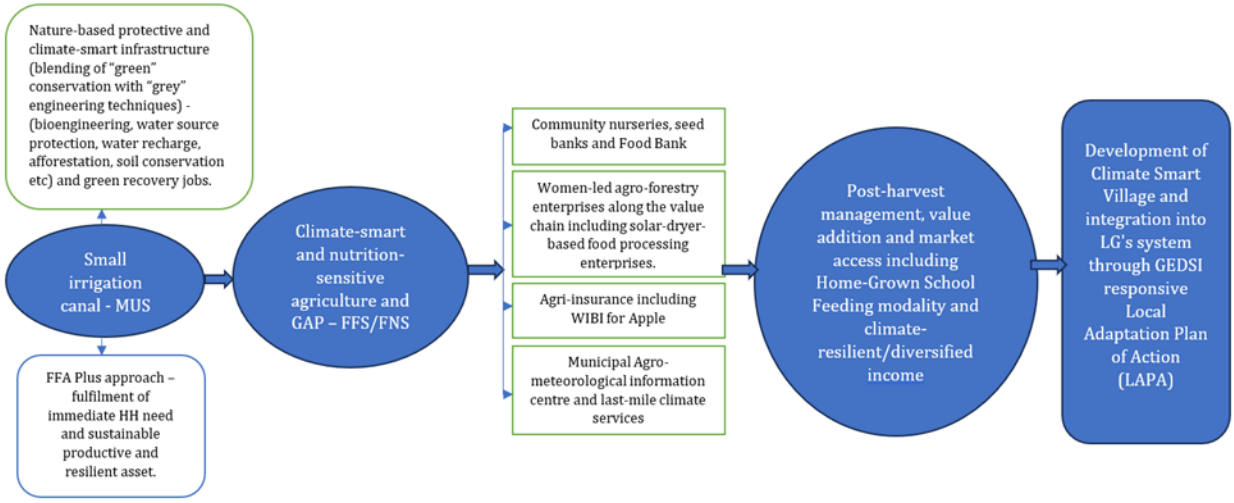


Figure 9: Example of layering and sequencing of the intervention. Source: developed by WFP.

The calculation of beneficiaries across activities is provided below:

Table 7: Beneficiaries and interventions summary

S.N.	Output	Main activities	Total beneficiary HHs	Beneficiary overlap between activities	Unique beneficiary HHs without overlap across activities	Targeting criteria (in reference to project beneficiaries targeting criteria of the proposal (p. 20)
Direct beneficiaries:						
1	Output 1.1 and 1.2	Climate-resilient agriculture Promotion of Village Savings and Lending Groups (VSLGs) Post-harvest solutions Smallholders agricultural market support through home-grown school feeding approach and linkage with other structured markets	5,000	No	5,000	Vulnerable HHs – V2 (who own agricultural land for agribusiness)
2		Climate-resilient agroforestry enterprises	4,000 (200 enterprises x 20 HHs)	2,000 HHs overlapped with S.N. 1 and 2,000 new entrepreneur HHs who require	2,000	2,000 V2 HHs (overlapped with S.N. 1) and additional 2,000 HHs from Moderately vulnerable HHs – V3

				enterprise expansion, financial inclusion and market linkage support for the existing small and informal enterprises		category
3		Climate insurance	2,000	Overlapped with S.N. 1 and 5	-	Vulnerable HHs – V2 (who own agricultural land for agribusiness)
4		Community food and seed banks including storage facilities and community nurseries	1,000	No	1,000	Highly vulnerable HHs – V1 (landless/marginal landholders, highly food insecure HHs)
5	Output 2.1	Food Assistance for Assets	5,600	1,500 HHs are overlapped with S.N. 1 (marginal landholders and food insecure HHs from V2 category)	4,100	Highly vulnerable HHs – V1 (landless/marginal landholders, highly food insecure HHs)
6		Promotion of renewable energy technology – improved cooking stove	1,100	Overlapped with S.N. 5	-	Highly vulnerable HHs – V1 (landless/marginal landholders, highly food insecure HHs)
7	Output 1.1 and 1.2	Agro advisory to farmers through FFS and MAIC	12,100	Sum of unique beneficiaries of S.N. 1, 2, 4 and 5	-	HHs from V1, V2 and V3
Total					**12,100**	
Indirect beneficiaries:						
8	Output 3.1	Municipal agro-meteorological information centres (MAIC)	27,165 HHs (137,376 people)	-	27,165 HHs (137,376 people)	Whole population/HHs of 11 LGs (HHs from all categories: V1-V4)
		Sensitization for farmers to access, understand and utilize vital climate information (agro-meteorological advisories, early warning, forecasting				
	Output 3.2	Sensitization of the local stakeholders and communities on predicted climate change scenarios/impacts and formulate and implement locally led adaptation strategies/actions.				
		GEDSI-integrated and climate-risk-informed Local Adaptation Plan of Action (LAPA) and risk-informed, evidence-based and needs-based costed disaster preparedness, contingency planning, early actions, and effective response				

B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The project targets remote districts in Nepal's Karnali and Sudurpashchim provinces, focusing on local governments vulnerable and highly susceptible to climate-induced hazards like rainfall

variability and drought, with limited adaptive capacity. It combines “soft” support such as awareness-building, planning capacity, and technology transfer with “hard” adaptation actions to enhance community resilience. Using the FFA approach, the project provides income during critical times and engages communities in activities, ensuring food security for households. Community-led efforts aim to increase livelihood resources, boost production, and ensure long-term income and food security. The project adopts affirmative actions for gender equality and women's empowerment, aligning with the Environmental Social Policy and Gender Policy of the Adaptation Fund. The project will generate the following environmental and socio-economic benefits:

Economic benefits

Sustainable livelihoods: The project aims to boost economic sustainability and resilience in communities, with a strong focus on marginalized groups like women and persons with disabilities. It promotes climate-smart agriculture (5,000 HHs), diversified livelihood options (4,000 HHs), and improved water resource management practices (3,700 HHs). Direct cash transfers through the FFA programme to local people and the promotion of NTFPs will bolster sustainable livelihoods. This includes enhancing the agricultural value chain, especially through agroforestry enterprises targeting women, and providing business development services. Training initiatives will empower community members to enhance agricultural productivity and minimize losses, while investments in water management infrastructure will enable two cropping seasons annually. Crop diversification towards high-value vegetables and temperate fruits, alongside income-generating opportunities in local infrastructure work and FFA schemes, will directly benefit households and reduce migration pressures. By strengthening livelihood assets and fostering sustainable income sources, the project aims to support vulnerable communities, reduce negative coping strategies, and enhance overall community resilience. The project also emphasizes supporting agricultural value chains, particularly through agroforestry enterprises targeting women, and providing business development services. Specific strategies and interventions to enhance market access and strengthen value chains include facilitating the formation of farmer groups or cooperatives to increase bargaining power and access to markets. Improvements in post-harvest handling, storage, and processing facilities will reduce losses and add value to agricultural products. Developing market linkages and contract farming arrangements with buyers or processors will ensure reliable offtake for farmers. Training on marketing, branding, and quality standards will enhance product competitiveness. Supporting the development of climate-resilient and sustainable value chains for high-value crops or products will be a key focus. These initiatives aim to create a robust and sustainable agricultural economy that benefits all stakeholders, particularly marginalized groups and enhances the overall resilience of the community.

Skills development and job creation: The targeted vulnerable population will be provided skill development-related training and established micro-enterprises like small bamboo cottage industry, herbal tea and spices small cottage industry, vegetables, fruits, NTFPs processing small cottage industry etc. These cottage industries will create jobs for the local people with the main priority on women and marginalized groups. Further, the implementation of renewable technologies and support for small-scale business development will empower women and marginalized groups to operate businesses and produce goods. This approach will also create a conducive environment for additional groups to invest in these ventures and adopt alternative livelihood strategies. The innovative ideas and the introduction of new technologies and practices, the project will create job opportunities in various sectors, including renewable energy, the agricultural production of the indigenous variety of cash crops like beans and rice, and enhancement of the processing, packaging, and cold storage facilities. Likewise, capacity-building initiatives will be undertaken to equip community members, especially women and youth, to fully capitalize on these opportunities.

Enhanced financial inclusion: The project will facilitate greater access to financial resources for vulnerable communities, aiding them to capitalize on climate-smart agriculture technologies. By de-risking investment opportunities, collaborating with financial institutions and leveraging additional funding opportunities, the project will create pathways for communities to secure the necessary funding. Additionally, capacity-building endeavors will be implemented focusing on financial literacy training and nurturing an entrepreneurial spirit. This is anticipated to facilitate the emergence of new business ventures and the expansion of existing enterprises.

Gender and Inclusion consideration and social benefits

The project aims to empower women, girls, and marginalized groups by addressing their specific needs identified from the GEDSI assessments. Empowerment will be enhanced via three pathways: improving access to resources, enhancing human capital through knowledge and skills, and strengthening social and political capital. Community outreach will be participatory to ensure equal access and avoid bias, with gender inclusion integrated into all training. The project will also address barriers to disaster resilience and mitigate risks of SGBV. Additionally, the project will apply a conflict-sensitive, "Do No Harm" principle and conduct a protection risk assessment to ensure equitable benefit distribution and safety. The project's strategies of gender equality, women's empowerment and social inclusion are mentioned in Part II -Section A of this document. Please refer to the annex - 3 for the detailed gender assessment.

Creating an inclusive environment: The project prioritizes women and marginalized groups, including persons with disabilities and those from excluded communities. Vulnerability and Adaptive Capacity Assessments will prioritize options using tools developed in the CAFS Karnali Project. Women-headed households, marginalized individuals, and PWDs will be prioritized for project interventions, including income-generating activities like livestock rearing and fruit farming. Income generation programs, including the FFA initiative, will ensure high engagement of women. Community consultations will involve marginalized groups in developing LAPAs and integrating their adaptation needs into annual plans. Equal wages for equal work will be ensured irrespective of caste, sex, or status. Municipality-level information centres will provide technical data and training to increase community capacity to face adverse conditions. This will reduce out-migration, leading to a more equitable distribution of work between men and women. Gender-sensitive adaptation options will include livelihood-based skills development and access to new technologies like gender friendly agriculture tools and techniques, improved cooking stoves, electric stoves, improved water mill etc , reducing the physical labour burden on women and children. Renewable energy technologies like solar/electric dryer, post-harvest management technologies/tools etc will cater to women-centric needs, strengthening their engagement in the planning, implementation, and monitoring of adaptation actions. Project activities will enhance income and household production, reducing the risk of children dropping out of school. Positive health benefits are also expected for women and disabled household members. As the project targets poor and disadvantaged households, largely comprising women and minorities, they will actively participate in the adaptation planning and implementation process.

Breaking the social taboos: the project ensures that it strictly prohibits taboos like untouchability at the project site. Social mobilization and sensitization will be carried out to raise awareness among the communities. This will encourage the participation of Dalits and women during their menstrual period.

Capacity building and awareness: The programme intends to build capacity and raise awareness on the climate change impacts on the multiple sectors in their community, along with the differential

impacts that have been faced by women, marginalized and other vulnerable groups in their community. The project extends its service to engage them and make them aware of the need for adaptation strategies and develop these in a participatory and inclusive approach. In this way, the project aims to develop resilient communities of informed citizens who can actively participate in adaptation activities

Environmental benefits

Enhanced natural resources and ecosystem services in project target areas:

The project seeks to promote the sustainable management of natural resources through sustainable land, water, and energy management practices, thereby alleviating pressure on the environment and aiding in the conservation of biodiversity. The assets developed under Outcome 2, such as slope stabilization and farm fencing, along with afforestation efforts under the same outcome, will reduce soil loss and soil erosion. Forest management activities in Outcome 2 will improve forest biodiversity and create an enabling environment for locals, especially women, to access forest resources for their daily agricultural use. Promoting organic farming and introducing climate-smart technologies to transform areas into climate-smart villages will help reduce dependency on forests, supporting long-term improvements in the biological environment. By increasing resource use efficiency and productivity of existing systems, the project will reduce the strain on the surrounding natural land and habitats. Furthermore, the reliance on natural woodlands for energy will be diminished through access to renewable energy sources.

The project also emphasizes on strategies to reduce post-harvest losses and enhance sustainability in the value chain. This includes promoting sustainable and eco-friendly packaging solutions to reduce waste and enhance product shelf-life. Introducing low-emission or renewable energy-based post-harvest processing technologies will further support sustainability. The development of decentralized processing units or value-addition facilities closer to production areas will reduce transportation losses, ensuring that products maintain their quality and value. These comprehensive measures aim to support sustainable land, water, and energy management while promoting biodiversity conservation and economic resilience for local communities.

Climate resilience: By fostering the adoption of climate-resilient agricultural practices and water conservation strategies, the project seeks to build communities that are more resilient to the adverse effects of climate change.

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 1.1, 1.2 and 2.1 is expected to demonstrate: Increased vegetative cover in degraded areas with a 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/programme.

The proposed project builds on the successful implementation of the CAFS-Karnali project (2018–2022), which was found to be highly cost-effective compared to other similar climate change projects implemented in Nepal, as highlighted by its final evaluation report. A key achievement was the delivery of over 90% of the Adaptation Fund's funding directly to local beneficiaries,

significantly enhancing financial literacy and inclusion among vulnerable groups. The new project will adopt an on-budget, on-treasury execution model in alignment with the Government of Nepal's financial systems, ensuring streamlined fund flows from federal to local government levels. This approach will enhance operational efficiency and accountability. A separate project account will be maintained within the government's financial system, and project activities will be embedded in the government's annual planning and budgeting processes. During the consultations, the local governments expressed their readiness to prioritize the implementation of climate adaptation activities identified in their LAPAs (developed under Output 3.2) and to allocate budget through their annual planning and budgeting process to fund these plans. With that funding, the local governments will replicate successful activities implemented under this project to additional areas and beneficiaries outside the project's scope, and to fund the creation of additional climate-resilient, productive and protective assets identified by the LAPAs. This shows the catalytic effect that this project is set to have in spurring local adaptation, while ensuring long-term sustainability of project gains and full alignment with national priorities.

The project is cost-effective due to its alignment with national priorities and policy frameworks, efficient use of existing resources, focus on high-impact, low-cost interventions, and emphasis on community-based adaptation and local ownership. Its integrated approach to watershed management, nature-based solutions, and financial sustainability further enhances its cost-effectiveness, ensuring resources are used efficiently to achieve long-term climate resilience and sustainable development. By leveraging existing systems, prioritizing high-impact interventions, and focusing on the most vulnerable groups, the project demonstrates strong value for money, delivering equitable and sustainable climate adaptation outcomes that build climate resilience in Nepal's most vulnerable communities.

Regarding Component 2, the project will enhance national and local capacities to utilize weather, climate, and hydrological data for both immediate risk management and long-term adaptation planning. Communities will receive timely forecasts, enabling proactive decision-making. For instance, access to a one-week rainfall forecast during paddy harvests can significantly reduce crop losses and optimize yields. Evidence from the World Meteorological Organization (WMO) indicates that Early Warning Systems (EWS) saves lives but also also offer at least a tenfold return on investment as evident from a cost-benefit analyses of flood EWS in Karnali River basin[48]. Alternatively, without access to such systems, farmers often rely on traditional forecasting methods that have proven to be increasingly unreliable because of dramatic climate change. Over-reliance on traditional methods is not sustainable for agricultural practices that need accurate weather information.

Additionally, the project also ensures financial sustainability by integrating adaptation measures into local government budgets, reducing the need for external funding in the future. The project will improve local understanding of how climate change impacts food systems and ensure climate adaptation is integrated into provincial and local policies, plans, and programs. Local governments will benefit from more stable and responsive policy frameworks and services that address climate-related shocks and stressors. Alternatively, the local governments would plan and implement their actions without considering the climate additionality that requires costly adjustments later. Ultimately, reliable weather information is conducive to maximizing agricultural production and, in doing so, improving food security, nutrition and food supply chains. In doing so, the economic benefits to households, communities, and districts are clear and can be measured by monitoring overall economic activity.

48 WMO (2022). Early Warnings for All Executive Action Plan 2023-2027. Available online: https://library.wmo.int/

Cost-Effectiveness Analysis
WFP has conducted a cost-effectiveness analysis (CEA) of the proposed project by employing a rigorous, multi-method approach to assess the economic viability and efficiency of proposed interventions. The following provides a summary of the analysis. Please see the full report in **Annex 5**.

Output 1.1: Climate-resilient agroforestry and livelihood improvement actions

Objective and investment: The project will invest US$ 2.07 million over five years under Output 1.1 to support climate-vulnerable communities in strengthening ecological resilience, improving food security, and diversifying livelihoods. Over a 10-year period, the total estimated cost amounts to US$ 15.2 million, which includes both project investments and community contributions such as labour, seeds, compost, and the operation and maintenance of project assets. While the project will provide initial financial and technical support. Local communities are expected to sustain and expand these efforts over time.

Key Interventions and Benefits:

- **Climate-resilient orchards (776 hectares):** Planting 240,000 apple, walnut, and citrus saplings, projected to generate US$ 4.8 million annually from fruit sales and an additional US$ 425,000 annually from intercropping.
- **Climate-resilient vegetable cultivation (5,000 farmers across 525 hectares):** Projected to generate US$ 4.4 million annually under optimal conditions, or US$ 2.4 million even under a conservative scenario.
- **Local seed value chain:** Community-managed seed production and seed banks are expected to save households US$ 15–20 per year, totalling over US$ 100,000 annually at the community level, while enhancing crop resilience and genetic diversity.
- **Sustainable land management (SALT, water-smart agriculture):** Anticipated annual savings exceeding US$ 216,000 through reduced input costs, including up to 40% less water usage and 25% less pesticide application
- **Nutritional and public health benefits:** Diversification of diets leads to a 25% increase in iron intake in comparable contexts, reducing anaemia and undernutrition. [49]
- **Financial inclusion through Village Savings and Lending Associations (VSLAs):** Expected to mobilize and circulate over US$ 150,000 annually.
- **Weather-index crop insurance:** Projected annual benefit of approximately US$ 40,000 in avoided losses for beneficiaries, comparing favourably to conventional post-disaster cash transfers.

Cost-Effectiveness & Economic Viability: The proposed project demonstrates strong economic viability with a BCR of 1.99 at a 10% discount rate. This means for every dollar invested, the project is expected to generate US$ 1.99 in economic returns. The NPV is approximately US$ 9.9 million. This significantly outperforms comparable initiatives like the ICIMOD project (1.81:1) and conventional farming (1.02:1)[50]. It also offers a distinct improvement over fertilizer subsidy programmes, top-down agricultural extension, and monoculture plantations.

Sensitivity Analysis: The project remains financially resilient even under adverse conditions. With a 10% increase in costs or a 10% decrease in benefits, the BCR remains above 1.75. Even

[49] SPRING Nepal and Helen Keller International. *Impact of Homestead Food Production on Nutritional Outcomes in Nepal*, 2016.
[50] Rajesh Rai, Laxmi Bhatta P. (2018). *Assessing climate-resilient agriculture for smallholders* https://www.sciencedirect.com/science/article/abs/pii/S2211464518300630

in a conservative scenario of a 20% cost increase and 20% benefit decrease, the BCR is still 1.33, and the NPV remains positive.

Trade-offs: Acknowledges the time lag for fruit orchards (5–7 years to full productivity), addressed by intercropping and short-term employment in the asset's creation activities, balancing wide coverage with depth of support via localized FFS and building institutional capacity for innovative tools like weather-index insurance.

Cost Effectiveness Ratio (CER) analysis: The analysis under Output 1.1 demonstrates that the project is highly cost-effective across all discount rates evaluated. Even when applying a conservative assumption using a higher discount rate of 12%, the CER remains well below 1. This clearly indicates a strong economic justification for the investment.

Output 1.2: Smallholder farmers and value chain actors increased capacity for market readiness and access

Objective and investment: This output has a planned investment of US$ 1,230,565 over a five-year project period, aims to reduce post-harvest losses, enhance value addition, and strengthen market access through the use of climate-resilient technologies. The total estimated cost over a 10-year period is US$ 2,512,533 (undiscounted), which includes the initial project investment as well as community contributions such as labour, O&M, and other related inputs.

Key Interventions and Benefits:

- **Reduced Post-Harvest Losses:** Improved practices can reduce losses by approximately 40 %, saving 2,234 metric tonnes of produce annually and generating US$ 621,000 in income.
- **Market Access (HGSF):** Linking farmer cooperatives to institutional buyers through HGSF enhances price stability and provides predictable income. The HGSF approach demonstrates a strong return on investment, delivering approximately US$ 5 in benefits for every US$ 1 spent.[51]
- **Value Addition:** Investing in processing, packaging, and aggregation infrastructure, which could generate an estimated US$ 280,000 annually from unprocessed NTFPs.
- **Community Food Banks:** Stabilize prices, mitigate seasonal food insecurity, and promote equity and resilience, reducing reliance on emergency food assistance.
- **Shelf-Life Extension:** Expected to increase the shelf life of perishables by over 200%.
- **Nutritional and Social Co-benefits**: 8,000 schoolchildren will benefit from improved nutrition, leading to a 10–15% increase in school attendance. Support to women-led cooperatives fosters social inclusion and gender equity.

Cost-Effectiveness & Economic Viability: The project's integrated interventions are expected to generate US$ 959,000 per year, over three times greater than traditional practices. An independent evaluation of a similar program (CAFS-Karnali) reported a BCR of 1.48, while the proposed project is expected to achieve a significantly higher BCR of 2.33**.** At a 10% discount rate, the NPV is US$ 2,467,183.

Sensitivity Analysis: Even under a worst-case scenario (20% increase in costs and 20% reduction in benefits), the BCR remains well above 1.0 (1.55) and the NPV stays positive (US$ 1,230,566), highlighting the intervention's economic viability and resilience.

[51] Ministry of Education, Science and Technology (MoEST). (2024). *Home-Grown School Feeding Programme Framework.*

Trade-offs: Acknowledges higher upfront investment and technical training needs for solar technologies, addressed by programme support and community training; risks of dependency on government budgets for HGSF, managed by market diversification; and disposal concerns for solar components, mitigated by responsible plans and local maintenance.

CER analysis: The project demonstrates strong cost-effectiveness across all discount rates. At a 10% discount rate, the CER is 0.43, and even under a conservative 12% rate, it remains low at 0.45. An estimated CER of 0.38–0.40 at 3% further highlights the project's economic efficiency. These consistently low CER values confirm that the project delivers high value for money and remains financially viable under varying economic conditions.

Output 2.1: Restoration-based actions implemented through rehabilitation of degraded areas and climate-resilient assets

Objective and Investment: This output, with a total planned investment of US$ 3.33 million, aims to combat land degradation by restoring and constructing climate-resilient community assets, with a strong focus on empowering women and vulnerable groups. Of this amount, approximately US$ 1.7 million is planned for wages to the workers. The total undiscounted cost over the project period is estimated at US$ 3.68 million, which includes both the initial investment and the O&M of the rehabilitated assets.

Key Interventions and Benefits:

- **Slope Stabilization (120 hectares):** Utilizes Nature-based Solutions (NbS) at a cost-effective alternative of US$ 4,000–6,000/ha compared to conventional grey infrastructure (US$ 8,000–10,000/ha). NbS reduce landslide/erosion risk by 60% and offer co-benefits like biodiversity enhancement and improved soil moisture retention.
- **Establishment of irrigation system (600 hectares):** Replaces high cost, polluting diesel-powered irrigation. Projected to increase cropping intensity by 95% (from 110% to 205%), enhancing food security and dietary diversity.
- **Safe Drinking Water & Kitchen Gardening:** Community-managed piped water systems reduce waterborne diseases and the burden of water collection on women.
- **Improved Cookstoves (ICS):** Reduce firewood consumption by 30–40% (saving approx..3 metric tons of CO_2 emissions per household annually) and indoor air pollution by 60–70%, leading to health and time savings for women and girls.
- **Renewable Energy-Powered Seed Banks & Food Storage:** Solar-powered alternatives offer cleaner and more affordable solutions (US$ 0–0.014 per kWh vs. US$ 0.05–0.06 per kWh for conventional systems), reducing food losses and ensuring food availability.
- **Rehabilitation of Micro-Hydropower (MHP):** Budgeted at US$ 208,038.6, enabling energy generation valued at US$ 78,211 by Year 5, with significant long-term return-of-investments (ROI) given the 15–20-year lifespan and low maintenance costs.

Cost-Effectiveness & Economic Viability: The economic analysis for this output shows strong viability. At a 10% discount rate, the BCR is 2.41, indicating that for every US$ 1 invested, the project yields a return of US$ 2.41. The NPV is US$ 4,277,525. The economic internal rate of return (EIRR) is likely to exceed 25%. Comparison to other projects shows the proposed irrigation system EIRR (25.76%) is higher than ADB's project (15.5%) and WASH per household cost ($529.10) is lower than WFP Nepal's Local Infrastructure Support Programme (LISP) ($550) in the same region.

Sensitivity Analysis: Even under adverse conditions (20% increase in costs and 20% decrease

in benefits), the project maintains a positive NPV of US$ 1,524 ,474 and a BCR of 1.61, underscoring its resilience.

Cost Effectiveness Ratio Analysis:
The cost-effectiveness analysis confirms strong value for money. At discount rates of 3%, 10%, and 12%, the CERs are 0.42, 0.48, and 0.50 respectively, well below 1. This indicates that the intervention remains highly cost-effective and financially viable across all scenarios.

Output 3.1: Capacities for tailored climate information services

Objective and Investment: This output, with a total investment of US$ 673,245, aims to strengthen the capacity of government institutions and communities to co-design, disseminate, and utilize tailored climate information services (CIS). It directly benefits approximately 27,165 individuals.

Key Interventions and Benefits: Establishing the PCCMIS, MAICs, a One-Stop Climate Portal, and end-user training. These are designed to close the last-mile delivery gap and enhance institutional capacity for climate resilience. Benefits include reduced crop losses, improved agricultural productivity, and decreased input inefficiencies, leading to an estimated annual benefit of at least US$ 1.5 million.

Cost-Effectiveness: The intervention is projected to have a BCR exceeding 2.5, indicating a strong return on investment. This localised, institutionalised model is more effective than national-level dissemination, Automated Weather Station (AWS)-only models, private sector agri-tech solutions, or NGO-led awareness initiatives, which often lack local specificity, actionable advice, inclusivity, or sustainability.

Note: A comprehensive economic analysis was limited due to data availability, so a cost-effectiveness analysis has been used as the primary evaluation framework for the outputs 3.1 and 3.2.

Output 3.2: Capacities of local governments and communities for adaptation planning and disaster risk reduction

Objective and Investment: With a **total estimated cost of** US$ 759,800, this output aims to enhance the capacities of LGs and communities to formulate and implement inclusive LAPAs and costed disaster preparedness and contingency plans. It targets approximately 137,376 direct beneficiaries across 11 municipalities, including vulnerable groups.
Key Interventions and Benefits: Formulation and mainstreaming of GEDSI-integrated and climate-risk-informed LAPAs; support for risk-informed, evidence-based disaster preparedness and response; and sensitisation of local stakeholders. Benefits include averting an estimated US$ 3–5 million in disaster-related losses over five years through reduced damage, improved early warning, and more efficient recovery. It also enhances institutional capacity, builds knowledge for long-term resilience, and strengthens public trust.
Cost-Effectiveness: This proactive, participatory, and preventative planning model is more cost-effective than reactive, centralized, top-down approaches that often lack contextual relevance, community ownership, and integration with local budgeting. The projected ROI ranges from 1:4 to 1:6, meaning each dollar invested may yield savings of four to six dollars in future disaster-related costs.

Output 3.3 – This output aims to strengthen inclusive knowledge management and learning

systems that support the replication and scaling of cost-effective community-based climate adaptation practices, particularly for vulnerable groups such as women, indigenous peoples, and marginalized communities in Nepal. To this end, the project will generate robust evidence, including systematic documentation of implementation processes and outcomes, and the dissemination of knowledge through targeted communication strategies and peer learning exchanges, to facilitate wider scaling-up of the cost-effective adaptation measures from the project. This output is focused on communication of the project's cost-effective best practices; hence, the cost-effectiveness analysis of this output has not been conducted.

Based on the above description, an overview of CEA for all project outputs is provided below.

Table 8: Cost effectiveness of the proposed measures

Output	Input Cost (US$)	Key Benefits / Losses Averted	Alternatives approach & Costs (US$)	Cost-Effectiveness Rationale
1.1 Climate-resilient agriculture, agroforestry, seed systems	2 million	✓ 35–65% productivity gain across cereal, legumes, and fruits = ~$2.45M/year. ✓ Reduced input costs by $216K/year and lower irrigation costs ($144K/year) due to 35% reduced water use. ✓ 25% pesticide reduction leading to health savings of $146K/year. ✓ Additional income from agroforestry/NTFP enterprises = $320K/year. ✓ Enhanced food and nutrition diversity, especially for women and children. ✓ Strengthened household resilience to 2–3 seasonal dry spells per year. ✓ Local seed and sapling use increases survival rate from 30% to 70%.	✓ Input subsidy model: $681K/year benefit, but declining productivity and soil degradation over time. ✓ Standalone social protection: $555K/year, provides short-term relief only. ✓ Top-down extension: $227K/year benefit due to low adoption. ✓ Monoculture forestry (eucalyptus/pine): $2.9M cost with low biodiversity and food value. ✓ High-input chemical farming: $500K/year net gain after costs, but high input dependency and soil depletion. ✓ One-off training: $50K/year with minimal adoption.	Integrated approach combining agroecology, local enterprises, and insurance delivers 3–4× higher productivity gains, sustainable soil health, and inclusive resilience benefits compared to conventional models.
1.2 post-harvest, storage, and market linkages	1.2 million	✓ 40% reduction in post-harvest losses (saving 2,234 MT/year). ✓ $959K/year additional income through value addition, better prices, and market access. ✓ 700 MT stored in community food banks preventing seasonal price collapse. ✓ 200*20 new agro-enterprise jobs for women/youth. ✓ 8,000 school children receive diverse local meals improving nutrition: school attendance up to 10–15%. ✓ 200% increase in shelf life of perishables. ✓ Enhanced household food security during lean periods (3+ months).	✓ Open-air drying & traditional methods: 15% loss reduction (838 MT saved = $335K/year). ✓ Insulated box/huts: 30% product loss = $36K/year loss. ✓ No structured market linkage: missed $58K/year. ✓ No value addition to NTFPs: lost gain $280K/year. ✓ Contracted school meals: no local economic benefits. ✓ Net alternative gain: $299K/year vs. $1.23M/year under proposed model.	Proposed interventions create 4× higher economic return and strong nutrition, gender, and resilience co-benefits. Strengthens rural food systems and local markets.

2.1 FFA plus (NbS and renewable energy)	3.3 million *(1.7M CBT)*	✓ Stabilized 120 ha land: landslide/erosion risk reduced by 60%. ✓ Irrigation for 600 ha enhancing cropping intensity and food production. ✓ 700 HHs gain year-round water access, improved WASH and nutrition. ✓ 1,100 HHs with ICS reduce firewood use by 30–40% (0.8 ton/HH/yr) and indoor air pollution by 60–70%. ✓ RE systems power seed banks and food storage reducing loss. ✓ 5,600 HHs earn wage income enhancing short-term protection and long-term asset creation.	✓ Grey infrastructure: \$8,000–10,000/ha (vs. \$4,000–6,000 for NbS), lacks biodiversity and water retention benefits. ✓ Diesel irrigation: high O&M (\$70/pump/yr) and CO_2 emissions (2 tons/pump/yr). ✓ Tanker-based water supply: costly (\$0.1–0.15/L), unreliable in dry months. ✓ Firewood cooking (BAU): 2 tons/HH/yr, 3–4 hrs/day collection burden. ✓ Contractor-led delivery: 50–70% fewer jobs, higher corruption and delays. ✓ No watershed management: 30% water reduction and higher irrigation failure risk.	NbS + community-led FFA model reduces cost by 40–50%, provides local employment, restores ecosystems, and sustains climate resilience versus grey or fuel-based alternatives.
3.1 Climate information and advisory systems	673 k	✓ \$1.5M/year avoided crop losses and yield improvements from timely advisory use. ✓ Reduced fertilizer and pesticide waste through precise advice. ✓ Enhanced disaster preparedness and local early warning dissemination. ✓ Strong institutional ownership and data continuity at provincial/LG level.	✓ National broadcast via radio/TV: information too generic, low trust and uptake. ✓ SMS alerts from federal level: language and timing mismatch, low use. ✓ NGO/CSO-based advisory: fragmented and unsustainable, lacking government integration.	Localized institutional climate services yield 2–3× higher returns than generic advisories, ensuring sustainability and integration within government systems.
3.2 Climate governance, LAPA, and GEDSI integration	759 k	✓ Avoided disaster loss of \$3–5M over 5 years through early preparedness. ✓ Faster evacuation and reduced casualties during floods/landslides. ✓ Efficient use of local budgets via risk-informed planning. ✓ Inclusive response planning benefits vulnerable groups. ✓ Institutional capacity built at LG and community level for sustained adaptation.	✓ Top-down DRR and NAPA plans: generic, not localized or gender/socially inclusive. ✓ Lack of budget linkage: poor ownership and sustainability. ✓ Reactive humanitarian approach: high recurring costs, limited resilience.	Locally led, inclusive LAPA approach yields ROI 1:4–1:6, institutionalizes adaptation, reduces emergency spending, and ensures equity and sustainability.

Overall Conclusion:

The proposed project demonstrates strong cost-effectiveness with strong economic viability across its three principal outputs, each delivering substantial economic, social, and environmental benefits. The benefit-cost ratios range from 1.99 to 2.41, indicating that each dollar invested yields at least double the return in economic, social, and environmental benefits: Output 1.1 (Climate-resilient agriculture) yields a BCR of 1.99, Output 1.2 (Post-harvest management and market access) records a BCR of 2.33 and Output 2.1 (Restoration-based adaptation) achieves the highest BCR of 2.82. Sensitivity analyses confirm the project's resilience under various financial scenarios, including increased costs or reduced benefits.

A unifying feature across all outputs is the programme's strong emphasis on community participation, inclusive planning processes, and the prioritization of gender equality and social inclusion, addressing the distinct needs of vulnerable populations to foster empowerment and equity. The integration of multiple co-benefits, such as improved food and nutrition security, biodiversity conservation, and carbon sequestration, amplifies the overall impact and sustainability. The deployment of innovative technologies (solar-powered systems, weather-indexed insurance) and investments in institutional strengthening ensure the durability of programme benefits.

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

The project is directly aligned with the Priority Adaptation Programmes defined by the NAP 2021-2050 for the agriculture and food security sector. The proposed interventions are within the scope of the below-priority adaptation programmes of the NAP with a particular focus on Sustainable Agriculture, Food and Nutrition Security, and Climate Resilient Health and Hygiene.

The project includes several key initiatives aimed at enhancing climate resilience in rural livelihoods and agriculture in Nepal. These initiatives encompass areas such as commercial animal husbandry, the development of climate-induced risk-sharing models, genetic resource conservation, and promoting climate-smart agriculture in hilly and mountainous regions. Additionally, the project focuses on enhancing agricultural productivity through resilient water management systems, integrated soil, and nutrient management, and strengthening climate services and agriculture information systems. Furthermore, it aims to promote water pumping technology and climate-resilient renewable energy in water-scarce areas to address water stress and enhance food security in hilly regions. Similarly, the project contributes to the mitigation and adaptation targets of the Nationally Determined Contribution (NDC) 3.0 (2025-2030). The project specifically contributes to the mitigation component below (target set for the agriculture sector). The project aims to achieve several key targets by 2030, including expanding mulberry and fruit orchard areas to 6,000 hectares, establishing 200 climate-smart villages and 500 climate-smart farms, and promoting practices like intercropping, agroforestry, and conservation tillage. It also prioritizes increasing access to climate-smart agricultural technologies for women, Indigenous Peoples, smallholder farmers, and marginalized groups, while supporting the protection and promotion of climate-resilient indigenous seeds through community and national seed banks.

Furthermore, the project contributes directly to the adaptation component targets of the 2nd NDC. By 2030, it aims for all 753 local governments to prepare and implement climate-resilient and gender-responsive adaptation plans. Additionally, it seeks to increase access to basic water supply from 88% to 99% and improve water supply from 20% to 40% by 2030. Strengthening public weather services, including the Agro-Meteorological Information System, and establishing a Climate Information System by 2025 are also part of the project's objectives.

A brief overview of the project's alignment with WFP Nepal CSP and relevant national policy, plans and strategies is presented below:

Table 9: Overview of project's policy alignment

Document	Project's Alignment
WFP's Country	CSP (2024-2028) has included climate change adaptation and resilience building as one of

Strategic Plan (CSP)	the important programme priorities under SO 3: – "Smallholder farmers and climate vulnerable populations in Nepal have enhanced access to climate-resilient and equitable food systems, sustainable livelihoods and climate-proof assets and services by 2028". In the proposed Country Portfolio Budget (CPB) for CSP (2024-2028), the funding from the AF through the proposed project is included as highly probabilistic funding for Nepal CO. WFP has been designated as a lead agency for the climate change and resilience pillar of the UNSDCF (2023-2027) for Nepal, hence, this project is crucial for the country offices to continue its footprint and leadership in climate change sector in the country.
Paris Agreement 2015	The Paris Agreement's main goal is to boost global efforts against climate change by ensuring that this century's global temperature rise stays well below 2°C above pre-industrial levels, with an aspiration to limit it to 1.5°C. Additionally, the agreement seeks to enhance countries' capacity to manage climate change impacts and ensure financial investments align with a low greenhouse gas emissions and climate-resilient future. As a party to the Paris agreement, Nepal already developed National Adaptation plan and nationally determined contribution and clearly communicated the adaptation actions and mitigation targets to achieve the resilient society.
National Adaptation Plan (NAP), 2021-2050	The NAP has a specific sector identified as Agriculture and Food Security in which the proposed project aligns. Within the nine priority programs of NAP, the project aims to secure a sustainable agriculture system and food security along with diversifying the livelihood for the people from Karnali and Sudurpashchim provinces. Additionally, it targets to strengthen climate information systems at national and provincial levels and improve last-mile climate services such as agrometeorological advisory systems and the proposed project aims to contribute to this target through the establishment of provincial climate information centres and municipal agrometeorological information centres.
Nationally Determined Contributions (NDCs) 3.0 (2025-2030)	The project contributes to achieving NDC targets for the Agriculture, Forestry, and Other Land Use (AFOLU) sectors by supporting activities like increasing soil organic matters, plantation, cattle-shed improvement, rationing fertilizers and establishing 100 climate-resilient villages and 200 climate-smart farms. Also, the project planned to support the local government in preparing the climate-resilient and gender -responsive adaptation plans in its targeted local government. In this way, it helps to achieve the target of developing gender-responsive adaptation plans in 753 local governments. It further helps to achieve 1,000 water source protection schemes to promote multiple water use systems.
National Climate Change Policy (NCCP), 2019	The project is designed in line with the policies and actions directed in the agriculture and food security theme of NCCP. As envisioned in the NCCP, it aims to address the challenges posed by climate change and promote climate resilience and low-carbon development in the country. The project closely embraces the strategies for improving food security by promoting climate-friendly agricultural systems. Further, it upholds the implementation strategy as suggested by the NCCP to uphold the principle of channelling 80% of adaptation finance to the local level. The NCCP Prioritizes crop diversification, protection of agricultural diversity, agroforestry with species of multipurpose trees in uncultivated agricultural land, and agroforestry to be developed in the slopy and low-grade forest areas. The project supports the development of climate-friendly agricultural systems for food security, nutrients, and improvement in the livelihood of citizens with emphasis on riverbeds affected by climate-induced risks.
National Framework on Local Adaptation Plan of Action (LAPA), 2019	The project envisions supporting local government to prepare the climate-resilient and gender-responsive adaptation plan adopting the LAPA framework and steps that are elaborated in the framework. It also penetrates down to the household level as suggested in the LAPA framework while doing the vulnerability analysis and collecting and prioritizing the adaptation options. Further, it ensures sustainability by integrating these prioritized actions into the annual planning of the local government thereby achieving sustainability.
16th National Development Periodic Plan (2024-2028)	The project contributes to the 16th National Development Plan in achieving key transformative strategies: climate resilience and inclusive development including local adaptation planning, nature-based solutions, ecosystem based adaptation etc, sustainable forest management for environmental service and green development, biodiversity conservation for resilient ecosystem, mainstreaming and localizing environment and climate change issues, mobilizing climate finance for climate resilience and inclusive development and policy improvement and institutional capacity strengthening. The project will contribute the major programmes – green economy promotion programme, sustainable forest management and commercial utilization programme, sustainable biodiversity conservation programme, climate change risks and loss and damage reduction programme, local adaptation promotion programme, enhancing access to international climate finance programme and policy improvement and institutional capacity strengthening programme, included in the 16th plan under the thematic area of

	biodiversity, climate change and green economy. Likewise, it supports to achievement of the goals of preparing and implementing the local adaptation plan of action in all 753 local governments by 2028.
Agriculture Development Strategy (ADS), 2015-2035	The project will contribute to promoting a climate-resilient agriculture system including capacity building of an agricultural extension system for promoting Climate Smart Agriculture (CSA) and implementing early warning systems.
National Disaster Risk Reduction Policy and Strategic Action Plan (2018)	The Policy and action plan aims to enhance the existing efforts to strengthen disaster risk reduction (DRR) and reduce loss of lives and assets from disasters and to transition from a reactive to a proactive approach to disaster risk management, to which the project will contribute.
Sustainable Development Goal (2015-2030)	The project will contribute to the target of Goal 13, take urgent action to combat climate change and its impacts, of "establishing 170 climate-smart villages and 500 climate-smart farming by 2030, preparing and implementing climate-resilient and gender-responsive adaptation plans, and a multi-hazard monitoring and early-warning system in all 753 local governments".
2nd Five-Year Periodic Plan of Sudurpashchim Province (2021-2026)	Sudurpashchim Province's first five-year plan emphasized enhancing climate resilience and ensuring food security, acknowledging the region's susceptibility to climate-induced challenges and socioeconomic vulnerabilities. To promote agricultural self-reliance, the plan introduced subsidies for improved seeds and fertilizers, prioritized irrigation development including lift irrigation and focused on producing and marketing seeds of major food crops. Special attention was given to marginalized groups in every plan and policy. The project also has similar proposed approaches which will support in achieving those plans.
2nd Five-Year Periodic Plan of Karnali Province (2024-2029)	Karnali Province's first five-year plan placed significant emphasis on addressing climate change and enhancing food security, recognizing the region's vulnerability due to its challenging geography and socioeconomic conditions. The plan aimed to promote climate-resilient agriculture by encouraging organic farming practices, diversifying crops, and supporting agroecological initiatives. Programs like the "Green Karnali" project focused on building resilient livelihoods through climate and gender-responsive farming approaches. The plan underscored the need for integrated approaches combining sustainable agriculture, infrastructure development, and community engagement to build resilience against climate-induced threats and ensure food security. The project will compliment and support in achieving the ambitious plan of the Karnali region.
Periodic Plan and Annual Programme and Budget of the local governments	The project will coordinate with local government plans to ensure that infrastructure developments and market initiatives complement existing or planned projects aimed at enhancing agricultural markets and reducing losses.

A. Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

The project will strictly adhere to the Government of Nepal's regulatory requirements for environmental and social safeguards during implementation. Policies and laws include the Constitution of Nepal, the Environment Protection Act, Forest Act 2020, NCCP 2019, National Agriculture Policy 2004, Water Policy 2020, and so on. The Environment Protection Act and its regulations are the key legislation that encapsulate the policy guidelines and standards for the sustainable environmental management of Nepal. It has listed a number of infrastructures in various sector that needs to undergo Environmental Impact Assessment, Initial Environmental Examination, and Brief Environmental Studies, including sectors like water resources management, forest management, physical infrastructure development, enterprises, etc. As the project will implement its activities in a buffer zone of the protected areas, the project will follow the national standards and laws while constructing community infrastructure. Moreover, WFP will ensure the Environmental and Social Policy of Adaptation Fund and WFP's Environmental and Social Sustainability Framework (2021) are upheld in addition to the Government of Nepal's technical standards and norms to avoid unintended harm to the environment and communities. This includes carrying out a thorough environmental and social risk screening to ascertain the

project risk level and develop an Environmental and Social Risk Management Plan to manage and mitigate identified risks as further described in Section K. The project will also follow gender-related legislation and policies for gender-responsive interventions, including WFP's Gender Policy and the AF Gender Policy and Action, from concept design to project evaluation. The key applicable national environmental and social standards are listed below.

Table 10: Applicable national standards to the project

Applicable national standards	Application to the project
Environmental Protection Act (2019) and its regulation (2020)	The infrastructures envisioned to rehabilitate do not need any environmental assessment according to the EPR 2020 guidance. However, the project will comply the national regulation while constructing small community infrastructure.
Environmental Protection Act and its regulation (2021) of Karnali Province and Sudurpashchim Province	The infrastructures envisioned to rehabilitate do not need any environmental assessment according to the EPR 2021 guidance. However, the project will comply the provincial regulation while constructing small infrastructure.
National Park and Wildlife Conservation Act (1993)	The project will comply with the guidance provided by this act while implementing the forest management activities in the buffer zone area. None of the proposed actions will be carried out within protected areas. To ensure that this is respected, the project will raise community awareness throughout the project on the need to conserve resources in these areas while ensuring that forest resources are only utilized within buffer zones as allowed by the law. The project technical team will establish close coordination with the Buffer zone Management Committee of the respective national parks i.e. Rara National Park, Mugu and Khaptad National Park, Bajhang. Considering that the project's Executing Entity, the Ministry of Forests and Environment, is the responsible authority for enforcing this legislation, the project is well placed to ensure that the project activities will only be planned and implemented in buffer zone areas, without entering in the protected areas. During project implementation, through monitoring activities, the IE and EE team will regularly assess whether activities are being implemented in compliance with this Act and the plan.
Buffer Zone Management Regulation (1996)	The project will comply with the standards provided in the regulation while implementing the activities in the buffer zone area. As required by the regulation, in close coordination with the relevant national park authorities, the project will mobilize the existing user committees to carry out the forest conservation activities under Outcome 1 and 2, to ensure the responsible use and management of forest resources. The project team will ensure regular coordination with the national park authority and raise awareness among local cooperating/implementing partners and communities about the provision of this regulation. The project technical team will establish close coordination with the Buffer zone Management Committee of the respective national parks i.e. Rara National Park, Mugu and Khaptad National Park, Bajhang. During project monitoring, the IE and EE team will regularly assess whether activities are being carried out in compliance with this regulation.
Gender Equality Policy (2020)	In line with the policy guidance, the proposed interventions will support the formulation of gender-responsive local climate action plans at the local government level and incorporate the needs of women from different groups in a participatory and inclusive manner. This will contribute to strengthening gender-responsive governance system at local government. Moreover, the project economically empowers women from vulnerable communities in establishing small agri-forest based enterprises. The project will raise awareness on the gender-responsive resilience building initiatives among community and cooperating partners. Additionally, the project team will closely implement gender action plan in annex … to ensure that the policy is upheld throughout project implementation.
Water Resources Policy (2020)	The project has been designed considering the key priorities of this policy, including watershed management to reduce water-induced disasters, integrated water resources management and a multipurpose uses approach. Key approaches highlighted by the policy, including integrated water resource management, water source protection, bioengineering and multi-use water system (MUS) technologies, will be prioritized while

	planning and implementing the project activities related to watershed management and community asset creation. To ensure the project's full alignment with the Water Resources Policy, a representative of the relevant Ministry will be a member of the project steering committee, who will further provide policy guidance to the project aligned with this policy.

In addition, the standards, norms and manuals issued by the Department of Local Infrastructure, Department of Irrigation, Department of Water and Sanitation, Alternative Energy Promotion Centre will be complied with during community assets creation (small infrastructure activities), as well as the guidelines and manuals set by the Department of Agriculture. Similarly, the National Framework on LAPA, endorsed by MoFE and the Local Disaster and Climate Resilience Framework, endorsed by the National Disaster Risk Reduction and Management Authority (NDRRMA), will be followed for the preparation of the LAPA at the local level.

B. Describe if there is duplication of project/programme with other funding sources, if any.

The detailed mapping of the project/programme was conducted to assess the potential duplication and overlap of similar initiatives from WFP, other UN agencies, and like-minded organizations in climate change adaptation, agriculture development, food security, and sustainable livelihood. The coordination and learning sharing meetings with the relevant project executing entities, joint monitoring and review meetings, etc., will be carried out regularly at the federal, provincial, and local levels to ensure coordinated efforts, potential complementary and integrated interventions. The table below provides further details on complementarities with previous and on-going projects.

Table -11: Complementarity of the project to other projects

Institution	Relevant initiatives	Complementarities, value-added and potential for partnership	Avoidance of duplications
WFP	Local Infrastructure Support Programme (LISP) – technical assistance to local governments for developing climate resilient, green recovery and productive local infrastructure.	The best practices and innovative approaches gained from LISP in the areas of developing climate-resilient, green recovery, and productive and protective/climate-proofing community infrastructure can be scaled -up through the AF project and there is the possibility of complementarity and collaboration between LISP and AF project in resilience assets creation through the Local Governments if both projects are implemented in the same LGs. The project will be benefitted by the climate resilience model of local infrastructure and the co-financing of the infrastructure by LGs and the Project implemented by LISP.	• The LGs to be covered by LISP beyond 2024 are yet to be finalized, but LISP supports local infrastructure only not for other intervention areas proposed in the AF project.
WFP	Pipeline project- Improving Climate Resilience and Food Security of Vulnerable Communities Living in Disaster-prone Areas of Terai in Nepal -GCF	The project aims to build the climate resilience of vulnerable communities in the Terai region through enhanced livelihood opportunities and integrated climate risk management.	• No duplications due to different geography and it's mainly focused on Terai districts.
FAO	Building resilient Churia region in Nepal (BRCRN) funded by GCF	BRCRN aims to build the resilience of the Churia region to climate change impacts, reduce vulnerability, and sustain natural resource management – the project can learn and replicate the sustainable NRM-related best practices.	• No duplications due to different geographic locations and different sectors/themes -

			forest resource management, Churia land management
IFAD	Value Chain for Inclusive Transformation of Agriculture (VITA)	VITA can be complementary in developing market linkages and improving financial services.	• No duplications due to different geographic locations
IFAD	Agriculture Sector Development Programme (ASDP)	The project can learn about climate-resilient agriculture technologies and market linkage in targeted value chains such as apple, ginger, and goat. The learning and successful climate resilient practices from the ASDP will be scaled up by the project.	• No duplications due to different geographic locations (project will end in July 2024)
FCDO	Nepal Climate Change Support Programme (NCCSP)	The project complements the NCCSP II, which aimed to address four significant climate risks related to infrastructure, agricultural yield, and food security, natural resources and biodiversity targeting the poor and women Project can learn and replicate NRM-related good practices, both the projects can benefit from knowledge and experience exchange. The learning and best practices of this project can be adopted by the project.	• No duplications due to different geographic locations and different timelines, as the project is ending in 2024.
FCDO	Résilience, Adaptation and Inclusion in Nepal (RAIN)	RAIN project, funded by the FCDO and executed by Dan Church Aid Nepal and People in Need Nepal, aims to strengthen resilience and safety for the most vulnerable populations through evidence-based, community-driven approaches. Community resilience and adaptation efforts has been implemented across 21 local governments—15 in Madhesh and 6 in Lumbini.	• No duplication of efforts, due to different geographic locations
UNEP	Ecosystem-based Adaptation Programme (EBA)	The project can take reference of some activities on natural resource management, and climate resilient agriculture and their experiences and learnings can be useful by the exchange of experience and knowledge sharing.	• No duplications due to different geographic locations and theme–ecosystem adaptation
IUCN	Improving Climate Resilience of Vulnerable Communities and Ecosystems in the Gandaki River Basin, Nepal – funded by GCF	This focuses on reforestation, slope stabilization, nature, and farm-based tourism, establishing habitat corridors, drought and heat tolerant crops, and livestock – the project can learn about drought and heat tolerant crops, and livestock practices.	• No duplications due to different geographic locations and different sectors/themes - ecosystem, biodiversity focus.
SDC	Agriculture and Food Security Project (AFSP)	Aimed at enhancing food security and building climate resilience in Nepal's agriculture sector- the project can learn about any innovative climate-smart techniques/technologies.	• No duplications of efforts, due to different geographic locations

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

The project is designed in a way that the previous knowledge will be applied, and new innovative technologies will be developed and demonstrated in most remote areas of Nepal. In that sense, it can be said that it is a natural lab to demonstrate the best practices and document them for further

replication and upscaling. Components 1 and 2 support the implementation of innovative technologies and practices with the prior assessment of the target area, which will be documented to replicate and upscale the practices in similar geographical and ecological regions of Nepal. The document will be disseminated to the three tiers of government (local, provincial and federal) and other stakeholders for their prioritization in agriculture, food security and sustainable livelihood after the project adjourns.

The knowledge will be co-created with the federal, provincial, and local governments. The project proposed to establish a climate change information management system within the provincial government, the Ministry of Industry, Tourism, Forests and Environment (MoITFE), which is further linked to the local government, which is the continuation of the experience from the CAFS-Karnali, AF-funded project. This creates a knowledge management platform at the local level where they can easily access the climate information on climate change impacts, evidence of the climate-induced disasters/shocks and other relevant information and adaptation and mitigation initiatives covering all the twelve themes of the NCCP 2019.

As the area is severely affected by climate-induced disasters, the local infrastructure built to combat these impacts will be documented with detailed elaboration and specifications to facilitate upscaling and replication in other similar areas. Lessons and best practices from the CAFS Karnali-AF funded project will be incorporated, particularly during wider communication and visibility efforts. One key lesson from the CAFS-Karnali final evaluation report is that the lack of a communication strategy in the first project negatively affected its visibility. To address this, a comprehensive communication strategy for this project will be developed to ensure better visibility and dissemination of its outcomes and impacts will be developed. Regular monitoring and evaluation produced findings and recommendations that will be disseminated to the stakeholders and will be incorporated into the project implementation. Additionally, the stories from women and marginalized groups will be collected, documented, and disseminated to a wider audience to spread the message that these groups can also combat climate change impacts if they are given equal opportunities. Several video documentaries will be documented and disseminated to wider audiences. Finally, the lesson-learned report will be prepared with a comprehensive overview of all the implemented activities with respect to the components.

D. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

WFP has established strong partnerships with Nepal's Ministry of Forests and Environment (MoFE) and the Ministry of Agriculture and Livestock Development (MoALD) to advance food security, sustainable agriculture, and climate adaptation. MoFE has recognized WFP’s successful implementation of an Adaptation Fund (AF) project as a model initiative, commending its timeliness, quality, and results. Based on this success, MoFE formally endorsed WFP as the Multilateral Implementing Entity (MIE) for the second phase of the AF project proposal. Actively contributing to Nepal's climate change policies, WFP ensures alignment with national priorities while fostering collaboration with federal, provincial, and local governments to enhance disaster management and resilient food security. MoFE remains committed to sustaining this partnership in climate change and food security initiatives.

The previous project ensured gender considerations in its design, incorporating gender-sensitive indicators in alignment with the AF Gender Policy and WFP’s Gender Policy, which emphasize gender equality and women’s empowerment. Building on this, the project will continue to

emphasize women's participation by involving them in enterprise management and ensuring their representation in events and committees. While the previous project faced challenges due to the lack of gender-disaggregated baseline data and the absence of a gender assessment during the inception phase, the project went through the preliminary gender assessment, which supports to acknowledges the need for continuous gender equality and women empowerment (GEWE) assessments to enhance benefits for marginalized groups. The detailed gender assessment has been carried out at the design of the project, and the gender impact assessment will be embedded into the final evaluation of the project. This approach will help track progress more effectively, ensuring better integration and measurement of gender-specific outcomes.

Meaningful participation of women and vulnerable groups, accountability mechanisms, and workload reduction for women was ensured during the community consultation. Stakeholder and community consultations have already been conducted in targeted provinces to ensure inclusivity. Project beneficiaries will include poor, climate/disaster vulnerable, food-insecure, unemployed, and marginalized groups, with a focus on households led by women, smallholder farmers, and those most at risk. A range of adaptation options were designed and assessed based on criteria such as impact, cost-effectiveness, and relevance to targeted communities. A series of discussions were held to set objectives, outputs, and outcomes of the proposed project based on the learnings of the CAFS-Karnali. The MoFE and WFP agreed to upscale the best practices executed in the CAFS-Karnali and extend the geographic area to Sudurpaschim province as well. The formal national and provincial level consultations were held between 2nd and 10th of April 2024 at one cohort and in May and June 2025 in second cohort. Wider stakeholders including relevant government institutions, non-government institutions, UN agencies, bilateral institutions and private sectors participated in the consultation meeting. The lessons learned from the CAFS Karnali, and the concept of the proposed project were presented, and feedback and suggestions were collected. The main concern was to extend and upscale the climate change adaptation interventions to the most vulnerable geographic areas of Nepal. Moreover, the stakeholders agreed that the climate change adaptation intervention from the government and other development partners like UN agencies is still minimal in comparison to the level of impacts that the people from remote areas are facing. Disasters events and extreme events are frequent, poverty level is reduced at a slow speed. They encouraged to development of an adaptation project with a focus on agriculture, food security and sustainable livelihood ensuring inclusiveness throughout the project cycle.

Since the local governments from the five (5) districts will play a key role in the execution of the activities, the discussions were held with all the proposed 11 local governments and collected their adaptation needs. Further, a total of 463 community people, including vulnerable and marginalized groups, and indigenous peoples, were consulted to collect their opinions on the previous intervention and future need to reduce climate change vulnerability. Out of them, 43.4% were female, 8% were the old people and 2% were persons with disabilities. Please see attached the details of the community consultation in Annex 2. The major concerns raised were:

1. Transition Away from Traditional Agriculture: There's a notable shift away from traditional agriculture towards daily wage jobs due to low crop yields, particularly for indigenous crops like *Phapar* (buckwheat)*, Jau (*barley), quinoa, Kaguno (foxtail millet) and *Chino* (proso millet). This transition is influenced by the need for immediate income and is accompanied by enduring social challenges such as discrimination and gender inequality.
2. Environmental Concerns: Increasing occurrences of hydrometeorological disasters like landslides and forest fires, exacerbated by changing rainfall patterns and drying water sources, are prominent. Environmental degradation, including soil erosion and declining livestock rearing due to pest infestation, further compounds these issues, reducing agricultural productivity.

3. Social and Economic Disparities: Wage gaps between genders, inadequate waste management, and declining land productivity contribute to social and economic disparities. Additionally, issues like early marriage and caste discrimination persist, impacting societal well-being.
   Climate Change Impacts: Climate change increases the health impacts related to vector borne diseases and reduces the production of indigenous crops, further straining local livelihoods and food security. The community people including the IPS observed following specific climate change impacts: These changes have led to food insecurity, seasonal migration, economic strain, and cultural disruption. Traditional livelihoods like barter trade, herb collection, and ritual calendars are increasingly difficult to maintain. Women and children are disproportionately affected, especially in tasks related to water and fuelwood collection. Youth migration is also eroding traditional knowledge systems.

The key findings of the community consultations are as below:

- ✓ **Agricultural Livelihoods and Challenges:** Communities including IPs rely heavily on agriculture, cultivating a variety of crops and rearing livestock using traditional methods, including open grazing. Additional income is supplemented through small-scale vegetable sales, masonry, and seasonal migration. Communities face environmental and social challenges such as pest and disease introduction with new crop varieties, significant reduction in forest cover, decreasing wild animal populations, gender discrimination, and wage disparities. The impacts of climate change are evident in changing rainfall and snowfall patterns, increased frequency of landslides, floods, and droughts, alongside drying water sources. Climate change has intensified these issues, with erratic rainfall and snowfall patterns, more frequent landslides, floods, and droughts, and the drying up of vital water sources. In Nepal's high Himalayan regions, IPs primarily depend on subsistence farming and livestock rearing. Due to limited local employment options, many households turn to seasonal migration and informal labour, with remittances offering sporadic financial support. Young people are increasingly worried about the growing reliance on migration and the lack of sustainable, locally available jobs.
  Men often struggle to access formal employment and rely on public works programs like FFA. Meanwhile, women, who shoulder the bulk of agricultural and livestock responsibilities, have minimal control over land and water resources. Despite their central role, property and livestock are typically registered under men's names.
  Agricultural productivity is hampered by poor access to quality seeds, irrigation systems, and mechanization, resulting in uncultivated land and low yields. Rangelands and forests—critical for grazing and medicinal plant harvesting - are under threat from overgrazing, soil erosion, and deforestation, jeopardizing ecological sustainability.
  Infrastructure remains inadequate, with limited access to safe drinking water, rising transportation costs, and worsening food insecurity. Women bear the heaviest burdens, often walking long distances to fetch water and collect fuelwood.
  Coping Strategies and Community Needs: The community has experimented with different crop varieties to cope with diminishing indigenous crop production and has expressed a need for external support in areas such as irrigation canal rebuilding, climate information management, and the development of irrigation facilities. Suggestions also include the creation of greenhouses for off-season farming, embankments, and vocational training for marginalized groups, along with eco-tourism initiatives to boost local income.

- ✓ **Seasonal Agriculture and Migration:** In certain areas, agriculture sustains livelihoods only part of the year, forcing locals to purchase food for the remaining months and leading to significant youth migration for work and education. This results in a lack of human resources for agricultural tasks, which predominantly leaves women to manage farming

and household chores. The community has turned to cultivating hybrid crop varieties and utilizing media like radio jingles to disseminate climate and disaster risk information. Recommendations focus on promoting commercial and off-season vegetable and fruit farming, enhancing local water sources, and cash crop cultivation suited to the area.

- ✓ **Climate Change Impacts and Recommendations:** Communities face altered climate patterns leading to decreased agricultural productivity and pastureland. There is a call for support in providing training for vulnerable groups, creating income-generating opportunities to reduce migration, and improving livestock management and market access for agricultural products. Community people including women and IPs have adopted following informal and local-level strategies:
    - Adjusting planting cycles to match new weather patterns
    - Diversifying income sources—from herding and farming to medicinal plant harvesting, trade, or labour
    - Using traditional irrigation (kulos) and constructing small water ponds
    - Shifting to resilient crops like buckwheat and millet
    - Participating in community forestry for conservation
    - Building terraces to combat erosion
    - Seasonal migration and remittances
    - Changing livestock routes to avoid degraded pastures
    - Despite these efforts, the lack of formal support systems, credit access, and infrastructure limits their resilience. Migration, including high-risk international routes, is becoming a more desperate but common response.

      These changes have led to food insecurity, seasonal migration, economic strain, and cultural disruption. Traditional livelihoods like barter trade, herb collection, and ritual calendars are increasingly difficult to maintain. Women and children are disproportionately affected, especially in tasks related to water and fuelwood collection. Youth migration is also eroding traditional knowledge systems.

Call for Action: There's a need for improved infrastructure, better market access, enhanced agricultural technology, and support systems to address these challenges effectively. Initiatives such as advancing agricultural equipment, increasing awareness of climate change, and providing support for vulnerable populations are crucial.

Limited Financial Capacity: While there's a strong willingness to collaborate on climate change adaptation activities, local governments have limited ability to co-finance these initiatives. This highlights a reliance on external support for significant infrastructural and technological improvements.

Overall, the findings underscore the complex interplay of environmental, social, and economic factors shaping local livelihoods and resilience in the face of climate change.

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

Nepal is a mountainous country with a high level of climate change impact on its natural resources and livelihood. This, coupled with poverty, exacerbates the impact and makes rural livelihoods more complicated, thereby increasing food insecurity. Over half of Nepal's poor live in the rural areas. 28% of the rural population is multi-dimensional poverty index poor as compared with 12.3% in urban areas. The multi-dimensional poverty is mainly concentrated in the Karnali,

Sudurpashchim and Madhesh Provinces[52].

The country is also in the process of graduating from a “least developed” to a “developing” nation by 2026, which demands enormous investments focused on development goals such as income, employment, education, health, infrastructure and so on. The impacts of hydrometeorological disasters, which are exacerbated by climate change hinders this progress, therefore GoN requires additional resources to invest in climate action and resilience building. For this, Nepal targeted to minimize the domestic financial resources to invest in climate action, and instead seek to access Official Development Assistance (ODA), with particularly focus on international climate finance, as it falls among the least responsible countries to cause climate change (it shares 0.056% of the greenhouse gas emission globally[53]).

Nepal, evident by its various policies and plans, is committed to addressing climate change and has built an enabling legal and regulatory framework to spur and implement climate action. GoN has taken steps to integrate climate change into development planning and budgeting[54]. The country introduced climate change coding into the national budget and expenditure tracking in 2013/14, enabling tracking of budget expenditure on climate change. Since then, the “highly relevant” climate budget accounted for roughly 5% of the total national budget due to limited public fiscal space[55]. To fulfil the climate ambition of Nepal as enshrined in the various policy frameworks and plans, Nepal requires an estimated US$ 20.5 billion for resilience/adaptation and US$ 46.4 billion for mitigation from now until 2030[56]. The total estimated investment requirement for the implementation of the National Adaptation Programme of Action (NAPA, 2010) was US$ 350 million; however, Nepal could only mobilize 21 % of the required budget until now. Historically, Nepal has not fully harnessed the resources available through international climate financing mechanisms. Given the country’s climate ambitions and adaptation targets, there is a huge gap in resources.

Nepal faces significant hurdles in directing resources toward climate adaptation due to a complex web of challenges stemming from its low-income status and a series of recent and ongoing crises. These include the devastation caused by the 2015 earthquake, which resulted in the loss of a quarter of the country's GDP that year, along with the need for ongoing recovery and reconstruction efforts in the aftermath of a more recent earthquake in western Nepal. Moreover, Nepal continues to grapple with the enduring effects of a decade-long armed conflict from 1996 to 2006, as well as over two decades of political instability. The socio-economic impacts of the COVID-19 pandemic and the economic repercussions of the Ukraine-Russia war further compound these challenges, significantly limiting the government's capacity to allocate resources toward climate adaptation initiatives. Compounding these challenges is Nepal's relatively weak institutional capacity and the limited scale of private sector investment in the country. This means that alternative funding options for climate adaptation projects are largely restricted to public sources. While ODA from bilateral or multilateral institutions provides some financial support, it often falls short of meeting the country's extensive climate finance needs.

Geographically, the targeted five districts (Humla, Kalikot, Mugu, Bajhang and Bajura) are vulnerable and have high exposure to multi-climatic hazards like landslides, floods, heavy rainfall, drought and so on. Every year cultivated land is swept away by disasters, particularly in the monsoon and becomes unproductive because of prolonged drought during the dry season. These

[52] Government of Nepal, National Planning Commission, 2021: Multidimensional Poverty Index: Analysis towards Action
[53] Ministry of Forest and Environment, 2021, Third National Communication Report to the UNFCCC.
[54] MoF, 2017. Climate Change Financing Framework
[55] ibid
[56] Nepal’s Status Paper for Conference of Parties (COP 26), 2021

districts need an external intervention to reduce the impacts and secure the rural livelihood from the multiple impacts of climate change. The local governments, despite their mandates, and being frontline to climate change, close to communities, are unable to contribute effectively to climate change adaptation and resilience building due to several reasons like lack of awareness and incentives to focus on the issue of climate change adaptation; an inability to finance the incremental costs of climate change adaptation and a lack of appropriate budgetary allocations from the federal government. Local governments of these targeted districts also require additional financial resources to respond and adapt to the impacts on agriculture, food security and livelihoods. to make the society climate resilient.

Considering these constraints, the Adaptation Fund emerges as a crucial resource for Nepal's climate adaptation efforts. As a dedicated fund specifically designed to finance adaptation projects and programs in developing countries, with a particular focus on those most vulnerable to climate change impacts, the Adaptation Fund provides a reliable and consistent source of funding. Additionally, as an accredited MIE, WFP can access and manage funds from the Adaptation Fund, thereby facilitating local capacity building and ownership of adaptation initiatives. Moreover, the Adaptation Fund prioritizes projects that benefit vulnerable communities, ensuring that those most affected by climate change are supported in adapting to its impacts. This makes it a particularly suitable funding option for mobilizing resources to address climate change in Nepal.

In addition, MoFE has expressed confidence in WFP's capabilities by endorsing its submission of a second Adaptation Fund fully developed proposal, underscoring the strong support for climate adaptation initiatives at the local level. In addition to seeking support from the Adaptation Fund, WFP intends to explore funding opportunities from the Green Climate Fund (GCF), further aligning with Nepal's climate financing needs. This multifaceted approach to funding mobilization reflects a concerted effort to address the adaptation gap in Karnali and Sudurpashchim provinces, the most rural and vulnerable regions of Nepal. This is the best opportunity to provide oversight and guide them in achieving inclusive and sustainable livelihoods and climate-resilient ecosystems and policies/programs/plans. Once the system is in place, the greater the amount of funding, the greater the number of climate-resilient subprojects that can be done, and the wider their impact can be. The proposed project is well-aligned with the AF’s investment priorities, and successful implementation should contribute to the achievement of improved climate resilience as below:

Component 1: Community and ecosystem resilience: Enhancing community-based participatory climate resilient strategies for adapted livelihoods, and sustainable natural resource management.

Baseline 1: The targeted local governments of the Karnali and Sudurpashchim Provinces are facing a high level of seasonal food insecurity, climate change and climate-related disasters as major food insecurity drivers. This is coupled with employment, and the youths and males are forced to migrate to fulfil their family’s basic needs abroad and to cities. The existence of many small household production units, lack of aggregation of products, and lack of food system-related technology transfer to farmers (climate resilience, post-harvest management, agro-forestry enterprises, etc) limit alternative livelihood opportunities and scope for income diversification is also highlighted in the targeted area. The local governments need additional resources to the annually allocated budget from the federal government to address the additionality impacts of climate change on livelihoods, to establish a climate resilient strategy in a participatory and inclusive way.

Adaptation alternative 1: From the AF intervention, the selected local governments in the Karnali and Sudurpashchim Provinces enhanced the use of climate-resilient practices and technologies in agriculture and food system transformation to increase crop yields and strengthen the resilience of the local food system; enhanced community-led adaptation processes integrated risk management and development of resilient and productive/protective community assets for resilience building. These practices will ensure that the poor and food-insecure people benefit from the income/job opportunities, increased production, and access to the market. established participatory and inclusive climate-resilient strategies and adapted livelihoods.

Baseline 2: The target areas are witnessing pest infestation and diseases in the agriculture and livestock sector, loss of agriculture and forest, drying up of water resources and damage to the infrastructure and assets, which support in increasing the vulnerability and reducing the adaptive capacity of the natural ecosystem. The dependency of the people on natural resources is high in comparison to the city dwellers, who, without alternative interventions, are not able to fulfil the demand and will move in the path of ecosystem exploitation and overuse.

Adaptation alternative 2: Although the local government has priority on the conservation of natural resources, the investment is not sufficient to address the climate additionality. Thus, the project envisaged support for the promotion of renewable energy technologies, mainly for women to establish a cottage enterprise and reduce their dependency on forests and other resources. The organic farming practices also support to rejuvenate the soil. Intervening in all these practices, the project will support building the climate-smart villages. At the end of the project, the funding will support building a resilient ecosystem and society.

Component 2: Climate governance and system strengthening: Capacity/system strengthening for improved last-mile climate information services to enable early/adapted actions and risk-informed climate-induced disaster management.

Baseline: Nepal has recently gone through an administrative restructuring in 2018. Under Nepal's constitution 2015, the local government has been given the mandate of formulating and implementing the laws and policies aligned with the federal laws and policies. However, the local government, although in its second tenure after federalization, has limited capacity to formulate and implement policies with climate change integration. The empirical experience indicates that local governments lack agro-meteorological information within their institution; as a result, the locals are not able to get information on time. The local governments made some necessary laws and policies, and they are at the stage of implementation; however, the policies have limited integration of climate additionality.

Adaptation alternative: Local governments in the targeted local governments have established a formalized structure for coordinated and vertically integrated CCA planning, increased their understanding of local climate change adaptation, and established new procedures. Climate change adaptation is mainstreamed into the planning and budgeting processes, and the voices of the communities and the most vulnerable inform LG plans and investments. Likewise, the climate information centres established thereby locally benefited.

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

The proposed project will ensure the sustainability of the project outcomes during the design and execution phase. The following strategies will be adopted:

Aligning with the organizational strategies and national policies: Through the CSP (2024-2028), WFP aims to bolster the sustainable livelihoods and resilience of vulnerable communities by developing climate-resilient assets, increasing agricultural productivity, and fostering livelihood diversification. This will be achieved through technical assistance and tailored support activities to address the root causes of food insecurity and malnutrition. WFP's role as the lead in environmental sustainability and disaster resilience in the UNSDCF for Nepal (2023-2027) positions it to coordinate UN agencies and government counterparts, scaling up best practices.

With a robust track record in climate adaptation interventions, including climate-smart agriculture and local development planning, WFP will leverage its expertise to align with its CSP objectives. WFP Nepal plans to continue with the implementation of similar activities under its new CSP, Strategic Outcome 3, Activity 5. Hence, the project is directly aligned with WFP's mandate, capacity, comparative advantage, and strategic priorities set out in the CSP. Likewise, as described earlier, the project aligns with the priority programmes of NAP and contributes to achieving the NDC targets from the agricultural sector and integrating climate change into the local-level planning process. The project also aims to contribute to achieving the ADS targets set in different pillars, namely sustainable livelihoods, food security, resilience, and inclusiveness.

The strong foundation within the implementing entity and the executing entity in Karnali and Sudurpaschim Provinces: As an accredited entity of the Adaptation Fund since 2010, WFP has mobilized over US$ 133 million for climate adaptation across 14 countries. WFP brings extensive operational expertise in food security, agricultural development, climate adaptation, and disaster risk reduction, especially in remote and vulnerable regions. In Nepal, WFP’s experience includes leading the first AF-funded project in Karnali Province and conducting thematic assessments like the CLEAR and climate risk studies. These initiatives provide critical insights for designing relevant and effective interventions tailored to local contexts.

WFP works in close collaboration with the Government of Nepal, particularly the MoFE and the MoALD. Together, these partnerships have driven successful climate adaptation projects, such as the Nepal Climate Change Support Programme (NCCSP) and Adaptation for Smallholders in Hilly Areas (ASHA), further advancing climate resilience objectives. As the lead UN agency for environmental sustainability and climate resilience under Nepal’s UNSDCF, WFP is well-positioned to scale up its impact. By leveraging lessons learned from past projects and working in close partnership with national stakeholders, WFP is committed to enhancing the effectiveness and efficiency of climate resilience efforts. This commitment aligns with broader global priorities for sustainable development, supporting transformative change and resilience-building in vulnerable communities.

Furthermore, MoFE has recognized and appreciated the successful completion of a recent AF project implemented by WFP and in advancing the goals and priorities of national climate change policy, NAP and NDC, including documentation. This project has been regarded as one of the exemplary project executions in terms of timeliness, quality, and results. Moreover, MoFE has conducted its own comprehensive assessment of the first phase of the AF project and considered it a model climate change adaptation initiative. As a result, the MoFE, in a formal letter (enclosed along with the proposal), expressed its endorsement of WFP to continue to be the MIE of the second phase of AF through the submission of the project proposal. With the lesson learned from the previous CAFS Karnali project, activation of Provincial-level Climate Change Coordination Committee (PC4); provincial climate change management information system hosting, provincial level coordination, linkages between the initiatives from line ministries, overlaps, guidance for the local level policies, providing the oversights and technical inputs for the local government

(climate-informed decision making). MoU with the local government, implementation tools and the system of local government are used to implement the project.

WFP actively contributes to climate-resilient infrastructure development, prioritizing a comprehensive and inclusive approach to green recovery. This includes fostering productive and protective assets that strengthen adaptation and resilience to climate change. WFP's efforts align with the GRID framework, which is a collaborative initiative of GoN with development partners including bilateral donors, IFIs and UN agencies. Through the LISP in Karnali Province, WFP partners with Local Governments to enhance ecosystem and community resilience. LISP emphasizes the implementation of nature-based solutions and climate-smart infrastructure to reduce climate-related vulnerabilities while creating green recovery jobs and reinforcing systems for long-term sustainability. WFP's strategic focus extends beyond immediate needs, embedding sustainable practices that prepare communities to withstand future climate shocks. This holistic approach, exemplified by initiatives in Karnali Province, offers replicable models for broader cooperation. The lessons and knowledge derived from these interventions inform future strategies and foster south-south and triangular cooperation, enabling the exchange of best practices and evidence-based solutions.

Building institutional sustainability: The institutional sustainability of the project will be ensured by building the capacity of the local government on climate change adaptation in general, securing food security, and building a sustainable livelihood through a participatory and inclusive approach. Further, the local government will be provided with the technical support to develop climate-informed policies and plans so that the climate additionalities will be addressed within the policies, which result in integration into the sectoral plans. In addition to this, the local government and community people will be capacitated to fully integrate and implement the actions identified and prioritized in the respective LAPAs of the local government. The demonstration and implementation of LAPA will ensure climate sustainability within the institutions. The past best practices and successful adaptation actions will be integrated into the LAPA, which will be included in LG's annual plans and budgets, as the LGs receive equalization grant from federal and provincial governments every year and they can allocate the budget for LAPA activities under forest, environment and DRR and infrastructure sectors. The LGs will implement the LAPAs with the public fund utilizing the management and execution experience and model of the project. The environment and disaster management committee within the local government will be capacitated to actively engage in the social forum and lead the advocacy and awareness for the local community on the climate change impacts and its adaptation measures in the agriculture and food security theme.

Building economic and financial sustainability: The project will support local governments in practicing a climate-informed planning process, integrating climate change adaptation into their development strategies. Implementing the proposed actions will address local governments' adaptation needs, reducing food insecurity and poverty. Financial sustainability will be ensured by allocating additional budget directly from the country's treasury to the targeted local governments for planned activities. This approach will reduce operational costs and regular investments in local infrastructure, ecosystem restoration, providing alternative livelihood options, and increasing agricultural productivity.

Layering and sequencing activities over the project years in agriculture production, on-farm and off-farm enterprise development, market linkages, and operation and maintenance will ensure multifaceted economic development of the community. This approach will familiarize community members with the processes and steps involved, capacitating them to develop business plans,

launch new businesses, and sustain existing ones. Training will equip them to anticipate risks and benefit from their ventures.

The proposal can expand on strategies to ensure the economic and financial sustainability of the value chains and enterprises supported by the project. This includes facilitating access to finance and credit facilities for farmers, processors, and entrepreneurs to invest in value chain infrastructure and operations. Promoting market-driven production and diversification into high-value, climate-resilient crops or products with strong market demand will be emphasized. Establishing sustainable business models and public-private partnerships for value chain development and market linkages will further support the project's goals. These strategies will help build robust, self-sustaining agricultural economies that are resilient to climate change and market fluctuations.

Environmental sustainability: The project aims from its component 2, to strengthen environmental sustainability and resilient natural resources management. This sustainability will be achieved through integrated water management, promotion of renewable energy, and providing support to develop climate-smart villages adopting nature-based solutions. The nature-based solution is proven to achieve environmental sustainability through the restoration of the forest, agriculture, wetland ecosystem, and river-basin management. In addition to this, the project encourages to use of local materials as far as possible for building the community assets.

Technical Sustainability: The project's goal is to establish community green infrastructure and showcase nature-based solutions for enhanced ecosystem resilience and livelihoods. It also aims to create a mechanism for the maintenance and utilization of developed infrastructure by the community. Assets will be transferred to either the community or local government for ongoing maintenance and use. Leveraging its experience from projects like CAFS Karnali and the LISP, WFP will build upon existing mechanisms for seamless transfer of assets and technology to local entities. The CAFS-Karnali and LISP have supported the LGs to establish local infrastructure repair and maintenance support fund at the LG level along with its operational guidelines, preparing infrastructure repair and maintenance plans at community levels and resilient local infrastructure management directives at the LG level and operational guidelines for agro-forestry enterprises for their sustainability through the government systems. Those LGs are still continuing these policy and operation systems. This project will adopt the best practices and ensure the sustainability of the project’s outputs.

Social Sustainability: The proposed project seeks to employ a participatory and inclusive approach, prioritizing the capacity building of community members, particularly women, marginalized groups, and persons with disabilities. Through this participatory process, the project aims to foster an inclusive society within the targeted local governments. It is anticipated that project activities will enhance the access of disadvantaged and marginalized populations to markets, services, and financial resources, thereby showcasing their skills and contributions. By promoting participation, the project aims to broaden access to resources and enable communities to address challenges such as climate change, income generation, and local leadership in climate action, migration, and restoration efforts. Furthermore, awareness and sensitization programs will empower community members to advocate for social accountability and constructive change, facilitating collaboration, innovation, and climate justice initiatives.

G. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

A detailed Environmental and Social assessment was carried out to determine potential environmental and social risks against the 15 principles outlined in the AF's Environmental and Social Policy, as set out in the table below. The screening tool consists of a list of around 20 general level 1 questions (indicated with two digits, e.g. 3.1) and around 60 detailed level 2 questions (indicated with three digits, e.g. 3.1.1). They are categorized in fifteen thematic areas that correspond with WFP's eight Environmental and Social Standards. The detailed environmental and social risk assessment is provided in Annex 4. Based on the screening, the risk level of this project is identified as Category B, primarily because Component 1 of the project includes USPs that are not yet fully defined. Prior to the implementation of the relevant activities, environmental and social risk screening of the USPs will be conducted to ensure that the overall project risk category B is not exceeded, and applicable ESS instruments to mitigate/minimise/control the risks are in place. The proposal prioritizes environmental and social sustainability, aiming to mitigate adverse impacts on project beneficiaries. It promotes inclusivity, ensuring gender, ethnicity, and economic equality. Two components focus on enhancing technical, environmental, and social knowledge while respecting beneficiaries' religion, indigenous knowledge, and rights. A detailed ESMP has also been developed (please see Annex 4) in order to mitigate the potential environmental and social risks that will be posed by the project at any stage of the project cycle from design, implementation and project conclusion. In addition, once the USPs have been identified and screened, the ESMP will be adjusted to accommodate identified potential environmental and social risks. The checklist of environmental and social principles is as below:

Table 12: Checklist of environmental and social principles

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law		**Low/no risk**: The components planned are highly relevant to the national, provincial and local laws and policies. The project is conceptualized with due consultation with the government agencies and will consult during the proposal development as well to ensure compliance with the relevant laws and policies.
Access and Equity		**Medium risk:** The project is designed to promote equitable access to activities and assets by women, marginalized groups, persons with disabilities and youth in project areas. They, the most vulnerable group to climate change, are the direct unique beneficiaries of the proposed project. Within this group, it is anticipated that the possible risk of certain leaders from the same group may benefit more than others, as a result of an entrenched system of privilege, access and authority. To mitigate the risk, all relevant community-level stakeholders is/will be consulted during the concept note and full proposal preparation phase. The details of the stakeholder consultation and the discussion agenda are elaborated in section H.
Marginalized and Vulnerable Groups		**Low/no risk**: The project is designed to provide support to marginalized and vulnerable groups. These include households headed by women, people with disabilities, pregnant and breastfeeding women (PLW), Dalit households etc. Project activities will be designed to empower vulnerable groups to make decisions on concrete adaptation actions, valuing their traditional and local knowledge. The project aims to increase the availability, quality and access to resources of marginalized groups. Concrete adaptation and value chain activities will be supported in which both women and men can participate, as well as female and male youth. The project will implement livelihood assets, and nutrition-sensitive asset creation targeted to improve the livelihood and nutritional status of poor people and vulnerable groups.

Human Rights		**Low risk**: The project affirms the rights of the people and promotes international human rights.
Gender Equity and Women's Empowerment		**Low risk:** The project ensures that women and men have equal opportunities to participate and receive benefits from community asset building, access to finance, income generation activities, and climate-resilient ecosystem development. A comprehensive gender assessment will be conducted during the full proposal formulation stage. In line with the new WFP Gender Equality Accountability for Results (GEAR) framework, which categorizes activities into Reach, Benefit, Empower, Transform, and Mainstream, the project will go beyond participation and benefits. It will focus on empowering women economically by providing new knowledge, skills, and information. This empowerment will extend to decision-making at the household and community levels, particularly concerning natural resources management. The project will implement strategies to ensure that informal and formal social institutions are transformed towards greater gender equality and social inclusion. This includes developing mechanisms to enhance women's roles in decision-making processes and leadership positions within the community. By fostering an environment where women are actively involved in natural resource management and community planning, the project aims to create sustainable and equitable development outcomes. The project's approach will be to not only reach and benefit women but also to empower and transform their roles in society, ensuring that gender equality and social inclusion are mainstreamed throughout all activities. This holistic strategy will contribute to long-term, sustainable improvements in gender dynamics and community resilience.
Core Labour Rights		**Low risk:** The project will ensure respect for international and national labour laws and codes, as stated in WFP's policies.
Indigenous Peoples		**Low/medium risk**: In Nepal, the Government of Nepal has officially recognized and enlisted 60 communities as Indigenous Nationalities (Indigenous Peoples) through the National Foundation for Development of Indigenous Nationalities (NFDIN) Act 2002. Among them, Byasi, Bhote, Mugal (Karmarong), Tamang and Magar are the Indigenous Nationalities residing in the project areas proposed for the project. These indigenous Peoples (IPs) have distinct cultural, social, and economic systems that must be respected in development interventions. Hence, WFP has conducted the Free, Prior, and Informed Consent (FPIC) with these indigenous communities for the proposed project recognizing that FPIC is a fundamental right of IPs aligned with international human rights instruments, including the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and ILO Convention 169. In Karnali Province, the Raute, who are nomads living in the jungle, are mostly spotted in various districts but are not found in the project-targeted locations. The project has carried out environmental and social risk screening as well, which found no negative impact on culture, identity, tradition, habitat and livelihoods of IPs. The Grievance Mechanism will be established while planning the project activities. The indigenous peoples of the project areas were also consulted at the time of community consultations in all 11 LGs during the preparation of the concept note and full proposal. The project will also promote nature-based solutions for social, ecological, climate and disaster resilience based on indigenous knowledge and systems. The detailed FPIC document is provided in Annex-9. A relevant Indigenous Peoples Plan will be elaborated and implemented in coordination with the project activities.
Involuntary Resettlement	**X**	**No risk:** The project will not lead to involuntary resettlement
Protection of Natural Habitats		**Low/no risk**: By implementing the activities to build the resilience of natural ecosystems such as nursery management, agroforestry, and promoting fruit plantation in the forest, the project will ensure the protection of natural habitats. In addition, consultations with government stakeholders and communities will ensure that the conversion or degradation of critical natural habitats (including those that are legally protected, officially proposed for protection, recognized for their high conservation value, or recognized as protected by traditional or indigenous local communities) is avoided. Component 2: perform social and environmental screening of activities. The project will implement its activities in the buffer zone area of the Rara and Khaptad Chhanna National parks. The project will follow the national standards and laws while constructing community infrastructure in those areas.
Conservation of Biological Diversity		**Low/no risk**: The project will only promote local varieties of the plants during the afforestation and agro-forestry which support biodiversity. However, the introduction of the drought-resistant crop variety may cause the deterioration of biological diversity if species are not correctly selected. It will be assessed during the full proposal development.

Climate Change		**Low risk**: The project will not generate any significant emissions of greenhouse gases. Many project activities will be designed to be low-emissions, as well as adaptive – e.g., the promotion of renewable energy technologies in value chains, and an increase in vegetative cover during afforestation, and agro-forestry practices. As the project area is highly vulnerable to the impacts of climate change, all project components and activities will be designed to contribute to increasing local capacities to sustainably face climate change in the long term and climate variability in the short and medium term.
Pollution Prevention and Resource Efficiency		**Low/medium risk**: The project is designed to minimize environmental impact by avoiding pollutant release and reducing resource use through energy efficiency and waste reduction. Agricultural activities will promote conservation practices, organic production, and integrated pest management, replacing chemical inputs with locally made biofertilizers and liquid manure-based fertilizers. Non-hazardous organic waste from NTFP processing and construction debris will be managed through proper disposal, recycling, and reuse. Awareness campaigns will ensure responsible waste handling, with measures by local governments, beneficiaries, and technical assistance to prevent accumulation and maintain environmentally friendly practices.
Public Health		**Medium risk**: The project is nutrition-sensitive and aims to improve public health by addressing malnutrition through sustainable agriculture, resource management, and nutritious value chains. Water harvesting and storage will be managed to prevent vector-borne diseases, with communities trained on safe practices. While construction of climate-resilient infrastructure may pose minor health and safety risks, especially for unskilled workers, these will be mitigated through proper training, adherence to safety standards, and precautions against natural hazards.
Physical and Cultural Heritage		**Low/no risk**: The project will seek to understand the role of traditional and local knowledge and how it can be blended with scientific information for climate resilience. Consultations and engagement with stakeholders and communities during implementation will ensure that any physical cultural heritage present on project sites is identified and potential negative impacts are avoided through project design.
Lands and Soil Conservation		**Medium risk**: The project will promote land and soil conservation through sustainable land management, erosion control, afforestation, and regulated farming practices. Rehabilitation of small-scale Farmer-Managed Irrigation Systems (FMIS) may cause minor soil erosion and reduce downstream water flow, but mitigation measures, such as erosion control, maintaining environmental flows, and redirecting water back to streams, will minimize impacts on ecosystems and water availability. Activities like plantation, NTFP conservation, indigenous herb protection, and rotational grazing will further support ecological balance and adaptation.

PART III: IMPLEMENTATION ARRANGEMENT

A. Adequacy of project / programme management arrangements, in compliance with the Gender Policy

1. Project Management

WFP will act as Multilateral Implementing Entity, in charge of financial oversight, monitoring, and reporting of the progress to the Adaptation Fund. With technical assistance from WFP, the MoFE, which is also the Designated Authority (DA) for AF, and the MoALD will act as co-Executing Entities, working closely at the provincial level with the MoITFE and the local governments. The project governance structure will include a national project steering committee housed at the MoFE, provincial-level project coordination committees at MoITFE, and local project management committees at targeted project municipalities. All project activities will be integrated into the national budget and programme of government at different levels through the on-budget/on-treasury mechanism adopted by the Government of Nepal for similar projects. The implementation of project activities and funds management will be guided by the Project's Standard Operating Procedures, which will be jointly developed and agreed upon by the IE and EEs at project inception, before commencing the execution of project activities. The budget of the project will be managed through a separate bank account maintained by MoFE as the executing

entity. WFP and executing entities will collaborate with local NGOs and work closely with relevant departments of the government for the field implementation of project activities and social mobilization. The key role of IE and EE is mentioned below:

Implementing Entity. WFP is submitting this project as an accredited Multilateral Implementing Entity (MIE) for the AF. In its capacity as MIE, WFP will oversee the project cycle management, overseeing overall project progress, including financial oversight, monitoring, and evaluation support, as well as technical backstopping and reporting to the AF. The project will be coordinated through the support of the WFP Country Office. Further technical support will be available from the WFP Regional Office in Bangkok, Thailand, and WFP headquarters in Rome, Italy, as needed. WFP will recruit and deploy the technical assistance (TA) staff to the executing entities and local governments for the execution of the project activities. WFP's climate and resilience portfolio manager (Strategic Outcome Manager), Climate Change Specialist, Resilient Infrastructure and ESS Specialist, GEDSI Specialist, M&E Specialist and other subject experts will provide technical backstopping, guidance and oversight to the TA staff.

Executing Entity (EE): MoFE and MoALD will be the EEs. They will collaborate with project-implemented local governments for the field-level execution of project activities. The EEs will be responsible for the effective and efficient delivery of the project outputs and ensuring objectives and outcomes are achieved. The EEs will coordinate with government bodies and non-governmental organizations at the national, provincial, and local levels.

2. Project Governance Structure:

Project Steering Committee: A Project Steering Committee (PSC) shall be established under the leadership of the Secretary of the Ministry of Forests and Environment (MoFE) to provide strategic oversight and overall direction for the project. The PSC will guide the project throughout its implementation, ensuring effective oversight and strategic alignment. Annually, the PSC will review and approve the project's work plans and budgets and provide strategic guidance to the Project Management Unit (PMU) and all executing partners.

Composition of the PSC:

- **Chair** – Secretary, Ministry of Forests and Environment (MoFE)
- **Member** – Joint Secretary, Planning, Monitoring and Coordination Division, MoFE
- **Member** – Joint Secretary, Ministry of Finance (MoF)
- **Member** – Joint Secretary, Ministry of Agriculture and Livestock Development (MoALD)
- **Member** – Joint Secretary, Ministry of Federal Affairs and General Administration (MoFAGA)
- **Member** – Joint Secretary, Ministry of Energy, Water Resources and Irrigation (MoEWRI)
- **Member** – Secretary, Ministry of Industry, Tourism, Forests and Environment (MoITFE), Karnali and Sudurpaschim Provinces
- **Member** – Secretary, Ministry of Land Management, Agriculture and Cooperatives (MoLMAC), Karnali and Sudurpaschim Provinces
- **Member** – Representative from the two local governments implementing the project – to be selected the LGs on annual rotational basis (every year 2 LGs over 5 years)
- **Member** – Country Director and Representative, WFP Nepal
- **Member-Secretary** – Joint Secretary, Climate Change Management Division, MoFE

Representatives from other relevant institutions and stakeholders may be invited to participate in PSC meetings, depending on the agenda and issues under discussion. The composition of the PSC may be revised as necessary at the commencement of the project. It is important to note

that PSC members will not be employed by the project, and therefore, no budgetary provisions have been allocated for their participation. The PSC will be hosted by MoFE and will convene at least biannually, or more frequently on an ad-hoc basis as required.

Responsibilities of the PSC:
The PSC shall undertake the following responsibilities, among others:

- Provide strategic guidance and high-level technical and policy advice for the project.
- Review and offer recommendations on annual work plans and budgets.
- Exercise oversight over the Project Management Unit (PMU).
- Approve annual work plans submitted by the PMU.
- Monitor the overall progress of the project.
- Provide feedback based on annual supervision missions and mid-term reviews.

Project Management Unit (PMU): Upon receipt of funding, the Project Management Unit (PMU) will be established with the MoFE to manage all execution responsibilities and be responsible for the progress reporting on all field-level activities. The PMU will be tasked with the day-to-day operations and management of the Project activities under the direct supervision of the National Project Director (NPD), a joint secretary and chief of CCMD of MoFE. There will be two National Project Managers (NPM) in the PMU, Under Secretaries assigned by the MoFE and MoALD to oversee the forest, biodiversity and natural resource management; and agriculture related project interventions respectively. NPD will provide the oversight for the project and supports the PSC in the decision-making process. Likewise, NPMs serve as the focal point of this project from MoFE and MoALD. The NPD and NPMs will work partially on the project, and they do not work on the project daily. The oversight of the project is their additional responsibility in addition to their regular ToR in the civil service. In addition to the NPD and NPMs, MoFE will deploy an account officer as well for the project's financial management/monitoring, and reporting. Similarly, the LG's whole workforce will be involved in the execution of the project at the ground level along with their regular service delivery and implementation/execution of different programmes/projects/plans. According to the Government of Nepal's policy, Government staff assigned to the project will be deployed by the Government of Nepal with no additional salary burden on the project. Their salaries will be paid from the government's public funds, in line with standard practice in similar programmes and projects. The national project coordinator will be hired by WFP as TA staff for the PMU to technically coordinate the project execution, who will closely work with the project focal points assigned by MoFE and MoALD and the WFP's climate and resilience portfolio manager (Strategic Outcome Manager), Climate Change Specialist, Resilient Infrastructure/ESS Specialist, GEDSI Specialist and other subject experts. The PMU will:

- Be responsible for the coordination of all project activities funded by the project and undertaken by the executing entities.
- Be accountable for all fiduciary matters, including financial management, procurement and project disbursements.
- Oversee financial disbursement to the local governments for the execution of approved project activities (conditional grants).
- Ensure coordinated delivery of the agreed project outputs and activities.
- Coordinate all partners, stakeholders and suppliers involved in project delivery. In addition to field activities, the PMU will coordinate and consolidate monitoring, learning and knowledge products with the support of relevant experts involved in project delivery.
- Prepare annual plans and budgets.
- Liaise with Provincial and Local governments for timely and quality project execution. The TA team at the PMU Kathmandu will coordinate with NPMs from both the ministries on a regular basis and ensure the project is on track in terms of progress.
- Manage the technical issues related to project execution and to support for day-to-day

management of the project.

- Consolidate the project's annual reports, share the reports with WFP, MoFE and MoALD and submit the project's annual project performance reports to AF through WFP.

Local Project Management Committee (LPMC): The project will establish LPMC in each LG for smooth planning, implementation, monitoring, reporting and day-to-day management of the project execution on the ground. The chairperson/chief of all the Local Governments will chair the LPMC. The ward chairpersons and section chiefs of the local governments will be the members, and the chief administrative officer will be the member secretary of the LPMC. The project's TA staff assigned for the LG will be invited as members of the LPMC.

The project management structure is provided below.

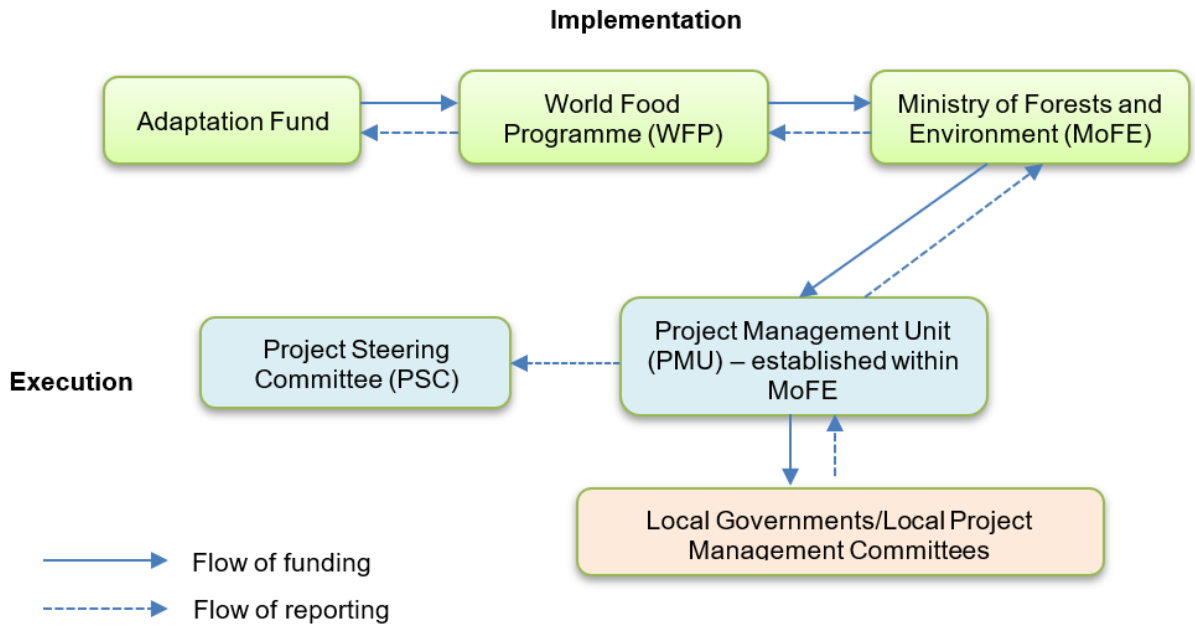


Figure 8: Project management structure

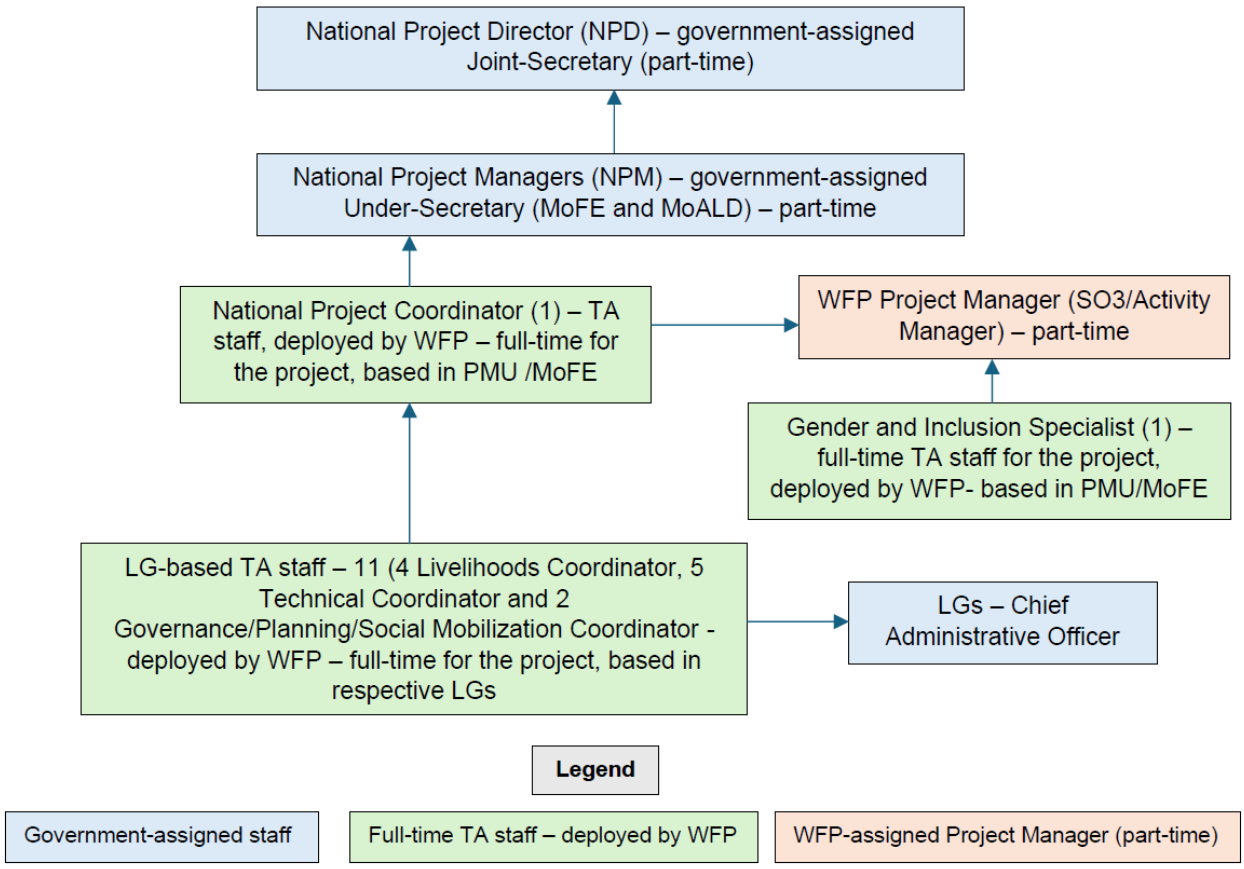
The role and responsibilities of various entities involved in project execution/management are mentioned below:

- **MoFE:** Manage project funds, carry out annual fiscal transfer (project fund) to the LGs for project execution based on annual plan and budget, provide periodic progress and financial expenditure report to WFP, carry out annual internal/external audit and provide audit report to WFP and provide technical guidance, standards, and quality assurance oversight to LGs for interventions related to agro-forestry and climate-smart village development under output 1.1, activities related to output 2.1, output 3.1, 3.2 and 3.3, and monitoring of project activities under relevant outputs.
- **MoALD**: Provide technical guidance, standards, and quality assurance oversight to LGs for interventions related to climate-resilient agriculture of output 1.1 and project activities under output 1.2 and monitoring of project activities under relevant outputs.
- **MoITFE/MoLMAC:** Support the LGs to align the project activities with provincial policy,

strategy, standards, and plans, and monitor the project implementation for all outputs. Establish and operationalize the PCCMIS, with the project's support.

- **LGs:** Execute the project activities based on the annual conditional grant provided by MoFE (EE), incorporating project-specific activities and budget in LG's annual programme and budget, following LG's regular procurement, administrative and financial systems/procedures and oversight mechanisms for all outputs.
- **WFP:** Recruit and deploy TA staff to the EEs, provide technical assistance for project activities execution, procurement of goods and services for project inception, monitoring and evaluation, and monitoring and oversight of the project activities for all outputs.

Technical Assistance (TA) arrangement for project execution: The Government of Nepal has requested WFP to provide technical assistance for the execution of this project. Since LGs will execute the project activities, incorporating project-specific activities and budget in LG's annual programme and budget, and following LG's regular procurement, administrative and financial systems/procedures and oversight mechanisms for all outputs, the whole mechanism and workforce of LGs will be involved in project's execution along with their regular public service delivery and implementation/execution of their projects/plans. They lack some technical expertise to deliver the project activities. Hence, WFP, in agreement with GoN, will provide implementation support and direct project services; however, the full accountability for the execution of the project remains solely with the EEs. To support the existing staff of EEs and LGs in execution of the project, a team of TA staff led by the National Project Coordinator will be recruited by WFP as per WFP's recruitment rules and regulations and will be fully deployed to the project (EEs/LGs) to support the government in project execution. The National Project Coordinator and Gender and Inclusion Specialist will be based at the PMU. The TA team at the LG level will consist of 4 Livelihoods Coordinators (specializing in agriculture and forestry), 5 Technical Coordinators (programme engineers), and 2 Planning, Governance, and Social Mobilization Coordinators. These personnel will cover 11 LGs from four clusters: Mugu, Kalikot, Bajura/Humla, and Bajhang. The TA staff will be recruited by WFP as per its standard human resource (HR) rules and regulations. The terms of reference (ToR) and selection criteria for these positions will be jointly developed by the WFP Country Office and the MoFE. TA staff will be accountable under WFP's contractual arrangements and HR policies, including entitlements and performance standards. While fully deployed to their respective duty stations, they will adhere to the working norms and daily operational procedures of the Government. The WFP Country Office's Strategic Outcome Manager for the climate and resilience portfolio will serve as the Project Manager, with overall responsibility for project implementation, oversight, and reporting to the Adaptation Fund. The TA team will receive technical guidance and support from WFP Country Office specialists, including the Strategic Outcome/Project Manager, Climate Change Specialist, Resilient Infrastructure/ESS Specialist, Gender Equality, Disability and Social Inclusion (GEDSI) Specialist, Monitoring and Evaluation Specialist, and other relevant support function units i.e. human resource, finance, security, information, communication and technology, M&E etc. The reporting arrangement of the project management team (government-assigned staff and TA staff) is as below:



The key role and responsibility of the TA staff are mentioned below:

Table 16: TA staff roles

S.N.	Position	Duty Station/Coverage	Key roles/functions
1	National Project Coordinator (1)	PMU-Kathmandu	• Prepare an annual work plan and coordinate with specialists and provincial coordinators in the implementation of the work plan. • Regularly track the progress/performance of the project based on the plan, deliverables, and performance indicators. • Ensure the achievement of the program/project in accordance with the timeline. • Coordinate and report project progress to the Project Manager and Project Management Unit (PMU). • Prepare quarterly and annual project reports. • Provide regular updates to the PMU and steering committee.
2	Gender and Inclusion Specialist (1)	PMU-Kathmandu	• Coordinate the implementation of gender action plan of the project. • Provide technical guidance and support to the TA team and LGs on gender mainstreaming in planning, implementation, monitoring and evaluation activities. • Lead the gender and inclusion related in knowledge management and reporting.
3	Technical Coordinator (Engineering) (5)	Cluster LGs	• Provide hands-on technical support to LGs for the overall delivery of resilient infrastructures as per the project's plan. • Support LG in strengthening the system for the delivery of climate-resilient and inclusive infrastructure delivery. • Support LGs in quality assurance of construction and sustainability (operations and maintenance) of local infrastructure through the LG institutional mechanism.

4	Livelihood Coordinator (Agriculture/Forestry) (4)	Cluster LGs	• Provide hands-on support to LG for enhancing the livelihoods of vulnerable communities through climate-resilient agroforestry and agriculture. • Raise awareness among farmers and facilitate access to agriculture insurance, including weather-index-based insurance and livestock insurance products. • Support to establish new climate-smart villages in each targeted local government, scaling up the national initiative. • Provide support to the farmers in post-harvest solutions. • Support smallholder farmers, especially women and other marginalized groups, to aggregate into farmer groups/cooperatives and sell their produce to the national mid-day meal programme implemented in the community schools. • Organize training to demonstrate and promote post-harvest management technologies, non-timber forest products, and small agroforestry businesses.
5	Planning, Governance and Social Mobilization Coordinators (2)	Cluster LGs	• Provide hands-on support to assigned LGs for evidence-based deliberative decisions, planning and budgeting of local-level climate action, • Enhance communities' access to last-mile climate information and advisories with universal accessible means of communication. • Support smallholder farmers, especially women and other marginalized groups, to aggregate into farmer groups/cooperatives and sell their produce to the national mid-day meal programme implemented in the community schools. • Social mobilization support in the implementation of climate-resilient infrastructure. • Support the local governments for risk-informed, evidence-based and needs-costed disaster preparedness, contingency planning, early actions, and effective response linked with the government's annual planning and budgeting system. • Deliver financial literacy training to improve farmers' investment capabilities.

4. Project's Financial Management, Procurement and other arrangements

Arrangement of Fund Flow:

The project will be implemented as an on-budget government programme, within which Financial Assistance (FA) will be On-treasury, and Technical Assistance (TA) support will be Off-treasury. On-treasury financial resources will be channelled to the local level through fiscal transfers from the federal government. In accordance with the funding agreement between the AF and WFP, resources will be transferred from AF to WFP. The WFP Nepal Country Office will enter into a Project Implementation and Technical Assistance Agreement with the MoFE, which will include provisions for the transfer of AF grant resources to the Executing Entity (MoFE/PMU). Disbursements will be made in alignment with annual work plans and disbursement schedules mutually agreed upon by WFP and MoFE/PMU. WFP shall transfer AF funds to the Ministry of Finance (MoF) of Nepal, which will subsequently disburse funds to MoFE and onward to Local Governments (LGs) through appropriate mechanisms, based on the approved annual work plan and budget. WFP will retain a portion of the funds, as stipulated in the approved budget, to provide technical and operational support to Executing Entities for effective project implementation.

The GoN follows a structured budget cycle, ensuring that all allocations are aligned with approved annual work plans. MoFE will integrate project activities and budgets into the public finance management systems framework. To ensure fiduciary compliance and facilitate annual audits by Nepal's Office of the Auditor General (OAG), MoFE will establish a dedicated bank account for the receipt of project funds. In accordance with Article 251(1)(c) of the Constitution of Nepal, the GoN may provide conditional grants to local governments for the implementation of national and sub-national programmes. These grants shall be governed by specific terms and conditions to ensure transparency and accountability. Accordingly, project funds will be transferred to LGs, which will serve as implementing entities at the field level. Disbursements to LGs will be made as conditional grants, accompanied by comprehensive operational guidelines detailing fund utilization procedures, eligibility criteria, and compliance and reporting requirements. LGs will manage project funds through the Sub-national Treasury Regulatory Application (SuTRA), a web-based public financial management system that promotes transparency in planning, budgeting,

and accounting. Local Governments will be responsible for executing project activities and procuring goods and services in accordance with national laws and regulations.

Accounting and financial reporting: The AF grant will be separately accounted for by the Government and therefore readily identifiable and made available to the public at all times. The PMU shall assume responsibility for the accounting and fiduciary oversight of all funds disbursed to executing entities. The PMU, in consultation with the WFP, will develop a comprehensive Project Execution Guideline/Manual, which will be submitted for approval to the PSC. At the local level, financial management and reporting will be conducted through the SuTRA, a multi-functional, web-based treasury platform that supports budgeting, accounting, and reporting functions. SuTRA facilitates both cheque issuance and electronic fund transfers (EFTs). Accordingly, the project's financial reporting will be based on outputs generated by SuTRA. These financial reports are aligned with the Government of Nepal's designated financial reporting framework, namely the NPSAS, which are based on the cash-basis IPSAS. The Government of Nepal shall ensure that all goods and services financed through the AF grant are utilized exclusively for the purposes outlined in the approved project document. Furthermore, the Government commits to full cooperation with WFP and its authorized personnel during any assessments of the public financial management system, including the provision of all necessary information and documentation to facilitate effective evaluations. In line with fiduciary requirements, the Government shall submit to WFP the Annual Audited Financial Statements issued by the OAG within nine (9) months following the end of each Nepali fiscal year. These statements shall confirm that the AF grant, managed through on-budget and on-treasury modalities, has been utilized in accordance with the intended objectives and approved plans.

Arrangements for procurement:
Under the project, procurement responsibilities shall primarily rest with LGs, which serve as the principal executing entities at the field level. LGs shall oversee the entire procurement cycle - including planning, sourcing, contracting, and quality assurance - in accordance with approved work plans and budgets. All procurement activities shall be conducted in strict compliance with the Public Procurement Act (2007), Public Procurement Regulations (2007), and any supplementary directives issued by the Government of Nepal or the MoFE. LGs shall utilize the Electronic Government Procurement (e-GP) system for the procurement of works (e.g., construction activities), goods (e.g., construction materials, training materials, agricultural inputs, tools), and consulting services required for project implementation. WFP has carried out an assessment of procurement-related legislation, policy, standard and practice of the government and WFP which found that the basic principles of competitive, transparent and fair procurement are compatible in the procurement system of both government and WFP. The government's procurement system and process align with WFP's standard procurement rules and regulations.

LGs will leverage their existing institutional structures - including procurement committees, designated procurement officers, financial administration personnel, and sectoral experts - to ensure compliance, efficiency, and value for money. To facilitate timely and effective procurement, LGs shall receive technical assistance from WFP and coordinate with MoFE or the central PMU for technical backstopping as necessary. The Public Procurement Monitoring Office (PPMO), the national authority responsible for overseeing public procurement, will provide technical guidance and closely monitor procurement processes to ensure adherence to national standards and promote good governance. All procurement activities shall be documented and tracked through the Public Asset Management System (PAMS) and related platforms, thereby reinforcing transparency, accountability, and audit readiness.

Infrastructure construction under the project shall follow both the user-committee and contractor-based models, incorporating improved modalities developed under LISP, implemented by the MoFAGA in selected LGs of Karnali and Lumbini Provinces with technical assistance from WFP. Under these improved modalities, LGs shall ensure:

1. Deliberate and scoring-based prioritization of infrastructure projects;
2. Maintenance of a database of unemployed and poor households to facilitate wage employment and ensure wage payments through the banking system;
3. Use of user committees (UCs) exclusively for community/labour mobilization and material handling;
4. LG accountability for procurement, financial management, direct wage payments, construction quality assurance, monitoring and supervision, and establishment of a local infrastructure repair and maintenance support fund and a grievance redress mechanism;
5. Mandatory employment of local unemployed individuals in both UC- and contractor-managed projects;
6. Implementation of public auditing, accidental insurance, and other safety and protection measures.

These measures are designed to mitigate fiduciary and corruption risks, address the limited infrastructure delivery capacity of UCs, and strengthen environmental and social risk management and quality assurance mechanisms. To enhance the resilience of infrastructure to climate and seismic shocks, the project will integrate “green” conservation approaches with “grey” engineering techniques, promoting the development of nature-based, climate-smart, and universally accessible infrastructure, in accordance with applicable national standards.

Institutional Capacity, Fiduciary Risk Management, and Accountability Framework:
The MoFE serves as the Government of Nepal’s designated focal ministry for climate change-related conventions and projects supported by the Global Environment Facility (GEF), Least Developed Countries Fund (LDCF), GCF, AF, and other multilateral and bilateral development partners. To date, MoFE has managed 37 GEF/LDCF-funded projects with a cumulative value of US$ 102 million, of which 18 projects have been successfully completed. Additionally, MoFE is currently implementing four single-country GCF-funded projects amounting to US$ 148.3 million, utilizing an on-budget, on-treasury modality. MoFE and the MoF have also successfully executed other major climate change adaptation and mitigation initiatives, including:

- NCCSP Phases I and II (US$ 50.9 million, funded by UK/FCDO),
- Resilience, Adaptation and Inclusion in Nepal (RAIN) (US$ 52.36 million, funded by UK/FCDO),
- Building Climate Resilience of Watersheds in Mountain Eco-Regions (US$ 28.17 million, funded by ADB),
- Climate-Resilient Landscapes and Livelihoods Project (US$ 30 million, funded by ADB),
- Development Policy Credit (DPC) of US$ 100 million from the World Bank to support the implementation of Nepal’s GRID strategy.

A significant portion of these project funds has been executed at the local level through conditional fiscal transfers from the federal government to Local Governments. To systematically assess fiduciary risks at the sub-national level, the Government of Nepal has developed a Fiduciary Risk Assessment (FRA) Framework, led by the MoFAGA and implemented through District Coordination Committees (DCCs). The FRA evaluates 100 indicators across five core domains: planning and budgeting, procurement, accounting and reporting, monitoring and evaluation, and revenue management. In Fiscal Year 2080/81 (2023/24), FRA scores in the project’s target LGs were found to be satisfactory i.e. Kalikot-Tilagupha: 96.5/100, Mugum Karmarong: 91.5/100.

The Natural Resource and Fiscal Commission (NNRFC) has introduced performance evaluation tools under the Province and Local Level Performance Evaluation Directives (2021), which include 11 indicators for provinces and 17 for local governments, with a strong focus on Public Financial Management (PFM). These performance scores are directly linked to the allocation of federal grants, thereby incentivizing improved governance and financial performance at the sub-national level.

To enhance community accountability and transparency, the project will institutionalize Grievance Redress Mechanisms (GRMs) and conduct mandatory public hearings at key stages of implementation. Regular publication of financial and performance reports will further promote transparency. The project will also strengthen both internal and external audit systems. The OAG will conduct independent financial and performance audits, while internal audit functions within MoFE and LGs will be reinforced.

Capacity building is a cornerstone of the fiduciary framework. The TA team will provide targeted training to LG staff on financial reporting, e-procurement, anti-corruption measures, and compliance with fiduciary standards to ensure sustainable institutional capacity. To improve budget reliability, the project will emphasize realistic planning, streamlined fund flow mechanisms, and timely disbursement. Risk mitigation will be embedded through comprehensive ESMP, regularly updated risk registers, and adaptive management approaches, including mid-term reviews to address emerging risks.

Asset management risks will be mitigated through rigorous investment appraisals, mandatory feasibility studies, and detailed post-construction maintenance planning. Participatory and evidence-based planning will be promoted, with user committees actively engaged in community-level monitoring and oversight. The project will invest in upgrading financial data management systems and continuously enhance the reporting capacity of local governments to ensure accuracy and accountability. Structured audit follow-up mechanisms and technical reviews will institutionalize continuous oversight, ensuring transparency, value for money, and the long-term sustainability of project outcomes.

Fraud Prevention and Safeguarding Commitments

WFP and the Government of Nepal maintain a zero-tolerance policy towards fraud, corruption, and any fraudulent behaviour that may result in the misuse or misappropriation of project funds. Both parties are fully committed to cooperating with investigations into such incidents, whether led by WFP, the Government, or their duly authorized representatives. WFP may conduct, at any time during the project implementation period and for up to five years following project completion, additional audits, on-site inspections, and spot checks. These oversight activities may be carried out jointly with the Government or independently by WFP or its designated representatives.

In alignment with international safeguarding standards, WFP and the Government also uphold a zero-tolerance approach to inaction in addressing Sexual Exploitation, Abuse, and Sexual Harassment (SEAH). EEs and implementing partners are required to take all reasonable and appropriate measures to prevent SEAH involving any individual associated with the delivery of the project, whether through their own personnel or contracted service providers. They must also ensure timely and appropriate responses to any reported incidents. The Government of Nepal commits to applying the Inter-Agency Standing Committee (IASC) Six Core Principles on the prevention of sexual exploitation and abuse (PSEA), and to adhering to the IASC Minimum Operating Standards on PSEA and/or the Core Humanitarian Standard on Quality and Accountability.

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

A comprehensive financial and project/programme risk assessment has been conducted in accordance with the methodology established by WFP. In addition, the WFP Risk Catalogue has been employed to categorize the identified risks into the following domains: fiduciary, financial, operational, environmental, and strategic/political. This methodology evaluates risks based on their probability of occurrence and the potential impact on the overall achievement of project objectives. The combination of these two factors - likelihood and impact - determines the overall risk rating for each category, thereby informing the level of seriousness associated with each risk area. Table 17 summarizes the methodology and scale applied to each of the risks when being evaluated:

Table 14: Financial and Project/Programme Risk Assessment Methodology and Scales

Likelihood	Impact	Seriousness (Overall Risk Level)
When assessing likelihood, a combination of future probability and frequency of past occurrences is considered. The assessment is done at the country level, considering climate-related projects that have been managed by the country.	When assessing the potential impact of a risk, what it mainly considers is the Implementing (IE) and Executing Entities (EE) ability to deliver, continue operations, mitigate substantial financial and resource losses and protect the fund´s credibility. The assessment is done at the country level, considering climate-related projects that have been managed by the country.	The seriousness rating is calculated by multiplying the impact risk ranking and the likelihood risk ranking.
Scale		
Very Unlikely (1): The event has never happened or is very unlikely to happen more than once in 20 years.	Negligible (1): The IE and EE can still achieve the project's objectives and the overall project implementation with limited constraints.	**a. Low**: 1-7 **b. Medium**: 8-14 **c. High:** 15-25
Unlikely (2): The event has only happened once in the last 5-10 years or is unlikely to happen in the next ten years.	Minor (2): The IE and EE can still achieve the project's objectives and the overall project implementation, but not fully or in a timely manner.	
Moderately Likely (3): The event has happened once in the last 2-4 years or is likely to happen in the next 2-4 years	Moderate (3): The event hinders the IE and EE objectives and the overall project implementation.	
Likely (4): The event has happened once in the last year or is likely to happen in the next 1-2 years.	Severe (4): The event significantly hinders the IE and EE objectives and the overall project implementation.	
Very Likely (5): The event has happened on a regular basis over the last year or is likely to occur in the next year.	Critical (5): The IE and EE may be unable to operate, or the event could paralyze the overall project implementation	

The overall risk ranking for the project is medium risk. Mitigation measures have been elaborated to minimize identified potential risks and their implementation will be monitored. Table 18 summarizes the major risks identified for this project and the associated mitigation measures:

Risk	Likelihood		Impact		Seriousness (Overall Risk Level)		Mitigation/Remedy Mechanisms	Seriousness after Mitigation Strategy (Overall Risk Level)
	Rank	Description	Rank	Description	Rank	Description		
Fiduciary Risks								
Noncompliance with the Adaptation Fund policies and standards during project implementation	1	Very Unlikely	5	Critical	5	Low	Strong supervising mechanisms will be implemented by WFP to guarantee that the Executing Entity (EE) complies with the fund´s rules and regulations throughout the project implementation. Checks will be routinely done to assess compliance, and corrective actions will be taken when needed.	Low
There is a misappropriation of project funds by the Project Implementing Agency	1	Very Unlikely	5	Critical	5	Low	No need for a mitigation/remedy strategy for now.	Low
Financial Risks								
Financial underutilization by the Project Implementing Entity.	2	Unlikely	2	Minor	4	Low	No need for a mitigation/remedy strategy for now.	Low
There is misutilization of project resources/assets by the beneficiaries and the Implementing and Executing Agencies	2	Unlikely	5	Critical	10	Medium	Strong supervision mechanisms will be implemented by WFP to guarantee that resources are spent as expected by the Executing Entity (EE). MoFE will manages the funds and provide fiscal transfer to the LGs as conditional grants on annual basis based on specific annual plan and budget and the budget and activities will be incorporated in LG's annual plan and budget and the budget planning and expenditure will be recorded in the web-based public finance management system for the government – LMBIS and SuTRA and the financial expenditure reports automatically generated by the SuTRA will be used for the project's financial reporting. The constitutional and competent independent auditing agency- the Office of the Auditor General will carry out an external audit of the MoFE and LGs annually. Many donors, i.e. FCDO, World Bank, ADB, have conducted fiduciary risk assessments of the federal, provincial and local governments, which have shown low risk; hence, many donors have channelled funds through the government's treasury.	Low
Delay in activities onset caused by late disbursements	3	Moderately Likely	3	Moderate	9	Medium	Annual operational plans and APPs will be formulated in coordination with EEs and LGs.	Low
Significant changes in input prices decrease the project's ability to purchase all required elements/materials for successful implementation	3	Moderately Likely	3	Moderate	9	Medium	Constant monitoring mechanisms will be in place to create resource-maximization plans. WFP will collaborate with MoFE, MoALD, MoITFE and LGs to update and/or develop these mechanisms. Corrective actions will be timely taken when needed. The appropriate reduction in the number of beneficiaries and quantity of activities will be done whenever required.	Low
Operational Risks								
Inefficient prevention, detection and responding	3	Moderately Likely	4	Severe	12	Medium	IE and EEs will work closely with the provincial and local	Low

to sexual exploitation and abuse (SEA) of project beneficiaries by TA staff, provincial and local Government officials, service providers or contractors who has direct affiliation with beneficiaries while executing project activities, leading to increased risk of SEA on beneficiaries especially women and girls and reputational damage for the IE and EEs.							governments to increase awareness and understanding of SEA, including strengthening their existing grievance handling mechanism by providing necessary technical guidance and orientation sessions for TA staff, LGs staff and officials and the community people on WFP's and national SEA standards of conduct, legal provisions etc.	
Poor quality output/work	3	Moderately Likely	4	Severe	12	Medium	During the implementation phase, extensive and regular monitoring activities from LGs Monitoring Committee, WFP, provincial project coordination committees, and PMU will be conducted. Similarly, LGs staff and project TA staff will carry out regular/planned on-site supervision during the construction period, conduct quality checks after the material is transported and before the use of the materials, and conduct capacity building training to the beneficiaries before the start of the projects.	Low
Targets for the number of beneficiaries in each group are not met (women and socio-economically marginalized groups)	3	Moderately Likely	3	Moderate	9	Medium	There are strong action points described in the Gender Action Plan, the beneficiaries targeting criteria and the target for inclusion of women and socio-economically marginalized groups by activities are mentioned in the project document, and the logframe and their implementation will be regularly monitored to guarantee that targets are met.	Low
The project is not able to achieve early coordination among implementing institutions	3	Moderately Likely	3	Moderate	9	Medium	The PSC, PTC, PPCCs and LPMCs will meet regularly, and the regular planning, monitoring, review and reflection activities will be carried out involving the relevant stakeholders. The PMU and the TA staff will ensure the timely and appropriate coordination, communication and exchange of issues/challenges and timely actions to address the challenges in the project's execution.	Low
Strategic/Political Risks								
Controversy because of the processes associated with the selection of beneficiaries	2	Unlikely	3	Moderate	6	Low	No need for a mitigation/remedy strategy for now.	Low
The political climate in the country limits the ability to implement the project successfully	2	Unlikely	2	Minor	4	Low	No need for a mitigation/remedy strategy for now.	Low
The project implementation raises concerns with different stakeholders, especially the overall project beneficiaries	2	Unlikely	3	Moderate	6	Low	No need for a mitigation/remedy strategy for now.	Low
Environmental Risks								
Sudden and adverse agroclimatic conditions (such as hurricanes, floods, landslides) make the implementation of project activities difficult	3	Moderately Likely	4	Severe	12	Medium	In year 1, the project will focus on training participants in how to cope better with risks associated with this type of climate-related disasters. For instance, participants will strengthen their capacity to protect seeds, crops, and livestock when a flood/landslide occur; also, the project will try to create synergies among public institutions and programmes that focus on emergency preparedness and anticipatory actions (shock-responsive social protection and insurance). With the project's support, the LGs will prepare and implement the risk-informed disaster preparedness and response plans, and the LGs will utilize the disaster management fund and disaster risk reduction and management structures for rapid disaster response and averting the impact on	Low

							the project's execution.	
Slow-onset climate events like droughts and dry spells and natural disaster i.e. earthquake make the implementation of project activities difficult	4	Likely	4	Severe	16	High	The project will promote climate-resilient practices and technologies that aim at reducing the effects of these type of adverse events on communities. Drought-resistant seeds will be provided to beneficiaries. Additionally, there will be efforts to create low-investment water harvesting mechanisms to alleviate water scarcity consequences during the drought and dry spell periods. The project will also create synergies among public institutions and programs that focus on emergency preparedness and anticipatory actions (shock-responsive social protection). With the project's support, the LGs will prepare and implement the risk-informed disaster preparedness and response plans, and the LGs will utilize the disaster management fund and disaster risk reduction and management structures for rapid disaster response and averting the impact on the project's execution.	Medium
Climate-variability-related pests and plagues affect crops and severely hamper the results	3	Moderately Likely	3	Moderate	9	Medium	In year 1, the project will focus on training participants on mechanisms to produce local bio inputs to combat plagues and pests. This will heavily focus on taking advantage of the Indigenous Peoples' knowledge about local crop diseases. Also, investments in technical assistance will be made to ensure that farmers correctly implement the learned practices. Lastly, evidence suggests that with the use of agroecological practices, the likelihood of plagues and pests affecting crops decreases significantly.	Low
Project Total	**3**	**Moderately Likely**	**4**	**Severe**	**12**	**Medium**		**Low**

C. Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The entire project has undergone a comprehensive environmental and social risk screening in accordance with the 15 principles outlined in the Adaptation Fund's Environmental and Social Policy, as referenced in Section II.K above. Based on this assessment, the project has been classified as a "Category B" (medium risk) initiative, primarily due to the inclusion of Undefined Sub-Projects under Component 1. The complete Environmental and Social (E&S) Screening and Assessment is provided in Annex - 4.

The ESMP, detailed in Annex -4, is structured at two levels:

1. **Mitigation measures** for the risks identified during the initial screening and assessment, including provisions for monitoring and reporting.
2. **Procedures** for the screening, assessment, and mitigation of the Undefined Sub-Projects under Component 1 during project implementation.

The ESMP is designed to address and monitor risks identified at the proposal stage, identify any emerging risks during implementation, and ensure the effective application of mitigation measures. The monitoring and reporting mechanisms outlined in the ESMP are fully integrated into the project's overall monitoring framework. The ESMP explicitly prohibits the implementation of any activities, including Undefined Sub-Projects, that are assessed as high risk. The project will adhere strictly to all applicable national legislation, including Nepal's Environmental Protection Regulation (EPR) 2020, as well as the Environmental and Social Policy of the Adaptation Fund and WFP's environmental and social standards. As the executing entity, the MoFE - which also serves as the national focal agency for environmental and social oversight - will ensure close coordination with provincial and local monitoring bodies to ensure full compliance with the EPR and other relevant regulatory requirements. A Grievance Mechanism, described in Annex 9, is in place to ensure that beneficiaries and affected populations have accessible and inclusive channels to submit complaints and feedback. Multiple entry points are available to facilitate broad and equitable access to the mechanism.

Aligning with the ESMP (annex 4) potential adaptation activities for all the components of the project, as well as excluded activities, are listed in Table.

Table 15: Potential adaptation activities and excluded activities

Category	Potential activities	Excluded activities
Climate-resilient agriculture & livelihoods	• Drought/flood-resilient crops (millet, buckwheat, barley, beans, legumes) • Agroforestry (fruits, nuts, fodder trees, NTFPs) • Intercropping, crop rotation, conservation agriculture • Composting, mulching, crop residue management • Bio-pesticides, IPM • Community seed banks (local varieties) • Climate-smart demo farms/FFS • Access to weather-index/livestock insurance • Soil and water conservation (terracing, contour bunding) • Drip/sprinkler irrigation and water-efficient systems • Local seed production as a community enterprise • Promotion of leasehold and community forestry	• Introduction of invasive/alien crops Introduction of synthetic agrochemicals • Large-scale monoculture • Farming in conservation areas • Input subsidy-driven chemical farming • Slash and burn practices • Over-extraction of groundwater for irrigation • Grazing in ecologically fragile/protected areas Deforestation for farmland expansion
Climate-resilient value chains & market access	• Capacity building of smallholder farmers and value chain actors on market standards and quality requirements • Establishment of community-based collection, grading, and storage centers (climate-smart storage, e.g., solar-powered cold storage) • Promotion of value addition (processing, packaging, branding of local products, e.g., millet flour, herbal teas, pickles) • Training on post-harvest management to reduce losses (drying, hermetic storage, safe handling) • Enterprise development in processing of medicinal and aromatic herbs, NTFPs, and local crops	• Over-reliance on chemical preservatives for post-harvest handling • Market promotion of invasive/alien species • Value chain activities that exclude women, youth, and marginalized groups • Excessive focus on export crops at the cost of local food security • Environmentally harmful packaging (single-use plastics, non-recyclables) • Large-scale commercialization that displaces smallholders from markets

	• HGSF that link local farmers to nutrition-sensitive markets • Establishment and strengthening of community seed banks	Unregulated/illegal cross-border trade harming local producers • Large storage facilities (>100m3 OR surface <25m2)
Ecosystem restoration & nature-based disaster risk reduction	• Small nature-based structures (check dams, grass/tree plantation) to reduce landslides and flash floods • Bio-engineering techniques to stabilize erosion-prone rural areas, forests, water sources, and cultivated land • Construction of climate-resilient green belts to protect forests, wetlands, and grasslands from landslides and floods • Establishment of community nurseries • Restoration of degraded land	• Large dams or embankments (>2m height or >1,000m³ storage) • Hard infrastructure without ecosystem integration • Sand/gravel extraction causing slope destabilization • Commercial logging • Conversion of forests/grasslands to monoculture plantations • Introduction of invasive or non-native species • Unsustainable harvesting of forest products
Water management & irrigation efficiency	• Rehabilitation/construction of irrigation system and water harvesting systems (conservation ponds, ridge ponds, reservoirs) • Promotion of water-use efficiency (drip, sprinkler irrigation) • Use of treated wastewater in kitchen/nutrition gardens • Construction & maintenance of water holes in community grasslands to improve availability	• Diversion of >20% of river flow or >100 m³/day without clearance • Excavation/ponds without land management planning • Large-scale water infrastructure harming downstream ecosystems/users
Renewable energy & sustainable household solutions	• Improved water mills and micro-hydro rehabilitation • ICS targeting women beneficiaries • Renewable energy solutions in cold storage and school's kitchen.	• Fossil-fuel-based energy solutions with high emissions • Technologies without local maintenance capacity • Large-scale energy projects harming ecosystems or excluding communities
General excluded activities: Any activity involving child labour • Any activity leading to involuntary resettlement • Activities causing deforestation or degradation of natural forests • Activities encroaching on protected areas or critical habitats (wetlands, forests, biodiversity hotspots) • Extraction of asbestos, hazardous chemicals, or radioactive materials • Activities involving forced labour or bonded labour • Projects that increase social exclusion of women, youth, Dalits, or marginalized groups • Activities with significant GHG emissions without mitigation (e.g., diesel-powered processing units) • Any activity conflicting with national laws or environmental standards		

D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan, in compliance with the ESP and the Gender Policy of the Adaptation Fund.

A comprehensive and gender-responsive approach to project monitoring, reporting, and evaluation will be undertaken in alignment with WFP's established guidelines, procedures, and standards and AF Evaluation Policy/guidance to ensure the effective tracking of project outcomes.[57] Regular collection, analysis, and reporting of data through a gender-responsive lens will be conducted to systematically integrate gender considerations across all stages of the monitoring process. Monitoring activities will involve both internal and external stakeholders, ensuring a balanced and inclusive perspective that strengthens the credibility of findings and supports evidence-based decision-making.[58] WFP will collaborate with external partners to conduct independent evaluations and will coordinate closely with WFP's Office of Evaluation (OEV) in Headquarters to uphold the quality, impartiality, and integrity of evaluation processes, thereby enhancing learning and accountability. In addition, WFP will ensure that financial monitoring and accounting for the project are conducted in compliance with IPSAS and in accordance with relevant national laws and regulatory frameworks.

WFP will assume overall responsibility for the monitoring, evaluation, and reporting of the project. The Research, Assessment and Monitoring (RAM) unit within the WFP Country Office will provide technical guidance to the Project Manager/Portfolio Manager, the National Project Coordinator, and the Monitoring and Evaluation (M&E) Expert, ensuring that all M&E processes, outcomes, outputs, and activities are fully aligned with the Adaptation Fund Strategic Results Framework and comply with AF rules and regulations. An annual, detailed M&E plan will be developed, specifying the responsible agency for the collection and reporting of each indicator. This plan will also incorporate indicators related to the ESMP. All indicators will

[57] This will include leveraging relevant indicators from WFP's Corporate Results Framework (CRF) indicators, where these align with project goals.
[58] This will be complemented by WFP's Programme Monitoring and Reporting Service (APPM), which offers continuous monitoring of activities and progress to maximize efficiency in resource management.

be monitored in a disaggregated manner by gender, age, caste/ethnicity, and disability, as outlined in the project results framework. The M&E plan will be harmonized with the project's results framework, including corresponding indicators and targets, and will detail data sources, collection methodologies, frequency, sampling strategies, and timelines for both the Mid-Term Review (MTR) and Final Evaluation.[59] Local Governments, through their Monitoring Committees coordinated by vice-chairpersons, will take primary responsibility for routine monitoring of project implementation. This will be supported technically by the project's technical assistance team. WFP, in collaboration with the PMU, will be responsible for annual outcome monitoring and the conduct of project evaluations.

The following will be the key project monitoring, evaluation, and reporting activities:

1. Inception planning: During the six-month inception phase, key preparatory activities will be undertaken to establish a solid foundation for project implementation. These activities will include the development and formalization of an agreement between WFP and the Government of Nepal, serving as the implementing and executing entities. The inception period will also encompass the recruitment and onboarding of technical assistance personnel, the procurement of necessary equipment and materials, and the establishment of the PMU within MoFE, as well as at the provincial level.
Additionally, the inception phase will involve:

i. the formulation of operational procedures for project management and execution by WFP in collaboration with the executing entities (MoFE and MoALD);
ii. the formal establishment of the PSC, , and Local Project Management Committee (LPMC)
iii. the creation of project-specific accounts within the national public financial management system to facilitate the transfer of funds from WFP to the executing entities in accordance with the approved annual workplan and budget; and
iv. the organization of an inception workshop to finalize the first-year workplan and detailed budget, and to further refine the implementation strategies.

The inception workshop will also be used to review and, where necessary, develop or adapt systems and tools for monitoring and evaluation (M&E), community engagement, and the complaints and feedback mechanism. It will also serve to validate and approve pre-developed standard operating procedures (SoPs), thereby clarifying the roles and responsibilities of all stakeholders and partners. All planning, monitoring, and reporting templates will be validated during this workshop and formally endorsed by the PSC.

2. Baseline assessment: A baseline assessment will be carried out during the inception phase to enable the timely collection of data, primarily focusing on the key project indicators at the objective and outcome levels for which the baseline values are not available. Planning for the baseline - including the development of methodology and engagement with relevant stakeholders- will be prioritized early in the inception process to ensure that baseline values for the identified indicators are established within the first six months of project implementation. The findings of the baseline assessment will inform the finalization of the project results framework. Both the baseline report and the revised results framework will be submitted to the Adaptation Fund by the end of the first project year, and no later than the submission of the first Project Performance Report (PPR).

3. Activity implementation monitoring: Process or activity implementation monitoring focuses on assessing how project activities are being carried out, with particular attention to adherence to established standards, procedures, and timelines. This form of monitoring evaluates the quality and efficiency of implementation, identifies challenges, and ensures compliance with WFP and Adaptation Fund protocols. It also examines the extent to which gender, disability, and social inclusion considerations are integrated and assesses responsiveness to community feedback.

The activity implementation and process monitoring will be conducted annually by the Local Governments' Monitoring Committees, chaired by the respective vice-chairpersons, throughout the duration of the project. To facilitate this, the project's technical assistance team will provide support to each local government in developing and formally adopting a monitoring and supervision working procedure. This procedure will

[59] Monitoring activities will be supported by WFP's APPM, maximizing efficiency in resource management.

serve as the basis for the Monitoring Committees to systematically carry out their monitoring responsibilities. Any issues, challenges, or implementation bottlenecks identified during the monitoring process that require project-level attention will be documented by the Monitoring Committees and escalated to the PMU through formal monitoring reports. This mechanism will ensure the timely and appropriate resolution of emerging issues, contributing to the overall effectiveness and accountability of project implementation.

4. Output monitoring: Output monitoring focuses on assessing whether planned activities and immediate deliverables have been completed as intended. This includes tracking indicators such as the number of individuals trained, training sessions conducted, and infrastructure schemes completed, thereby ensuring that resources are utilized appropriately, and activities are implemented in a timely manner. WFP's existing corporate data management platform, Country Office Tool for Managing Programme Operations Effectively (COMET), will be used for the project's regular output monitoring under the capacity strengthening category. The capacity strengthening-related planned outputs and targets will be entered into the COMET system, and the PMU, in close coordination with the local governments and the project's technical assistance team, will enter the relevant data for all capacity strengthening/technical assistance-related output-level indicators outlined in the project results framework in the COMET system. This data is subsequently used to inform quarterly and annual reporting obligations to relevant government authorities, donors, and WFP's Headquarters, in line with established requirements.

5. Outcome monitoring: Outcome monitoring assesses the short- to medium-term effects of the project on the target population, providing critical insights into whether the intended results are being achieved or are progressing in the desired direction. Outcome monitoring evaluates whether those activities are leading to tangible, measurable improvements in the lives of beneficiaries and stakeholders. For this project, WFP will conduct outcome monitoring during the gap years of the project cycle - specifically in years when no formal evaluations are planned – i.e. in the 2nd and 4th year of project implementation (as the baseline survey will take place in year 1, mid-term review in year 3 and final evaluation in year 5) - to ensure continuity in evidence generation, support annual project performance reporting, and enable adaptive programme management. Data collection for outcome monitoring will be conducted by independent enumerators adhering to standard research protocols and ethical guidelines. WFP's monitoring team will be responsible for analyzing the outcome monitoring data and producing relevant reports and knowledge briefs. The outcome indicators defined in the project logframe - across all three outcome areas- will be monitored through these studies using both formative and summative approaches. Standardized tools such as household surveys, focus group discussions, and institutional assessments will be applied to ensure methodological consistency and comparability over time.

6. Monthly, quarterly and annual progress reports: Regular monitoring during project implementation will be documented through quarterly and annual progress reports. The National Project Coordinator, based within the PMU, will be responsible for coordinating the preparation of monthly, quarterly and annual progress reports. These reports will be submitted to WFP and the PSC through the Project Director designated by the MoFE and the Project Manager assigned by WFP. A strong management information system (MIS) with constantly updated dashboards and almost real-time monitoring of key indicators will be used, leveraging WFP's existing COMET system. The data generated through this system will inform periodic reporting processes and provide a strong foundation for evidence-based decision-making throughout the project lifecycle.

7. Annual Progress Performance Reports: The National Project Coordinator, with technical support from the WFP CO (Project Manager/Strategic Outcome Manager), will coordinate inputs from implementing sectors and responsible partners to prepare the Annual PPRs. These reports will present progress in financial management, procurement, and activity implementation against the targets defined in the project results framework. They will also report on compliance with the Environmental and Social Assessment and Management Frameworks.

The draft annual reports and workplans will be reviewed and approved by the PTC prior to their submission to WFP and the PSC, no later than one month following the close of the project year. WFP will then consolidate this information and submit the final Annual Progress Performance Report using the standard

Adaptation Fund PPR template to the AF Secretariat, no later than two months after the end of each implementation year.

The national PMU will also ensure that each PPR is accompanied by the annual project workplan for the subsequent year. The annual plan for the forthcoming year, to be approved by the PSC, will detail planned project activities, assigned roles and responsibilities, and include a comprehensive budget with a disbursement schedule and a procurement plan for major items, provided as annexes.

8. Project completion report: At the end of the project, a project completion report shall be prepared within six months after project completion and submitted by WFP to the AF secretariat.

9. Mid-term review and final evaluation: An external, independent MTR will be conducted at the midpoint of project implementation to assess the overall status of implementation, the effectiveness of implementation arrangements, and to provide evidence-based recommendations for potential adjustments to enhance project performance. WFP will recruit an independent technical expert or consultant to conduct the MTR. The review will be based on a comprehensive assessment of project documentation and records, as well as qualitative data collected through key informant interviews (KIIs) and focus group discussions (FGDs) with project beneficiaries and stakeholders.

A Final Evaluation will be undertaken within nine months following the conclusion of the project. WFP will commission this evaluation through an independent research or evaluation firm. The purpose of the Final Evaluation is to deliver an impartial, evidence-based assessment of the project's performance, ensure accountability to stakeholders, and generate lessons to inform future programming. Specifically, the Final Evaluation will:

- Assess the project's relevance, coherence, effectiveness, efficiency, equity, adaptive management, sustainability, impact, scalability, and contributions to human and ecological security;
- Collect performance indicator data related to project objectives and higher-level results;
- Evaluate whether the project successfully achieved its stated objectives;
- Examine the project's overall impact on target populations and systems; and
- Identify key lessons learned that can inform future programmes by the Government, WFP, the Adaptation Fund, and other stakeholders to enhance impact and ensure sustainability.

Final versions of the baseline assessment, MTR and Final Evaluation reports will be shared with the relevant government ministries serving as executing entities, as well as with the Adaptation Fund Secretariat.

10. Financial audit: As project funds will be disbursed annually by WFP to the executing entities based on the approved Annual Workplan and Budget and managed through the Government's on-budget and on-treasury mechanism, the provincial and local governments will receive their respective allocations as conditional grants from the relevant federal ministry to implement specific project activities. In this context, the OAG, a constitutional, independent oversight body, will conduct annual external audits of the project as an integral part of the regular external audits of the respective government agencies. Upon project completion, WFP will employ an independent auditor, in coordination with the OAG, to validate and consolidate the financial audits conducted over the project cycle and to prepare the final comprehensive financial audit report. This final audit report will be submitted by WFP to the Adaptation Fund Secretariat within six months following the end of the fiscal year in which the project concludes, in line with AF financial reporting requirements.

11. Knowledge products/evidence generation: Photo monitoring will be employed as a visual documentation technique to track and assess physical changes in project implementation sites over time, particularly in relation to infrastructure and asset development activities. This methodology involves repeat photography from consistent locations and reference points to capture images before, during, and after interventions, thereby providing a clear visual record of progress and impact. In addition to photo monitoring reports for relevant project activities, the PMU will also produce and disseminate a range of knowledge products, including concise briefs from outcome monitoring exercises, the MTR, and the Final Evaluation. Further documentation will include a report on lessons learned and best practices, as well as human interest

stories, case studies, photo stories, and video documentaries. These materials will be shared widely through various national and international platforms and stakeholder networks to promote transparency, foster knowledge exchange, and support evidence-based policymaking and programming.

Evaluation methodology:
The methodology for conducting the final evaluation will align with WFP's Decentralized Evaluation Policy and the Adaptation Fund's Evaluation Policy. Government stakeholders at federal, provincial, and local levels will be actively engaged in the design of the M&E system to ensure alignment with national data requirements and to foster long-term sustainability of results and systems. A non-experimental, mixed-methods approach will be applied in the evaluation. This approach ensures comprehensive coverage of both quantitative and qualitative dimensions of impact. The evaluations will be guided by the AF's evaluation criteria and will follow a theory-based framework using the project's Theory of Change to examine underlying assumptions and causal linkages.

Quantitative data will be collected through structured surveys administered to households, farmers, and institutional stakeholders, using statistically representative sampling at a 95% confidence level. A stratified random sampling methodology will be adopted to ensure inclusion across different ecological zones and socio-economic groups. Qualitative data will be collected through KIIs, FGDs, direct observations, and the documentation of case studies. All tools and methods will be designed to ensure gender and social inclusion, with a focus on capturing diverse perspectives. Quantitative data will be collected using WFP's corporate Mobile Operational Data Acquisition (MODA) platform and analyzed with appropriate statistical software. Qualitative data will be analyzed using thematic analysis through dedicated qualitative analysis tools to support evidence-based reporting.

Quality assurance mechanism:
The evaluation will adhere to WFP's Decentralized Evaluation Quality Assurance System (DEQAS), which outlines a structured process comprising quality assurance steps and standardized templates based on a set of Quality Assurance Checklists (QACs). These checklists will be applied systematically throughout the evaluation cycle to ensure the quality, consistency, and credibility of each evaluation product. Relevant documents and checklists will be made available to the evaluation team at each stage, including detailed feedback mechanisms for draft outputs. DEQAS is grounded in the United Nations Evaluation Group (UNEG) Norms and Standards and reflects internationally recognized good practices in evaluation.

The WFP Evaluation Manager will be responsible for overseeing adherence to the DEQAS Process Guide, including rigorous quality control and timely review of all evaluation products before finalization.
To ensure data integrity throughout the analysis and reporting phases, the evaluation team will prioritize data quality dimensions such as validity, reliability, consistency, and accuracy. Enumerators and supervisors will be selected based on relevant academic backgrounds and prior experience with comparable evaluations to ensure competent data collection. Furthermore, dedicated personnel within the evaluation team will be assigned to coordinate and oversee quality control, thereby upholding the credibility and reliability of the evaluation process and outputs.

To uphold the principles of independence, impartiality, and credibility in the evaluation process, an internal Evaluation Committee (EC) will be established. The EC will be chaired by WFP Country Office Management and will include key personnel from the Country Office and the representative of the Ministry of Forest and Environment, and the Ministry of Agriculture and Livestock Development. The EC will provide strategic oversight throughout the evaluation process, including decision-making, providing guidance to the Evaluation Manager, and reviewing evaluation deliverables prior to their submission to the EC Chair for final approval. In parallel, a multi-stakeholder Evaluation Reference Group (ERG) will be constituted by the WFP Country Office. The ERG will comprise representatives from relevant government ministries, key implementing and executing partners, and other stakeholders, including the Adaptation Fund. It will serve an advisory role, reviewing and providing feedback on draft evaluation products to enhance quality, relevance, and impartiality. ERG members will also serve as key informants, contributing to data triangulation. This inclusive and transparent evaluation governance structure will help ensure that the evaluation is robust, credible, and fit for purpose.

Indicative plan, costing, schedule, and responsibilities for M&E and reporting:

Table 16: Indicative Project Monitoring and Evaluation, and Reporting Schedule

S. N.	MER activity	Responsible parties	Budget (US$)	Timeframe/ submission deadline
1	Inception workshop and report	Project Coordinator	14,500	1 month after the inception workshop
2	Baseline study report	Project Coordinator M&E Officer	30,000	1 month after the completion of the data collection
3	Monthly progress report	Project Coordinator	0	Monthly (Last day of the month)
4	Quarterly Progress and Financial Report	Project Coordinator	0	End of each quarter (1 month after the end of the quarter)
5	Project Steering Committee, PTC and Provincial Project Coordination Committee meetings (minutes, presentations & action plans) and learning workshop	Project Coordinator	45,000	PSC biannually, PPCC quarterly and PTC monthly
6	Output monitoring through the COMET system	Project Coordinator M&E Officer	0	Monthly
7	Activity implementation monitoring	Project Coordinator M&E Officer The Technical Assistance team and the LG's monitoring committees	0	Annually
8	Annual Progress Reports (Project Performance Report-PPRs)	Project Coordinator WFP CO (Project Manager/Strategic Outcome Manager)	0	Annually, 2 months after the end of the project implementation year)
9	Annual project outcome monitoring according to the M&E plan, including monitoring of the ESMP	M&E Officer	40,000	Years 2 and 4 of project implementation
10	Monitoring visits by executing entities	Project Coordinator	35,000	Annually
11	Mid-Term Review Report	External Consultant WFP CO RAM unit	15,000	2.5 years after project inception (3 months after data collection)
12	Final Project Report (Project Completion Report)	Project Coordinator WFP CO (Project Manager/Strategic Outcome Manager)	0	End of project (6 months after the end of the project)
13	Final Project Evaluation Report	External Evaluation Firm WFP CO RAM unit	113,014	End of project (within 9 months of project completion)
14	Knowledge products/evidence generation	Project Coordinator M&E Officer	14,000	In 3, 4 and 5th years of project implementation
15	Financial Audit	WFP Auditing firm	20,000	End of project (within 6 months of the fiscal year end in which the project ended)
	Total		**326,514**	

E. Include a results framework for the project proposal, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.

Table 17: Project's log frame

Outcome/Output	Indicator	Baseline (2025)	Target (at the end of project - 2031)	Means of Verification & Monitoring Responsibility (MR)	Risks (R) and Assumptions (A)
Objective: Enhance community resilience through community-based adaptation, integrated risk management, resilient natural resource management and strengthened government and community capacities for risk-informed locally-led adaptation.	O1. Proportion of targeted communities where there is evidence of improved capacity to manage climatic shocks and risks (CCS) [proportion of targeted community people having the ability to manage climatic shocks and risks]	0	60%	Mid-term review report Project final evaluation report, MR: WFP	Unforeseen disasters or shocks may disrupt the smooth implementation of the project and may lead to delays in achieving project results (R). The current political stability is expected to continue during project implementation (A).
	O2. Resilience Capacity Score (RCS) [percentage of targeted households perceiving their resilience capacities to climate-induced shocks and stressors with a medium/high RCS – Household level]	Medium RCS - 67.2% High RCS - 17.8% Source: WFP Nepal VAM HH Survey, March 2024[60]	Medium RCS - 50% High RCS - 35%	Mid-term review report Project final evaluation report MR: WFP	
	O3. Prevalence of food insecurity [percentage of targeted households with severe food insecurity, moderate food insecurity, marginal food insecurity and food secure]	Severe food insecurity % Moderate food insecurity: 17.9% Marginal food insecurity: 51.5% Food secure: 29.6% Source: WFP Nepal VAM HH Survey, March 2024[61]	Severe food insecurity: 0% Moderate food insecurity: 5% Marginal food insecurity: 35% Food secure: 60%	Mid-term review report Project final evaluation report MR: WFP	
Component 1: Community and ecosystem resilience: Enhancing community-based participatory climate resilient strategies for adapted livelihoods and sustainable natural resource management.					

[60] The actual project-specific baseline will be established at the project inception phase through baseline assessment, and targets will be revised accordingly, if required.
61 ibid

Outcome 1: Enhanced resilience of livelihoods of the vulnerable communities through adapting to climate change sustainably	1.1 Climate Adaptation Benefit Score (CABS) [percentage of households perceiving the extent to which they benefited from training, information or advice received to improve their resilience to climate shocks, stresses, and variability by adapting agricultural practices and livelihoods, with the score level - medium to high]	TBD from baseline survey	Medium CABS - 40% High CABS - 30%	Mid-term review report Project final evaluation report MR: WFP	
	1.2 Proportion of people engaged in Income Generating Activities (IGA) as a result of skills development training (FFT) (Engagement in Income Generation - EIG)	0	70%	Mid-term review report Project final evaluation report MR: WFP	
Output 1.1: Climate-resilient agroforestry and livelihood improvement actions implemented for coping with extreme events through climate-resilient agriculture, climate-smart villages, and other nature-based solutions.	1.1.1 Number of women, men, boys and girls receiving food/cash-based/commodity vouchers/individual capacity strengthening transfers through actions to protect against climate shocks (disaggregated by gender, age, caste/ethnicity and disability)	0	25,000 (5,000 HHs)	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	Communities prioritize the diversification and strengthening of their livelihood bases in their adaptation plan (A).
	1.1.2 Number of smallholder farmers supported with training, inputs, equipment and infrastructure (disaggregated by gender, age, caste/ethnicity and disability)	0	5,000 farmer HHs	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
	1.1.3 Number of people covered by an insurance product through risk transfer mechanisms supported by project (disaggregated by gender, age, caste/ethnicity and disability)	0	2,000 farmer HHs (apple farming and livestock rearing HHs)	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
	1.1.4 Number of participants of financial inclusion initiatives promoted by project (disaggregated by gender, age, caste/ethnicity and disability)	0	5,000 farmer HHs	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	

	1.1.5 Amount of savings made by participants of financial inclusion initiatives promoted by project	0	-	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
	1.1.6 Number of people provided with direct access to information on climate and weather risks (disaggregated by gender, age, caste/ethnicity and disability)	0	5,000 farmer HHs	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP)	
	1.1.7 Number of agriculture and forestry based enterprises established	0	200 enterprises benefiting 4,000 HHs	MR: WFP and PMU	
	1.1.8 Number of climate-smart villages established	0	11	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
Activities:	1. Climate-resilient agriculture: More than 60% of beneficiaries will be women from diverse groups. 2. Climate-resilient Agroforestry practices led by women from marginalized groups - beneficiaries of this activity will be largely women (more than 80%). 3. Agro-advisories: Enhance communities' access to last-mile climate information and advisories with universal accessible means of communication. 4. Financial inclusion: promotion of Village Savings and Lending Groups (VSLGs). 5. Climate insurance: Raise awareness among farmers and facilitate access to agriculture insurance, including weather-index-based insurance and livestock insurance products. 6. Climate-Smart Villages (CSV) establishment.				
Input (budget - US$)	2,077,275				
Output 1.2: Smallholder farmers and value chain actors have increased capacity for market readiness and access, reducing post-harvest losses, value addition and	1.2.1 Number of farmers HHs provided with agricultural and post-harvest inputs, equipment and infrastructures	0	5,000 farmer HHs	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	Communities prioritize the market-oriented production and agribusinesses, changing the mindset from 'grow and sell' to 'grow to sell' and accessing the markets (A).

manage the marketable surplus by applying climate-resilient practices.	1.2.2 Number of smallholder farmers supported with training in post-harvest management technology/practices (disaggregated by gender, age, caste/ethnicity and disability)	0	5,000 farmer HHs	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
	1.2.3 Number of farmers that benefit from farmer organisations' sales to home-grown school meals programme and other structured markets (disaggregated by gender, age, caste/ethnicity and disability)	0	5,000 farmer HHs	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
	1.2.4 Number of women, men, boys and girls receiving food/cash-based transfers/commodity vouchers/individual capacity strengthening transfers through actions to protect against climate shocks (disaggregated by gender, age, caste/ethnicity and disability)	0	3,000 (600 HHs)	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
	1.2.4 Number of community food banks, seed banks, storage facilities and community nurseries established	0	34	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
Activities:	1. Post-harvest solutions: improved storage, transformation and marketing techniques, including by harnessing renewable energy solutions. 2. Community food and seed banks 3. Smallholders agricultural market support through the home-grown school feeding approach and linkage with other structured markets - more than 60% beneficiaries will be women. 4. Capacity strengthening on post-harvest management technologies, agroforestry businesses and financial literacy.				
Input (budget - US$)	1,230,565				
Outcome 2: Strengthened eco- resilience through nature-based protective and productive climate-smart community assets	2.1 Percentage of the population in targeted communities reporting benefits from an enhanced livelihood asset base (Asset Benefit Indicator - ABI)	0	60%	Project final evaluation report MR: WFP	

	2.2 Proportion of the population in targeted communities reporting Environmental Benefits (Environmental Benefit Indicator – EBI)	0	60%	Project final evaluation report MR: WFP	
	2.3 Climate Resilience Capacity Score (CRCS) [proportion of targeted households perceiving their resilience to climate variability and weather-related shocks with medium to high score]	TBD from baseline survey	Medium CRCS -40% High CRCS - 30%	Project final evaluation report MR: WFP	
Output 2.1: Restoration-based actions implemented through rehabilitation of the degraded areas (agriculture and forest), climate-resilient, productive, protective, and green recovery assets to enhance women and vulnerable communities' resilience to shocks and stressors.	2.1.1 Number of assets built, restored or maintained by targeted households and communities, by type and unit of measure	0	90	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	Communities may consider asset creation activities as a social safety net programme and not take much interest in its continuity beyond the project (R).
	2.1.2 Number of people provided with energy assets, services and technologies (disaggregated by gender, age, caste/ethnicity and disability)	0	5,500 (1,100 HHs)	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
	2.1.3 Number of women, men, boys and girls receiving food/cash-based transfers/commodity vouchers/individual capacity strengthening transfers through actions to protect against climate shocks (disaggregated by gender, age, caste/ethnicity and disability)	0	28,000 (5,600 HHs)	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
	2.1.4 Number of people benefiting from assets and climate adaptation practices facilitated by project's risk management activities (disaggregated by gender, age, caste/ethnicity and disability)	0	36,000 (7,200 HHs)	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
Activities:	1. Food Assistance for Assets Plus: direct beneficiaries (wage employment recipients) will be socio-economically marginalized groups, and more than 60% will be women. 2. Promotion of renewable energy technology: i.e. solar-dryer-based food processing enterprises, improved water mills, solar lighting, improved cooking stoves) mainly targeting women (100% women beneficiaries).				

Input (budget - US$)	3,332,205				
Component 2: Climate governance and system strengthening: Capacity/system strengthening for improved last-mile climate information services to enable early/adapted actions and risk-informed climate-induced disaster management.					
Outcome 3: Strengthened climate governance and institutional system (policies, plans, institutions, and services) to sustain climate adaptation and disaster risk management actions	3.1 Number of innovative approaches to enhance resilience tested	0	2	Project final evaluation report MR: WFP	
	3.2 Number of national policies, strategies, programmes and other system components contributing to Zero Hunger, Climate Actions (SDG 13) and other SDGs enhanced with the project's capacity strengthening support	0	11	Project final evaluation report MR: WFP	
	3.3 Number of enhanced business processes contributing to Zero Hunger, Climate Actions (SDG 13) and other SDGs implemented at scale by national stakeholders following the project's capacity strengthening support	0	11	Project final evaluation report MR: WFP	
	3.4 Proportion of people participating in training, coaching, or mentoring with improvement in knowledge/skills contributing to Zero Hunger, Climate Actions (SDG 13) and other SDGs	0	80%	Project final evaluation report MR: WFP	
	3.5 Proportion of trained staff from targeted institutions (local governments) with increased capacity to respond to and mitigate impacts of climate-related events with the project's capacity strengthening support	0	80%	Project final evaluation report MR: WFP	
	3.6 Extent to which key government stakeholders perceive that the project's support has enhanced institutional capacity to sustain climate adaptation and disaster risk management actions (low, medium, high)	0	Medium - 40% High - 30%	Project final evaluation report MR: WFP	

Output 3.1: Capacities of key government institutions, local stakeholders and last-mile communities increased to co-produce, deliver/disseminate, and utilize tailored climate information services.	3.1.1 Number of government officials provided with capacity strengthening training on co-production, delivery and utilization of climate information services (disaggregated by gender, age, caste/ethnicity and disability) 3.1.2 Number of people provided with awareness raising information on utilization of climate information services through various means of communication (disaggregated by gender, age, caste/ethnicity and disability)	0 0	325 137,376 people (27165 HHs)	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	Extreme weather conditions and severe recurrent drought, and other climate-induced hazards during the project implementation might limit adaptive capacities (R). Government, stakeholders and farmers' uptake is satisfactory (A). The change in political leadership in the Local Governments through the upcoming local level elections scheduled in 2028 would not deprioritize this action (A).
	3.1.3 Number of Provincial and Local Government-level climate information management systems/platforms established	0	12	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP, information systems/platforms MR: WFP and PMU	
Activities:	1. Updating/setting up the provincial climate change management information system (PCCMIS) in Karnali and Sudurpashchim Provinces and municipal agro-meteorological information centres (MAIC). 2. Capacity strengthening of the local government staff to produce tailored climate services for the end users. 3. Sensitization for farmers to access, understand and utilize vital climate information (agro-meteorological advisories, early warning, forecasting, etc). 4. Development of a One-Stop Climate Portal at the provincial level.				
Input (budget - US$)	673,245				
Output 3.2: Capacities of local governments and communities strengthened to plan and implement adaptation solutions and effective climate-induced disaster risk reduction and management through climate-risk-informed and inclusive local adaptation	3.2.1 Number of government officials provided with capacity strengthening training on formulation of climate-risk informed and inclusive local adaptation, and disaster response plan (disaggregated by gender, age, caste/ethnicity and disability)	0	275	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	Community members are sufficiently interested in and willing to take part in the local adaptation planning process (A). Local Governments are institutionally committed to strengthening climate-resilient

planning instruments (e.g., LAPA) and climate-hazard/disaster preparedness planning and response.	3.2.2 Number of Local Governments that formulated GEDSI-integrated and climate-risk-informed Local Adaptation Plan of Action (LAPA) and needs-based (specific needs of women, children, persons with disabilities, pregnant and breastfeeding mothers, older people, etc) and costed disaster preparedness plans linked with the government's annual planning and budgeting system.	0	11	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP), and Plan documents MR: WFP and PMU	development and locally-led adaptation (A).
Activities:	1. Support for GEDSI-integrated and climate-risk-informed Local Adaptation Plan of Action (LAPA). 2. Support for risk-informed, evidence-based and needs-based (specific needs of women, children, persons with disabilities, pregnant and breastfeeding mothers, older people, etc) costed disaster preparedness, contingency planning, early actions, and effective response linked with the government's annual planning and budgeting system. 3. Sensitize the local stakeholders and communities on predicted climate change scenarios/impacts and formulate and implement locally-led adaptation strategies/actions.				
Input (budget - US$)	759,800				
Output 3.3: Knowledge and learning on community-based climate adaptation for vulnerable groups, including women, indigenous peoples, and marginalized communities enhanced	3.3.1 Number of knowledge products and communication materials on the project's learning and proven climate adaptation actions developed with universal accessible language	0	3 video documentaries	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP), knowledge products MR: WFP and PMU	
	3.3.2 Number of people engaged in knowledge and learning exchange initiatives on community-based climate adaptation, including women, indigenous peoples, community people and government representatives (disaggregated by gender, age, caste/ethnicity and disability)	0	120	Annual Project Performance Report, Output Monitoring Database (COMET) and Annual Country Report (WFP) MR: WFP and PMU	
Activities:	1. Document evidence-based best practices of the project and produce a learning document. 2. Develop communication material with universal accessible language so as to inform persons with disabilities about the climate change adaptation actions. 3. Produce a video documentary to be shared with the global adaptation forums. 4. Hold an exposure visit to the implemented LGs to showcase the adaptation actions.				
Input (budget - US$)	268,000				

F. Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

Table 18: Project's alignment with AF Results Framework

Project Objective(s)[1]	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (US$)
Enhance community resilience through community-based adaptation, integrated risk management, resilient natural resource management and strengthened government and community capacities for risk-informed locally-led adaptation.	▪ O1. Proportion of targeted communities where there is evidence of improved capacity to manage climatic shocks and risks (CCS) [proportion of targeted community people having the ability to manage climatic shocks and risks] ▪ O2. Resilience Capacity Score (RCS) [percentage of targeted households perceiving their resilience capacities to climate-induced shocks and stressors with a medium/high RCS – Household level] ▪ O3. Prevalence of food insecurity [percentage of targeted households with severe food insecurity, moderate food insecurity, marginal food insecurity and food secure]	**Outcome 3:** Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses 3.2. Percentage of targeted population applying appropriate adaptation responses	8,341,090.0
		Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	5.1 Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress	
		Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	2.1. Capacity of staff to respond to and mitigate. impacts of climate-related events from targeted institutions increased	
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (US$)**
Outcome 1: Enhanced resilience of livelihoods of the vulnerable communities through adapting to climate change sustainably.	▪ 1.1 Climate Adaptation Benefit Score (CABS) [percentage of households perceiving the extent to which they benefited from training, information or advice received to improve their resilience to climate shocks, stresses, and variability by adapting agricultural practices and livelihoods, with the score level - medium to high] ▪ 1.2 Proportion of people engaged in Income Generating Activities (IGA) as a result of skills development training (FFT) (Engagement in Income Generation - EIG)	**Output 6:** Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1.No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies 6.2.1. Type of income sources for households generated under climate change scenarios	3,307,840.0
Outcome 2:	▪ 2.1 Percentage of the population in targeted	**Output 4:** Vulnerable	4.1.1. No. and type of	3,500,205.0

Strengthened climate resilience of ecosystems through nature-based protective and climate-smart community assets and restoration of natural ecosystems.	communities reporting benefits from an enhanced livelihood asset base (Asset Benefit Indicator - ABI) ▪ 2.2 Proportion of the population in targeted communities reporting Environmental Benefits (Environmental Benefit Indicator – EBI) ▪ 2.3 Climate Resilience Capacity Score (CRCS) [proportion of targeted households perceiving their resilience to climate variability and weather-related shocks with medium to high score]	development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	development sector services modified to respond to new conditions resulting from climate variability and change (by sector and scale). 4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale).	
Outcome 3: Strengthened climate governance and institutional system (policies, plans, institutions and services) to sustain climate adaptation and disaster risk management actions.	▪ 3.1 Number of innovative approaches to enhance resilience tested ▪ 3.2 Number of national policies, strategies, programmes and other system components contributing to Zero Hunger, Climate Actions (SDG 13) and other SDGs enhanced with the project's capacity strengthening support ▪ 3.3 Number of enhanced business processes contributing to Zero Hunger, Climate Actions (SDG 13) and other SDGs implemented at scale by national stakeholders following project's capacity strengthening support ▪ 3.4 Proportion of people participating in training, coaching, or mentoring with improvement in knowledge/skills contributing to Zero Hunger, Climate Actions (SDG 13) and other SDGs ▪ 3.5 Proportion of trained staff from targeted institutions (local governments) with increased capacity to respond to and mitigate impacts of climate-related events with the project's capacity strengthening support ▪ 3.6 Extent to which key government stakeholders perceive that the project's support has enhanced institutional capacity to sustain climate adaptation and disaster risk management actions (low, medium, high)	**Output 7:** Improved integration of climate-resilience strategies into country development plans.	7.1. No. of policies introduced or adjusted to address climate change risks (by sector). 7.2. No. of targeted development strategies with incorporated climate change priorities enforced.	1,533,045.0

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

G. 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.

Table 19: Project detailed budget

Output	Cost Category	Year 1	Year 2	Year 3	Year 4	Year 5	Total (USD)	Budget Note
Outcome 1: Enhanced resilience of livelihoods of the vulnerable communities through adapting to climate change sustainably.								
Output 1.1: Climate-resilient agroforestry and livelihood improvement actions implemented for coping with extreme events through climate-resilient agriculture, climate-smart villages, and other nature-based solutions.								
1.1.1	Training	96,994	242,486	145,492			484,972	The budget includes costs of - (1) training materials, resource persons and other required logistical costs for capacity development and skill development training on climate resilient agriculture through farmer climate/nutrition field schools (200 farmer schools = 200 x 25 farmers = 5,000 farmer HHs), (2) materials/tools for skill and entrepreneurship training on climate-resilient agroforestry practices for 200 enterprises (200 x 20 HHs = 4,000 HHs), (3) sensitization on financial inclusion with promotion of 200 Village Savings and Lending Groups (VSLGs) - 5,000 HHs, (4) climate insurance by raising awareness among farmers and facilitating access to agriculture insurance, including weather-index-based insurance and livestock insurance products and agrometeorological advisory services for 2,000 farmer HHs.
1.1.2	Procurement	122,374	489,497	367,123	244,749		1,223,743	The budget includes - (1) procurement of equipment and materials, agricultural inputs (seeds, tools/equipment, etc) for providing drought-tolerant varieties to the 5,000 farmers, (2) conducting 200 farmer climate/nutrition field schools, SALT, Agro-forest plantation, for 5,000 farmer HHs, (3) promotion of 200 agriculture and forest-based small and micro-enterprises and (4) 11 Climate-Smart Villages (CSV) establishment.
1.1.3	Technical Assistance	59,232	59,232	59,232	59,232	59,232	296,160	Technical Assistance staff - 4 (100% agriculture/forestry/livelihoods) to provide project execution support to the Local Governments
1.1.4	Travel Costs of TA staff	8,320	8,320	8,320	8,320	8,320	41,600	Project staff field travel costs (subsistence allowance) for 4 livelihood coordinators.
1.1.5	Miscellaneous	6,160	6,160	6,160	6,160	6,160	30,800	Vehicle running cost for field staff and other consumables (motorbike and fuel) for 4 livelihood coordinators. .
Total - Output: 1.1.		**293,081**	**805,695**	**586,327**	**318,461**	**73,712**	**2,077,275**	
Output 1.2: Capacity of smallholder farmers and value chain actors increased for market readiness and access, reducing post-harvest losses, value addition and managing the marketable surplus by applying climate-resilient practices.								

1.2.1	Training/workshop	30,289	151,444	121,155			302,888	The budget includes - (1) costs of training materials, resource persons and other required logistical costs for skill training to impart technology, skills and technical knowledge on post-harvest solutions, improved storage, transformation and marketing techniques for 5,000 farmer HHs, (2) training cost on community food and seed banks management (3) implementation of home-grown school feeding approach and other structured markets linkage, agroforestry businesses and financial literacy for 5,000 farmer HHs.
1.2.2	Procurement		260,165	371,664	111,499		743,329	The budget includes procurement of equipment, tools and materials for: (1) establishing 10 community seed banks, 10 community food banks, 4 solar-powered agri-products/NTFPs storage facilities and 10 community based multi-purpose nurseries, (2) Improved storage for grains (on-farm storage technology like metal drums, hermetic bags, etc) for 5,000 farmer HHs, (3) Grains drying equipment (tarpaulins, solar dryer, shelter, etc) for 5,000 farmer HHs, (4) school kitchen construction and kitchen utensils for selected schools for safe cooking under home-grown school feeding.
1.2.3	Transfer (cash)		51,852	74,074	22,222		148,148	Cash transfer to the beneficiaries (workers of community assets creation work - community food bank and storage facility) as wages through bank accounts - 600 HHs for an average of 40 days at the local wage rate (US$ 6.67/day), through local government-contracted financial service providers.
1.2.5	Miscellaneous	3,080	3,080	3,080	3,080	3,080	15,400	Vehicle running cost for field staff and other consumables (motorbike and fuel) for 2 governance/planning/social mobilization coordinators.
1.2.6	Travel Costs	4,160	4,160	4,160	4,160	4,160	20,800	Project staff field travel costs (subsistence allowance) for 2 governance/planning/social mobilization coordinators. .
Total - Output: 1.2		**37,529**	**470,701**	**574,134**	**140,962**	**7,240**	**1,230,565**	**1,230,565**
Outcome 2: Strengthened eco-resilience through nature-based protective and productive climate-smart community assets.								
Output 2.1: Restoration-based actions implemented through rehabilitation of the degraded areas (agriculture and forest), climate-resilient, productive, protective, and green recovery assets to enhance women and vulnerable communities' resilience to shocks and stressors.								
2.1.1	Procurement		302915	424081	363498	121166	1,211,660	The budget includes the procurement of local and non-local construction materials (cement, rod, gabion wires, stones, aggregate, sand, wood etc) by local government through their public procurement procedure for 90 community assets creation/construction activities (i.e. small irrigation, small irrigation canals, multi-use water systems, drinking water supply systems, slope stabilization, rural roads, post-harvest management and storage facilities, degraded land rehabilitation/reclamation, small nature-based structures (bamboo check dams, plantation of grass and trees), water harvesting systems (conservation ponds, water reservoirs, ridge ponds), construction and maintenance of water holes in community grasslands, climate-resilient green belts, bio-engineering techniques), and renewable energy technology: i.e. improved cooking stoves for 1,100 HHs (IPs).

2.1.2	Transfer (cash)		388561	543986	466274	155425	1,554,245	Cash/wage transfer to the beneficiaries (workers of community assets creation work) as wage through bank accounts - 5,600 HHs, average 40 days of employment as per local wage rate (US$ 6.67/day), through local government-contracted financial service providers.
2.1.3	Technical Assistance	95,160	95,160	95,160	95,160	95,160	475,800	The budget includes: (1) salary of Technical Assistance staff (5 engineering - 100% and (2) 40% salary of 2 technical experts (climate change, and resilient infrastructure) to provide project execution support to the Local Governments and monitoring of activities.
2.1.4	Travel Costs	10,400	10,400	10,400	10,400	10,400	52,000	Project staff field travel costs (subsistence allowance) for 3 technical coordinators (engineering).
2.1.5	Miscellaneous	7,700	7,700	7,700	7,700	7,700	38,500	Vehicle running cost for field staff and other consumables (motorbike and fuel) for 3 technical coordinators (engineering).
Total - Output: 2.1		**113,260**	**804,736**	**1,081,327**	**943,032**	**389,851**	**3,332,205**	
Total Component 1		**443,870**	**2,081,132**	**2,241,787**	**1,402,454**	**470,803**	**6,640,045**	
Component 2:								
Outcome 3: Strengthened climate governance and institutional system (policies, plans, institutions, and services) to sustain climate adaptation and disaster risk management actions.								
Output 3.1: Capacities of key government institutions, local stakeholders and last-mile communities increased to co-produce, deliver/disseminate, and utilize tailored climate information services.								
3.1.1	Training/workshop	0	27,500	16,500	11,000		55,000	This budget includes the training materials, resource persons and other logistics costs for capacity development training to the 11 local and 2 provincial governments on updating/setting up and operationalization of the provincial climate change management information system (PCCMIS) in Karnali and Sudurpashchim Provinces and municipal agro-meteorological information centres (MAIC), to produce tailored climate services to the end users and sensitization for farmers to access, understand and utilize vital climate information (agro-meteorological advisories, early warning, forecasting etc) - US$4,000 x 11 (LGs) + US$5,500 x 2 (province).
3.1.2	Procurement	0	180,000				180,000	The budget includes the procurement of ICT equipment required for the setting up of the 1 PCCMIS in Sudurpashchim province and the setting up of the 11 MAICs in LGs - US$15,000 x 12.
3.1.3	Technical service provider and technical experts service	0	109,561	109,561	109,561	109,561	438,245	This budget includes the procurement of services of technical service provider consultancy and technical experts to develop/set up and operationalize the PCCMIC as a One-Stop Climate Portal at the provincial level, and MAICs at LG level and to provide technical support to the Local Governments and provide capacity strengthening support to LGs and oversight to the technical service provider.
Total - Output: 3.1		**0**	**317,061**	**126,061**	**120,561**	**109,561**	**673,245**	
Output 3.2: Capacities of local governments and communities increased to plan and implement adaptation solutions and effective climate-induced disaster risk reduction and management through climate-risk-informed local adaptation planning instruments (e.g., Local Adaptation Plan of Action - LAPA) and climate-hazard/disaster preparedness planning and response.								

3.2.1	Training/workshop	313,300	313,300				626,600	This budget includes the costs of training materials and logistics for community consultation at the ward and municipal level in 11 LGs (a total of 81 workshops) for LAPA and risk informed disaster response plan preparation and to sensitize the local stakeholders and communities on predicted climate change scenarios/impacts and formulate and implement locally-led adaptation strategies/actions.
3.2.2	Short-term consultants/technical experts	46,620	39,960	15,540	15,540	15,540	133,200	This budget includes the costs of 6 short-term consultants for 6 months to support 11 LGs in formulating GEDSI-integrated and climate-risk-informed Local Adaptation Plan of Action (LAPA) combined with risk-informed, evidence-based and needs-based costed disaster preparedness, and contingency plan and partial salary of 2 technical specialists (climate change, and resilient infrastructure) to provide technical support to the Local Governments in the execution of LAPA throughout the project period
Total - Output: 3.2		**359,920**	**353,260**	**15,540**	**15,540**	**15,540**	**759,800**	
Output 3.3: Knowledge and learning on community-based climate adaptation for vulnerable groups, including women, indigenous peoples, and marginalized communities enhanced.								
3.3.1	Service provider (developing knowledge products)			27000	27000	36000	90,000	This budget includes the cost of a technical service provider to design and develop the universally accessible knowledge products- 3 video documentaries, case stories, photo stories, and printing relevant documents.
3.3.2	Workshops/conferences	24,000	24,000	24,000	24,000	24,000	120,000	This budget includes the travel, allowance and other logistics costs for national/international workshop/conference related to climate change and resilience and for sharing best practices and learning of the project - 5 international workshops/conferences x 3 staff (US$5,000x5x3) and 5 national workshops/conferences (US$3,000x5).
3.3.3	Learning exchange visit/travel costs and intermittent technical experts for facilitation of learning exchange and ensure quality of knowledge products	11,600	11,600	11,600	11,600	11,600	58,000	This budget includes the cost of travel, allowance and logistics for learning exchange/exposure visits for the sectoral ministries, provincial and local governments and experts/practitioners to the project areas (travel, allowance and meeting costs) - 4 exposure visits x 30 participants: US$10,050 x 4).
Total - Output: 3.3		**35,600**	**35,600**	**62,600**	**62,600**	**71,600**	**268,000**	
Total Component 2		**395,520**	**705,921**	**204,201**	**198,701**	**196,701**	**1,701,045**	
Total Project Costs (Component 1 + Component 2)		**839,390**	**2,787,054**	**2,445,988**	**1,601,155**	**667,504**	**8,341,090**	
Project execution costs:								
1	National Project Coordinator	24,000	24,000	24,000	24,000	24,000	120,000	1 National Project Coordinator to be based in Project Management Unit (PMU) - MoFE, 100% dedicated to the project execution coordination and reporting.
2	Gender and Inclusion Specialist	24,000	24,000	24,000	24,000	24,000	120,000	1 Gender and Inclusion Specialist to be based in Project Management Unit (PMU) - MoFE, 100% dedicated to providing technical guidance and support to the EEs and TA team on gender and inclusion aspects/components of the project.
3	LG-TA staff (planning/governance/social mobilization)	29,616	29,616	29,616	29,616	29,616	148,080	2 Governance/Planning Coordinator to be deployed to the LGs, to provide project execution support to the Local Governments.

4	Partial salary of M&E expert (50%)	16,800	16,800	16,800	16,800	16,800	84,000	50% salary of M&E expert to provide technical support to the Local Governments and TA team
5	Project reviews, monitoring and technical guidance/oversight support by PMU, federal, provincial and local government and WFP	28,384	28,384	28,384	28,384	28,384	141,920	Travel and logistics costs
6	Project baseline survey	30,000					30,000	Baseline survey on the first year of the project through external/third-party research enumerators.
7	Annual outcome monitoring		20,000		20,000		40,000	Annual outcome monitoring, including monitoring of ESMP indicators on the second and fourth year of the project implementation - US$20.000 x 2.
8	Vehicle running cost for PMU	9600	9600	9600	9600	9600	48,000	Vehicle leasing/running cost for PMU/government staff.
9	Auditing cost					20,000	20,000	Engage private Auditing Firm to undertake project-specific auditing and reporting at the end of the project.
10	Office IT equipment and materials for PMU	24,000					24,000	Office IT equipment and materials for the 1 Project Management Unit (PMU).
11	ICT equipment to project TA staff	26,000					26,000	ICT equipment (computer set) for 13 TA staff.
12	Inception workshop and report writing	14,500					14,500	Inception workshop (1 day x 110 participants) and report writing. .
13	Meetings/workshops (project steering committee, local project coordination units' meetings and project learning sharing workshops)	9,000	9,000	9,000	9,000	9,000	45,000	Project steering committee and local level project coordination committees meeting costs and project learning sharing workshops - US$9,000/year.
14	Knowledge products/evidence generation			4,667	4,667	4,667	14,000	Cost of photo monitoring report, concise briefs from outcome monitoring exercises, the Mid-Term Review, and the Final Evaluation, report on lessons learned and best practices, as well as human interest stories.
Total Project Execution Cost (9.5%)		**235,900**	**161,400**	**146,067**	**166,067**	**166,067**	**875,500**	
Total Project Costs (Component 1 & 2+ Execution cost)		**1,075,290**	**2,948,454**	**2,592,055**	**1,767,222**	**833,570**	**9,216,590**	
Monitoring and Evaluation								
1	Mid-term review			15,000			15,000	Mid-term review of the project through independent consultant in the 3rd year of project implementation
2	Final Evaluation Consultancy in the 5th year					113,014	113,014	Final evaluation of the project through external/third party research firm in the 5th year of project implementation
Sub-total Monitoring and Evaluation				**15,000**	**0**	**113,014**	**128,014**	
3	Country office management cost (partial staff salary, office operation, travel etc)	9013	9013	9013	9013	9013	45,067	WFP Country Office management costs (cost-sharing of office rental, utilities, vehicle leasing, communication costs etc.).

4	WFP HQ Fee (6.5%), Indirect Support Costs (ISC)	70,480	192,235	170,044	115,455	62,114	610,329	Oversight, compliance, policy and strategic guidance and reporting support from WFP Headquarters to the country office.
Project Cycle Management Fee charged by the Implementing Entity (8.5%)		**79,493**	**201,249**	**194,058**	**124,469**	**184,141**	**783,410**	
TOTAL FINANCING REQUEST		**1,154,783**	**3,149,702**	**2,786,113**	**1,891,690**	**1,017,712**	**10,000,000**	

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

The schedule of disbursement of funds aligns with the broad implementation schedule and fund requirements.

	Upon Agreement Signature	**One year after Project Start**	**Two years after Project Start**	**Three years after Project Start**	**Four years after Project Start**	**Total**
Scheduled date	June 2026	June 2027	June 2028	June 2029	June 2030	
Project Funds (US$)	1,843,318	2,304,148	2,764,977	1,382,489	921,659	9,216,590
Implementing Entity Fee	156,682	195,853	235,023	117,512	78,341	783,410
TOTAL	**2,000,000**	**2,500,000**	**3,000,000**	**1,500,000**	**1,000,000**	**10,000,000**

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

A. Record of endorsement on behalf of the government
Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments as possible if a regional project/programme:

Name: Mr. Suman Subedi **Position:** Under-Secretary and DNA for AF **Ministry:** Climate Change Management Division, Ministry of Forests and Environment (MoFE)	Date: 17 December 2025

B. Implementing Entity certification
Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme 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 (Nepal Climate Change Policy, 2019; Nationally Determined Contribution (NDC) 3.0, 2025; National Framework on LAPA, 2019; and National Adaptation Plan, 2021-2050, Agriculture Development Strategy, 2015-2035 etc) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme

Name & Signature Implementing Entity Coordinator Mr. Riaz Lodhi Representative and Country Director WFP Nepal	
Date: 17 December 2025	Tel. and email: +977 5268607/5260316 riaz.lodhi@wfp.org
Project Contact Person: Mr. Krishna Jogi Deputy Head of Programme/Head of Disaster, Climate and Resilience WFP Nepal	
Tel. And Email: +977 01-5268607; krishna.jogi@wfp.org	

Government of Nepal
Ministry of Forests and Environment

P.O. Box No. 3987
Singh Durbar, Kathmandu

Ref. No. 195

Date: December 21, 2025

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

Subject: Endorsement for Improving food system resilience of vulnerable communities in Nepal through community-based adaptation.

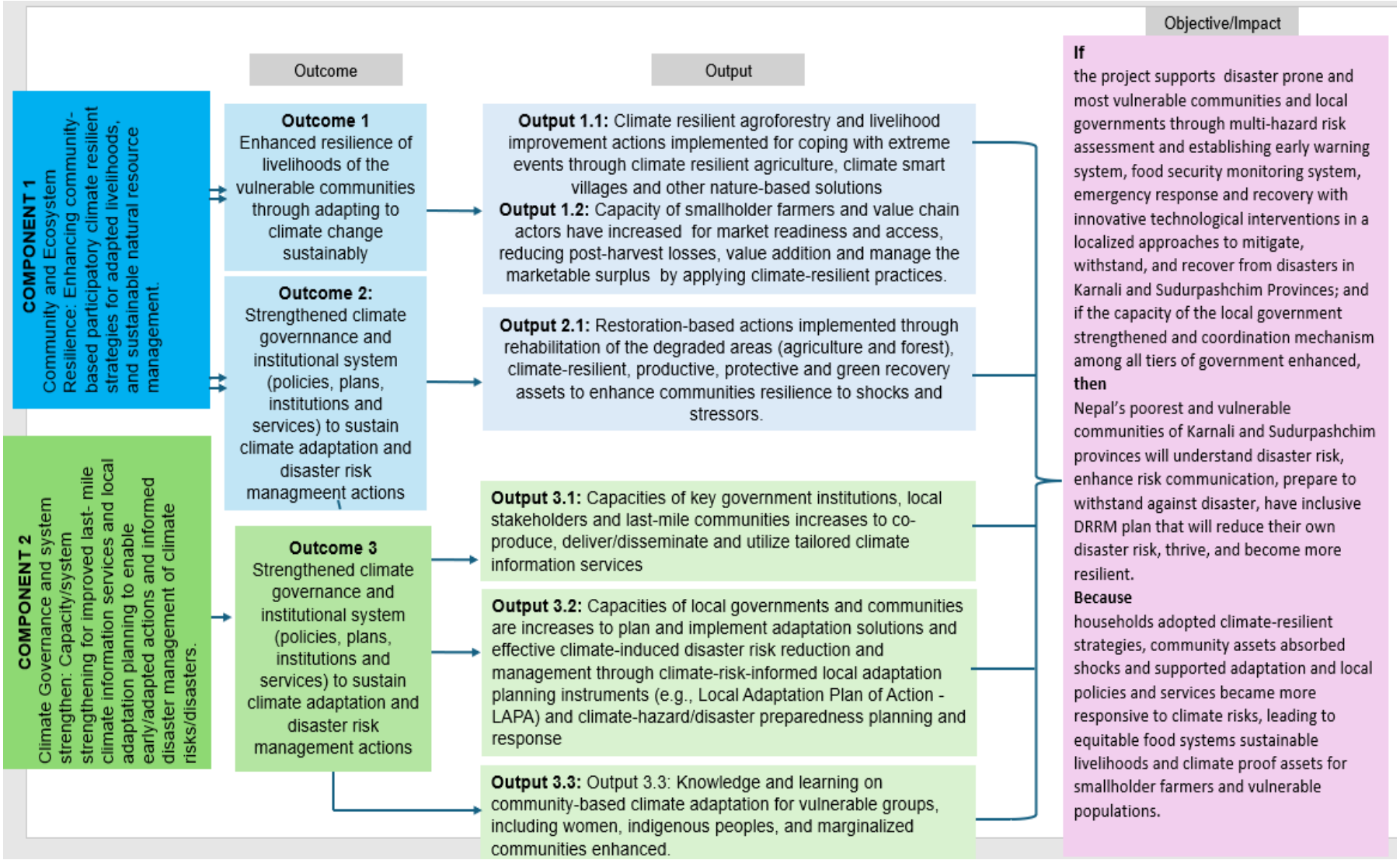
In my capacity as designated authority for the Adaptation Fund in Nepal, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Nepal

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project/programme will be implemented by World Food Programme (WFP) and executed by Ministry of Forests and Environment and Ministry of Agriculture and Livestock Development.

Sincerely,

Suman Subedi
Primary Contact Point, Adaptation Fund
Under Sercretary, Adaptation Section
Ministry of Forests and Environment
Email:s_subedi2003@yahoo.com
Suman.subedi@nepal.gov.np

Annex 1: Theory of Change



Annex- 2: Community and Stakeholder Consultations Report

1. Background

WFP is assisting the Government of Nepal to develop a project for adaptation to climate change under the Adaptation Fund (AF). The project's overarching goal is to strengthen the climate change adaptive capacity of vulnerable communities in Nepal. Specific objectives, outcomes and activities was developed based on different level of formal and informal meetings, consultations and from the secondary sources. To back up the development of the fully funded proposal, stakeholder consultations at various project sites were conducted and the necessary information were gathered as per the requirement of AF.

Building on the achievements and lessons from the initial phase, the Government of Nepal aims to scale up proven climate adaptation and resilience interventions in the districts of Kalikot, and Mugu, and scale out into additional climate-vulnerable mountain districts such as Humla, Bajura and Bajhang, where similar needs exist but were not previously covered. To ensure that the expanded project remains locally grounded, and demand-driven, extensive stakeholder consultations were carried out at the national, provincial, district, and local levels. These consultations engaged government agencies, local governments, indigenous and marginalized groups, and community members to identify climate risks, validate priority adaptation actions, and encourage community ownership of project activities.

The localized consultations were crucial for identifying context-specific needs and validating emerging adaptation innovations that can effectively strengthen the adaptive capacity of vulnerable populations - especially those at risk from climate-induced disasters, food insecurity, and environmental degradation. The disaggregated feedback from these consultations provided the foundation for the project's Gender Assessment (GA) and the development of a comprehensive Gender Action Plan (GAP), ensuring that gender equity and inclusion are fully integrated into project design and delivery. Upon finalization of the GA and GAP, project activities were revised and validated in collaboration with the Government of Nepal and key stakeholders, ensuring alignment with national adaptation priorities and community-level needs.

2. District profiles

Kalikot

Kalikot is a mountainous district located in Karnali Province in western Nepal. It covers an area of approximately 1,741 square kilometers and is bordered by Mugu and Jumla to the north, Dailekh to the south, Jajarkot to the east, and Bajura to the west. The district headquarters is Manma. The terrain of Kalikot is predominantly hilly and rugged, with altitudes ranging from around 700 meters in the southern valleys to over 4,000 meters in the northern highlands. The geography poses challenges for transportation, infrastructure, and service delivery, while also shaping the district's agricultural and ecological characteristics.

Kalikot falls within several agro-ecological zones, including Lower Tropical, Subtropical, Temperate, and Subalpine regions. This diversity supports a range of crops, with maize, millet, wheat, barley, and potatoes commonly grown. Farming is mostly rain-fed and subsistence-oriented, with low productivity due to poor soil quality, traditional techniques, and limited access to irrigation. Livestock rearing is a critical livelihood source, particularly in higher altitudes. Households keep cattle, buffalo, goats, sheep, and poultry, contributing to food security, income generation, and farming inputs such as manure. In upper elevations, mountain livestock like chauris are also raised.

As per the 2021 Census, Kalikot has a population of around 151,824. The district is home to a mix of ethnic groups, primarily Chhetri and Thakuri, along with significant Dalit communities such as Kami, Damai, and Sarki. Socioeconomic conditions are challenging, with widespread poverty, food insecurity, and limited employment opportunities. Many young people migrate seasonally or long-term to India or Gulf countries for work, and remittances play a crucial role in household economies. Administratively, Kalikot comprises one urban municipality (Khandachakra) and nine rural municipalities. Road infrastructure has seen gradual improvement, with the Karnali Highway providing a vital but often unreliable link to other districts. However, many interior villages still lack all-weather road access. Educational and health facilities are concentrated in accessible areas like Manma and Khandachakra, while remote regions face acute shortages of services, trained personnel, and supplies. The district hospital in Manma provides basic health services, but referrals often require long travel to neighboring districts. Schools are present at primary and secondary levels, but drop-out rates are high, especially among girls and marginalized groups. Despite the difficulties, Kalikot has potential for development in areas like climate-resilient agriculture, livestock improvement, community forestry, and small-scale hydropower. Its varied topography and cultural richness offer scope for eco-tourism and herbal product enterprises. However, these opportunities remain largely untapped due to weak market access, limited investment, and governance constraints.

Mugu

Mugu is one of the most remote and least developed districts in Nepal, located in Karnali Province in the far northwest of the country. Spanning an area of approximately 3,535 square kilometers, it is characterized by rugged mountain landscapes, deep valleys, and alpine meadows. The district headquarters is located in Gamgadhi, within Chhayanath Rara Municipality. Mugu shares borders with Humla to the west, Bajura and Kalikot to the south, Jumla to the southeast, and the Tibet Autonomous Region of China to the north. Its terrain ranges from mid-hill elevations of about 1,200 meters to high Himalayan peaks over 6,000 meters, creating a challenging environment for infrastructure development and service delivery.

The district falls within four major agro-ecological zones - Lower Temperate, Upper Temperate, Subalpine, and Alpine - with Subalpine and Alpine zones covering the largest portion. Due to the cold climate, short growing seasons, and poor soil fertility, agriculture is limited and mostly subsistence based. Common crops include barley, buckwheat, millet, potatoes, and beans, cultivated on small, sloping fields. Livestock rearing is an essential livelihood strategy, with households raising goats, sheep, cattle, and yaks, particularly in higher altitudes. Animal husbandry plays a key role in food security and income generation, especially where crop production is unreliable. As per the 2021 Census, Mugu has a population of approximately 55,286 people. The district is ethnically and culturally diverse, with major groups including Chhetri, Thakuri, Dalits (such as Kami and Damai), and indigenous communities like Mugali and Tamang. Nepali is the dominant language, though local dialects and Tibetan-influenced languages are spoken in the northern regions. Employment opportunities are extremely limited, and many people rely on seasonal migration to India or other parts of Nepal for labor. Youth outmigration is high due to lack of education, job opportunities, and basic services.

Mugu is administratively divided into one urban municipality - Chhayanath Rara - and three rural municipalities: Mugum Karmarong, Soru, and Khatyad. Basic facilities such as schools, health posts, and government services are concentrated in Gamgadhi and a few accessible areas, while most villages remain cut off due to lack of road infrastructure. Educational attainment is low, with limited access to secondary education and poor student retention rates. Health services are rudimentary, with limited medical supplies and a shortage of trained personnel. Most residents rely on small health posts, with only a few institutions offering maternal or emergency care. Despite these challenges, Mugu is home to Rara Lake—the largest lake in Nepal—situated within Rara National Park. This pristine lake and surrounding alpine forests hold immense potential for eco-tourism and conservation-based development. However, much of the district remains inaccessible, particularly during the winter. Recent road development has begun to link Mugu to neighboring districts, and the opening of seasonal roads has improved transportation slightly, though reliable year-round access remains a major issue.

Humla

Humla is Nepal’s northernmost and one of its most remote districts, located in Karnali Province. Spanning approximately 5,655 square kilometers, Humla is one of the largest districts in the country by area but among the least densely populated. The district headquarters is Simkot, which also hosts the only airport in the district. Humla shares its northern border with the Tibet Autonomous Region of China and is surrounded by Bajura, Bajhang, and Mugu districts on the other sides. The district is entirely mountainous, with elevations ranging from around 1,500 meters to over 7,000 meters. Its steep terrain, high mountain passes, and scattered settlements make accessibility and service delivery extremely challenging.

Humla falls predominantly within Subalpine and Alpine agro-ecological zones, with a very limited area under the Temperate zone. Due to harsh climatic conditions and limited arable land, agriculture is constrained to a few hardy crops such as buckwheat, barley, millet, maize, and potatoes, mostly grown in small, terraced fields. Livestock rearing is a crucial livelihood activity, particularly in high-altitude regions, where communities depend on yaks, goats, sheep, and cattle for food, income, and transport. Animal husbandry also plays a vital role in sustaining the traditional barter and trade-based economy, especially with Tibet. According to the 2021 Census, Humla has a population of about 55,886 people. The district is home to a mix of Khas Arya communities (such as Chhetri and Thakuri), Dalits, and ethnic Tibetan-origin groups. Nepali is the official and most widely spoken language, though Tibetan dialects are used in northern villages. Due to limited local economic opportunities, a significant portion of the population depends on seasonal migration and foreign labor, primarily to India, for income. Employment within the district is mostly informal, based on agriculture, livestock, and limited government or NGO services.

Humla is administratively divided into seven rural municipalities: Simkot, Namkha, Kharpunath, Sarkegad, Adanchuli, Tanjakot, and Chankheli. There are no urban municipalities, and settlements are widely scattered across steep, mountainous terrain. Basic public facilities such as schools, health posts, and government offices are concentrated in a few accessible locations. Simkot has a district hospital, but health services in remote areas are minimal and often lack trained staff and essential medicines. Educational infrastructure is limited, with low enrollment and high dropout rates, particularly among girls and marginalized communities. Literacy rates remain below the national average.
Despite these challenges, Humla holds significant cultural and ecological value. It is a gateway to the sacred pilgrimage sites of Mount Kailash and Lake Mansarovar in Tibet. The district also possesses breathtaking natural landscapes, rich biodiversity, and traditional Tibetan-influenced architecture and heritage. However, infrastructural development remains slow, with most of the district lacking road connectivity and relying on air transport or foot trails.

Bajhang
Bajhang is a hilly and mountainous district located in the far-western region of Nepal, within Sudurpaschim Province. It covers an area of approximately 3,422 square kilometers and is bordered by Darchula to the west, Baitadi and Dadeldhura to the south, Bajura and Humla to the east, and the Tibet Autonomous Region of China to the north. The district headquarters is Chainpur. Bajhang's elevation ranges from around 900 meters to over 7,000 meters, encompassing diverse topography, from river valleys to snow-covered peaks. The district's terrain is rugged and remote, with many villages accessible only by foot, especially in the northern and higher-altitude areas.

The district is divided into multiple agro-ecological zones: Subtropical (mainly in southern lowlands), Temperate, Subalpine, and Alpine. This variation in elevation influences local agriculture and livelihood practices. In the lower and mid-hill areas, crops like maize, rice, wheat, and millet are cultivated, while in higher altitudes, potatoes, barley, and buckwheat dominate. Agriculture is largely subsistence-based, relying heavily on rainfed systems. Livestock rearing is an integral part of the rural economy, with households raising cattle, buffalo, goats, sheep, and in upper regions, yaks and chauris. Livestock provides meat, milk, wool, manure, and serves as a safety net during economic stress. According to the 2021 Census, Bajhang has a population of approximately 195,000 people. The major ethnic groups include Chhetri, Brahmin, Thakuri, and Dalit communities, with a smaller presence of Janajati groups in some areas. Traditional customs and caste-based social structures remain influential in local life. Employment opportunities are limited, leading to widespread seasonal and long-term migration, particularly among youth, to India and the Gulf countries for labor work. Remittances are a key source of household income for many families.

Administratively, Bajhang is divided into 12 local units: one urban municipality (Jaya Prithvi Municipality) and 11 rural municipalities. While the district has seen improvements in road construction in recent years, a significant portion of the population still lives in areas without reliable road access. Basic facilities such as health posts, schools, and administrative services are available in some settlements, but coverage and quality remain uneven, especially in remote regions. Chainpur hosts the district hospital and a few secondary schools, but many rural villages have only primary schools and limited health services, often lacking trained personnel and supplies. Bajhang has notable potential for development in eco-tourism, medicinal herbs, and small-scale hydropower, given its natural beauty, biodiversity, and water resources. The Seti River and its tributaries offer hydropower and irrigation potential, while areas like Khaptad National Park and surrounding highlands have opportunities for nature and cultural tourism. However, realizing this potential requires substantial investment in infrastructure, education, health, and market access.

Bajura
Bajura is a remote and mountainous district located in the northwestern part of Sudurpaschim Province, Nepal. It covers an area of approximately 2,188 square kilometers and is bordered by Bajhang to the east, Achham and Doti to the south, Kalikot and Mugu to the northeast, and Humla to the north. The district headquarters is Martadi. Bajura features diverse topography ranging from steep hills and narrow river valleys to high-altitude alpine terrain, with elevation varying from about 300 meters in the south to over 6,400 meters in the north. This rugged geography creates both ecological richness and significant barriers to infrastructure development and service delivery.

The district spans multiple agro-ecological zones, including Subtropical, Temperate, Subalpine, and Alpine zones. The lower valleys support crops such as rice, maize, wheat, and millet, while higher elevations are suitable for barley, buckwheat, potatoes, and beans. Most agriculture is rain-fed and subsistence-based, with limited irrigation facilities. Terraced farming is common, and soil erosion and low productivity are persistent challenges. Livestock rearing is a major livelihood source, with households raising cattle, goats, sheep, buffalo, and poultry. In higher altitudes, yaks and chauris are also kept. Livestock contributes significantly to household food security, manure for farming, and income through sale of animals and dairy products. As per the 2021 Census, Bajura has a population of approximately 138,523 people. The major ethnic groups include Chhetri, Thakuri, Brahmin, Dalit communities (particularly Kami, Damai, and Sarki), and a small number of Janajati groups. The district has a deeply rooted traditional and patriarchal social structure. Due to limited local employment opportunities, out-migration for labor is widespread, particularly among men. Many households rely on remittances from India, Gulf countries, and Malaysia to supplement their livelihoods.

Administratively, Bajura is divided into nine local levels: one urban municipality (Badimalika) and eight rural municipalities. Road connectivity remains poor in much of the district, especially in northern and highland areas. While efforts have been made to expand rural roads, many communities remain isolated, especially during the monsoon season when landslides frequently block access. Facilities such as schools, health posts, and administrative services are concentrated in accessible areas like Martadi, while remote villages face significant service gaps. The district hospital in Martadi provides limited medical services, and most rural health posts lack adequate supplies, staff, and infrastructure. Similarly, access to quality education is constrained by distance, poverty, and lack of trained teachers. Despite these challenges, Bajura possesses considerable potential for development, especially in areas such as medicinal herb collection, high-value agriculture, renewable energy, and tourism. Its alpine landscapes, traditional hill culture, and sites like Badimalika Temple offer prospects for eco-tourism and religious tourism. However, harnessing

these opportunities will require targeted investments in infrastructure, climate-resilient livelihoods, health, education, and institutional capacity.

3. Approach and methodology

Stakeholder consultations:

In alignment with the participatory development requirements of the AF, GoN, and WFP, comprehensive community and stakeholder consultations were conducted for the proposed project. These consultations were carried out across all seven target districts - Kalikot, Mugu, Humla, Bajura, and Bajhang - over a series of consultation period including the consultations at the province level. Consultations included officials from key provincial and federal ministries and departments with a presence in the district, including those responsible for agriculture, livestock, water resources, forestry, and disaster risk reduction. The process also engaged NGOs, development partners, and indigenous people's institutions active in the respective districts. Detailed discussions were held with district-level technical staff and elected representatives of the concerned local governments to assess current vulnerabilities, ongoing interventions, and adaptation gaps. These meetings were followed by community-level consultations facilitated by the project development team, local government representatives, and WFP staff, and were conducted in multiple rural municipalities and wards within each district.

Details of the stakeholders consulted are listed at the end of this report. The inputs from both district and community consultations have been integrated into the situation analysis, the design of project interventions, and the development of the Gender Assessment (GA) and Gender Action Plan (GAP) to ensure locally grounded, inclusive, and effective adaptation planning.

Key findings from the stakeholder consultations

- Loss of production, productivity, and nutrients, shifts in altitudinal zones, flowering and fruiting times, species composition, and cropping patterns,
- Infestation of pest and diseases in the agriculture and livestock sector.
- Loss of agricultural land and forests,
- Drying up of water resources,
- Damage to infrastructure and assets

Community level consultations

Before conducting community-level consultations, guidelines and questionnaires were prepared to align with the requirements of the Adaptation Fund. Five local governments (LGs) from the targeted districts were selected, and consultations were carried out by WFP Kathmandu staff, supported by WFP field staff. These consultations engaged community members and LG representatives, gathering information based on the established guidelines, which was later compiled for analysis.

The community consultations took place on 2–10 April 2024, 8–10 May 2024, and 10-19 May 2025 including the Free, Prior and Informed Consent (FPIC) and Gender assessment consultations. Larger groups from each LGs were engaged to discuss their current environmental and social challenges, perceived climate change impacts, institutional mechanisms in place, and gaps in adaptation efforts. These groups were further divided into smaller groups to facilitate separate discussions with women and men, ensuring their distinct needs were identified. A checklist for initial gender analysis and FPIC were also used during these discussions.

The consultations were scheduled at appropriate times and locations, minimizing disruption to participants' daily agricultural and household responsibilities. To respect cultural norms and gather intricate viewpoints, consultations with women were conducted by female staff, focusing on the unique challenges, needs, and coping mechanisms women experience. Local Women Development Officers, along with other elected and bureaucratic officials, were also consulted to enrich the process. The consultations involved a diverse group of participants from vulnerable communities, including women, men, youth, senior citizens, persons with disabilities (PWDs), and members from the Indigenous People Group and socially marginalized groups (SMGs). Given that the entire region is classified as climate-vulnerable, with much of the population experiencing multidimensional poverty, efforts were made to ensure inclusive representation. A total of 463 individuals participated, of which 43% were women.

The inclusion of elderly participants provided valuable insights into their unique adaptation needs. Similarly, PWDs and IPs highlighted their specific challenges in coping with climate change impacts and shared their requirements for effective support. This inclusive approach ensured comprehensive documentation of the diverse climate change impacts experienced by various groups, their levels of exposure, and their adaptation needs. Additionally, consultations were conducted with local government representatives, including Mayors/Chairs, Deputy Mayors/Deputy Chairs, Chief Administrative Officers, and officers from rural/municipalities. These sessions captured broader perspectives on climate change impacts in their areas and assessed their commitment to taking action further during implementation of the project.

District wise disaggregation of the community people involved in the community consultations:

Table below reflects the total number of community people consulted from the respective districts. Consultations were held at various levels, involving diverse villages, including specific sessions with indigenous communities to ensure informed participation and rights protection. Separate focus groups were conducted for men and women on GA tools.

Summary Table: Community Consultations (April–May 2024 & May-June 2025)

Date	District	Local Government	Ward(s)	Settlements	Male	Female	Total	SMGs*	Elderly	PWD
3-Apr-2024	Kalikot	Subhakalika RM	5	Sukatiya, Khatyawada, Adhikariwada	9	11	20	4	2	—
16-May-2025	Kalikot	Subhakalika RM	1	Chhati	40	24	64	N/A	N/A	N/A
5-Apr-2024	Mugu	Chhayanath Municipality	3	Tali Tuma	16	23	39	1	5	—
19-May-2025	Mugu	Mugum Karmarong RM	2, 4–6, 8	Mangri, Daura, Karti, Puwa, Riusa, Pulu, Chimaath, Maha, Karmarong, Chhayal	13	34	47	N/A	N/A	N/A
7-Apr-2024	Humla	Tanjakot RM	4	Paniwada, Kharra, Pataniwada, Utteseti, Okhareta, Dopke, Nayabasti, Kawla	45	47	92	44	1	1
10-May-2025	Humla	Tanjakot RM	5	—	51	12	63	N/A	N/A	N/A
11-May-2025	Humla	Adanchuli RM	4, 5, 6	—	24	3	27	N/A	N/A	N/A
8-May-2024	Bajhang	Khaptadchhanna RM	4	Baaskatiya Tole	12	23	35	10	3	1
9-May-2024	Bajhang	Talkot RM	6	Gaitola Keutal	25	16	41	18	8	—
12-May-2025	Bajura	Himali RM	2, 4, 6	Nohanda, Lotpata	12	23	35	N/A	N/A	N/A
—	**Total**	—	—	—	**262**	**201**	**463**	—	—	—

Key:

SMGs: Socially Marginalized Groups
Elderly: Aged participants
PWD: Persons with Disabilities
"N/A" = Not available or not recorded

Findings from the community consultations:

This section is based on the primary data collected during the community FGDs. The findings are disaggregated as much as possible according to gender, age group, livelihoods and vulnerability groups. Gender and protection issues, including gendered division of labour, women and youth participation, and access to resources, and issues concerning people with disabilities and elderly people are mainstreamed into the findings' sections. Reporting is provided collectively for all the districts and LGs.

Basis of Livelihood:

The primary sources of livelihood in the region include crop cultivation, fruit and nut production, the collection and trade of medicinal herbs, and livestock rearing—particularly small ruminants such as sheep and goats. Additional income is generated through small-scale businesses, seasonal employment in nearby urban centers and India, and informal roadside trading. During community consultations, participants consistently identified crop sales, medicinal and other economically valuable non-timber forest products (NTFPs), domestic work, seasonal wage labour, and remittances as key contributors to household economies. Youth participants noted a lack of livelihood diversification, with several former coping strategies - such as seasonal migration - now functioning as normalized income-generating activities. Male respondents emphasized the scarcity of local employment opportunities, resulting in a heavy reliance on labour-based social protection programs such as Food for Assets (FFA). Female participants observed that while some men working outside the community send remittances, the overall number remains limited.

Land ownership for residential and agricultural purposes is predominantly registered under men. Co-ownership is not customary, thereby concentrating decision-making authority regarding land and water resource management in the hands of men. Women, however, play a critical role in both household and agricultural activities, including land

preparation, seed storage and preservation, and managing labour for planting. They also collect firewood and fodder from nearby community forests. Given the remoteness of the Local Government (LG) areas, agricultural practices remain largely manual, relying on traditional technologies such as ox- and hand-ploughing. Poor market access presents a significant constraint. Although the agroecological conditions are favourable for apple cultivation, high transportation costs - attributable to inadequate road infrastructure—make production less competitive compared to other regions. This challenge is compounded by the absence of local storage facilities.

Communities in the upland areas of the LGs depend heavily on rangelands for livestock grazing and the collection of medicinal plants for trade. However, these rangelands are showing signs of ecological stress due to overgrazing, resulting in land degradation, biodiversity loss, and gully erosion. The Mugum Karmarong region, in particular, is notable for high-value medicinal species such as Cordyceps sinensis. Likewise, upland area of Tajakot rural municipality, is also famous for their presence of the high value medicinal herbs. Most of the forest land have been handed over to the community as a community forests or buffer zone community forests in case of the Chhayanath Rara Rural Municipality and Khaptadchhanna Rural Municipality. Having these livelihoods in place, it poses risk due to environmental and social challenges, including pest and disease outbreaks from new crop varieties, significant deforestation, declining wildlife populations, gender inequality, and wage gaps. Climate change exacerbates these issues with erratic rainfall and snowfall, frequent landslides, floods, droughts, and drying water sources.

The livelihoods of Indigenous Peoples (IPs) in Nepal's high Himalayan regions primarily revolve around subsistence agriculture and livestock rearing (cattle, goats, sheep). Due to limited local opportunities, many households rely on seasonal migration and informal wage labour, with remittances offering some financial relief, though inconsistently. Youth are increasingly concerned about the growing dependency on migration and the lack of sustainable, local jobs. Men face barriers to formal employment, often depending on public works programs like Food Assistance for Assets (FFA). Women, while responsible for most of the agriculture and livestock work, face limited decision-making power over land and water resources. Despite their critical role, land and livestock are typically registered in men's names. Agricultural productivity is restricted by poor access to quality seeds, irrigation, and mechanization, leading to uncultivated land and low yields. Rangelands and forests, essential for grazing and medicinal plant collection, are under pressure from overgrazing, soil erosion, and deforestation, threatening long-term ecological balance. Communities face poor infrastructure, limited safe water access, and rising transport costs, worsening food insecurity. Women bear the brunt of these burdens, walking long distances to collect water and fuelwood.

Food security, nutrition and access to basic services

The project areas span from the mid-hills to the high mountain regions of Nepal. In the mid-hills, farmers grow paddy, maize, millet, wheat, cauliflower, squash, turnips, and leafy greens. In the higher mountain areas, crops such as wheat, barley, buckwheat, maize, potatoes, fox millet, radish, and other vegetables are cultivated. People also raise yaks and yak-cow hybrids. Some vegetables like lettuce, onions, and garlic are grown in both the mid-hills and uplands, depending on land size and water availability. Most agricultural products from these areas last for a maximum of six months. The lean season typically begins in July and lasts until the next harvest. During this period, many households are forced to buy food from local markets, where prices are significantly higher due to transportation challenges. These high costs, combined with limited income opportunities for smallholder farmers, result in widespread food insecurity.

Limited road access within the project's area makes transporting food and getting crops to market difficult. In many cases, food must be carried manually by porters. Upland of all the LGs have enabling environment for apple production, however because of this inaccessibility and lack of storage houses people are not willing to grow more. Malnutrition remains a persistent issue in these areas. Extreme weather events—such as prolonged droughts, intense rainfall, floods, and landslides—further reduce agricultural yields, leaving families with insufficient food. In recent years, snowfall has drastically decreased in districts like Mugu, Humla, Bajhang, and Bajura leading to lower barley and wheat production. In Kalikot, untimely and erratic rains have even washed away farmland. These climate extremes have only worsened the food insecurity faced by these vulnerable communities.

Energy sources: Almost all households depended on firewood for cooking and heating, thereby depleting the trees and indigenous trees/shrubs. In most of the project areas, electricity is used for the purpose of lighting. The electricity from the micro-hydro system in Nepal generates limited electricity and multiple households share the same system. For this reason, it is only enough for the lighting, charging devices or running small appliances but not sufficient for the energy-intensive uses like cooking and/or space heating.

Water supply: There is an acute water crisis in several towns and villages of all the districts. Locals of all the project areas are struggling with the acute water shortage. In some of the villages of Mugu, Kalikot, , Bajura, and Bajhang districts, they distributed the supply water taps but authority cannot supply water regularly which worsen the sanitation situation of the community. In some places like Mugum Karmarong rural municipality only 34% of the households have access to formal water supply distribution water for the specific time for an instance at morning 1-2 hours. The water sources are just a mile away from the community, but the authority is not able to distribute the drinking water to the community. In some villages of Mugu,and Kalikot, they are able to distribute the water for an hour/day through tap per

community. The community people have to be in a queue for the entire morning to get 20-50 litre of the water. They have to manage for the cooking, washing, cleaning, livestock and so on.

In certain villages of Mugu, Kalikot, , and Bajhang water is only available for about an hour each day through a communal tap. As a result, residents must queue for hours in the morning just to collect 20 to 50 litres of water. Although water sources are located just about a mile from some of the settlements like in Humla, the authorities have not been able to install the drinking water system. For these areas, people are forced to fetch water from the near-by wells and springs which leads to consuming unsafe drinking water. Due to climate change, the nearby water sources are drying up which again adds up extra hour for women to fetch water. The fetched water must be stretched to cover all their basic needs cooking, washing, cleaning, and caring for livestock placing a heavy burden on daily life of women. The community people from Khaptadchhanna LG of Bajhang recalled the 2021 flood which destroyed all the drinking water system and community were under acute water shortage of drinking water and they forced to use water from rivers and streams. The case repeats in every monsoon.

Climate Change observed, perceived impacts and environmental issues
Climatic changes observed: erratic rainfall patterns, increased dry spells, heavy rains, temperature rise, less snowfall on the mountainous LGs, frequent water-related disasters like floods, landslides, hailstorms and drought.
Perceived impacts: Due to the climatic changes over the years, the region is facing impacts on agriculture, livestock and livelihood directly and indirectly. The impacts include:

Impacts on agriculture and livestock: Community groups across the region reported that rice planting in the mid-hills has been delayed by 2–3 weeks due to unpredictable rainfall in June. Additionally, the rice harvest now occurs about a month earlier than in the past. Traditionally, paddy was planted in early to mid-June and harvested after mid-November. However, climate changes in the region have caused a consistent delay in planting and an earlier harvest. This shift has also affected wheat cultivation. Since farmers typically sow wheat after harvesting paddy, the earlier paddy harvest has led to wheat being sown and harvested roughly a month earlier than before, now typically between April and May. Similar shifts in timing have been observed for beans, affecting both sowing and harvesting periods. If extreme events like prolonged drought, heavy rainfall, floods, hailstorms and landslides farmers often experience loss of their farmland, destroying the ready-to-harvest crops. Thus, farmers must incur the additional expenses in alternate to the crops which they cannot afford under normal conditions. In the upland areas of the selected LGs, barley production is highly dependent on both the amount and timing of snowfall. However, communities have reported that recent climatic shifts - particularly the absence or significant reduction of winter rainfall between December and February - have resulted in frequent crop failures, especially of barley and wheat. These changes have also led to declining productivity of other indigenous crops, including various millet species such as foxtail millet, finger millet, and proso millet. When asked about their willingness to continue cultivating these crops, many community members expressed reluctance due to these persistent environmental challenges. Despite this, barley, wheat, and millets remain deeply rooted in local socio-cultural traditions and have been consumed as staple foods for generations.

The project area is experiencing a temperature rise, which is resulting in a pest infestation problem in all the project areas. This problem results in the decline of the indigenous crop yield. It has been witnessed by the community that invasive species destroyed the beans at Mugu, which is a staple as well as the cash crop for them. The frequent disease spread of the livestock is the main problem faced by the locals.

Impacts on water resources: Women from all the communities highlighted water scarcity as a major environmental challenge, impacting access to clean water for household use and irrigation. They shared that over the years, they have observed reduced snowfall in the mountains, faster glacier melting, and the drying up of springs and wells. While climate change affects the entire community, the group emphasized that women, girls, children, persons with disabilities, and the elderly are disproportionately impacted. During droughts, they are often the ones who must travel long distances to collect water. In times of flooding, water sources become contaminated, increasing the risk of waterborne diseases.

Impacts on the forest and biodiversity: With increasing temperatures, tree species that were previously confined to lower altitudes are now being observed at higher elevations. Local communities have noted that traditional varieties of walnut and apple are also shifting upward. Forest degradation has emerged as a significant concern across the project areas, particularly as medicinal plants become increasingly scarce due to their migration to higher altitudes. For example, the collection of *Yarsagumba* (Cordyceps sinensis) now requires an additional day of trekking compared to the past. Communities further reported that overgrazing of rangelands is diminishing available pasture, while the spread of invasive species in local forests has become widespread. Despite limited efforts to manage them, these invasive species continue to pose a persistent challenge. Moreover, the availability of medicinal herbs has noticeably declined over the past decade.

Impacts on livelihood: Agriculture supports livelihoods only part of the year in many areas, forcing families to purchase food during off-seasons and driving youth migration for work and education. This labour shortage leaves women

managing both farming and household responsibilities. Coping strategies include adopting hybrid crop varieties and using media like radio jingles for climate disaster alerts. Recommendations highlight commercial and off-season farming, water source development, and cash crop cultivation tailored to the region. Community has faced the social challenges include inadequate waste management, gender discrimination, wage gaps, social marginalization, and the persistence of Bali Pratha - a system through which marginalized groups exchange crops for occupational goods due to limited land ownership.

Health impacts: vector borne diseases in the mountains is witnessed which was not registered in the past. The locals also observed a more water-borne diseases and seasonal flu and cold strains during the spring. The children, breastfeeding mothers and elderly people are mostly affected by those diseases.

In a nutshell, changing climate patterns have reduced agricultural productivity, agricultural production of the local crops, and pasturelands, with limited community-led coping mechanisms in place. Water sources are drying up which make locals life harder. Incidents of the disease outbreaks in plant and animals are frequent. Recommendations include providing training for vulnerable groups, creating income-generating activities to curb migration, improving livestock management, and enhancing market access for agricultural products, alongside fostering resilience through external support.

Coping mechanism and adaptation strategies

Following coping mechanism and adaptation strategies were collected from the community consultations.

- In response, communities have adopted a variety of informal and local-level strategies, including:
- Adjusting planting cycles to match new weather patterns
- Diversifying income sources - from herding and farming to medicinal plant harvesting, trade, or labour
- Using traditional irrigation (kulos) and constructing small water ponds
- Shifting to resilient crops like buckwheat and millet
- Participating in community forestry for conservation
- Building terraces to combat erosion
- Seasonal migration and remittances
- Changing livestock routes to avoid degraded pastures
- Despite these efforts, the lack of formal support systems, credit access, and infrastructure limits their resilience. Migration, including high-risk international routes, is becoming a more desperate but common response. Changing livestock routes to avoid degraded pastures
- Despite these efforts, the lack of formal support systems, credit access, and infrastructure limits their resilience. Migration, including high-risk international routes, is becoming a more desperate but common response.

3. Recommendation

Based on the discussion with different levels of stakeholders following recommendations are drawn:

- Livelihood support and training: Provide skills training, create income-generating opportunities, improve livestock management, and enhance market access to reduce migration and build resilience.
- Participatory adaptation planning: Ensure inclusive, community-driven planning processes that prioritize local vulnerabilities and develop context-specific climate adaptation strategies.
- Timely climate information: Deliver regular, accurate, and accessible climate forecasts and advisories to help communities better plan their agricultural and livelihood activities.
- Climate-resilient irrigation systems: Introduce small-scale, sustainable irrigation infrastructure and improve access to climate-adaptive agricultural technologies.
- Capacity building for climate resilience: Organize workshops on climate-smart agriculture, sustainable natural resource management, and alternative livelihood strategies.
- Promotion of resilient crops: Support the introduction and cultivation of climate-resilient and nutrition-sensitive crop varieties to strengthen food security.
- Effective communication of government schemes: Streamline and culturally adapt the dissemination of information on government programs and entitlements to ensure better community access.
- Inclusive implementation strategies: Prioritize the active participation of women, persons with disabilities, and marginalized groups in project design and land-based adaptation efforts.
- Strengthen Self-Help Groups (SHGs): Provide support to SHGs to empower women, improve household income, and enhance overall community resilience.
- Agroforestry and homestead gardening: Improve market access for agroforestry products and promote homestead gardening through training, input support, and extension services.
- Natural resource and water management: Invest in rainwater harvesting, rehabilitate water infrastructure, promote sustainable NTFP harvesting, and restore degraded land and rangelands.

- Energy, finance, and traditional knowledge: Expand clean energy access, strengthen community finance systems, and integrate traditional ecological knowledge into development planning and agricultural services.

List of key stakeholders consulted:

Organization	Name	Position	Gender
National Level			
MoFE	Dr. Rajendra Prasad Mishra	Secretary	Male
MoFE	Dr. Maheshwor Dhakal	Joint Secretary	Male
MoFE	Dr. Buddi Sagar Poudel	Joint Secretary	Male
MoFE	Yam Nath Pokharel	Under Secretary	Male
MoFE	Naresh Sharma	Under Secretary	Male
MoFE	Suman Subedi	Under Secretary	Male
MoFE	Srijana Shrestha	Under Secretary	Female
MoFE	Hari Laudari	Assistant Forest Officer	Male
MoFE	Janak Raj Sharma	Section Officer	Male
MoFE	Muna Neupane	Assistant Research Officer	Female
MoFE	Surendra Raj Pant	Assistant Scientific Officer	Male
MoFE	Somnath Gautam	Section Officer	Male
MoFE	Narayan Rayamajhi	Section Officer	Male
MoFE	Newton Lamsal	Section Officer	Male
MoFE	Harimaya Paudyal	Section Officer	Female
MoFE	Kiran Kumar Pokharel	Scientific Officer	Male
Ministry of Finance	Shreekrishna Nepal	Joint Secretary	Male
Ministry of Finance	Surya Prasad Pokharel	Under Secretary	Male
MoALD	Sanjiv Kumar Karna	Joint Secretary	Male
MoALD	Sabnam Shivakoti Aryal	Joint Secretary	Female
MoALD	Shankar Sapkota	Under Secretary	Male
Provincial Level			
MoITFE	Devesh Mani Tripathi	Secretary	Male
MoITFE	Bharat Prasad Shrestha	Forest Officer	Male
MoITFE	Padam Bista	Finance Officer	Male
MoITFE	Radhika Bohora	Forest Officer	Female
MoITFE	Parbati Bhatta	Section Officer	Female
Directorate of Industry, Commerce and Consumers' Welfare (DICCW)	Bhoj Raj Bhalla	Director	Male
Forest Directorate	Shyam Shrestha	Senior Officer	Male
Ministry of Social Development (MoSD)	Hem Raj Khadka	Senior HEO	Male
District level			
Humla District Stakeholders			
Tanjakot RM	Lalkesh Jaisi	Chairperson	Male
Tanjakot RM	Surendra Bahadur Thapa	Vice Chairperson	Male
Tanjakot RM	Mohanlal Risal	Ward Chairperson, Ward 1	
Tanjakot RM	Ajabirya Khatik	Ward Chairperson, Ward 2	
Tanjakot RM	Rajendra Bahadur Shahi	Ward Chairperson, Ward 3	
Tanjakot RM	Raj Bahadur Bogati	Ward Chairperson, Ward 4	
Tanjakot RM	Jagat Sarki	Executive committee member	
Tanjakot RM	Nandabir Chadhara	Executive committee member	
Tanjakot RM	Aapsari Kami	Executive committee member	Female
Tanjakot RM	Rajdevi Malla	Executive committee member	Female
Tanjakot RM	Chhamaka Khadka	Executive committee member	
Tanjakot RM	Aausi Damai	Executive committee member	Female
Tanjakot RM	Rajendra Syankhu	CAO, OIC	
Tanjakot RM	Dhanraj Dhakal	Chief of Heath Section	

Tanjakot RM	Lal Prasad Dhakal	Chief of Administration	
Tanjakot RM	Balbhadra Chhantyak	Admin assistant	
Tanjakot RM	Mangal Nepali	Ward Chairperson, Ward 5	Male
Tanjakot RM	Samikchya Adhikari	Chief Administrative Officer	Female
Tanjakot RM	Dhiraj Bhatta	Engineer	Male
Adanchuli RM	Mohan Bikram Singh	Chairperson	Male
Adanchuli RM	Kamal Bahadur Chhatyal	Ward Chairperson, Ward 5	Male
Adanchuli RM	Birkha Bahadur Budha	Ward Chairperson, Ward 6	Male
Adanchuli RM	Karna Rokaya	Vice Chairperson	Male
Adanchuli RM	Pradip Bhandari	CAO	Male
Adanchuli RM	Bipin Paudel	Engineer	Male
Bajura District Stakeholders			
Himali RM	Govinda Bahadur Malla	Chairperson	Male
Himali RM	Rajkala Sarki	Vice Chairperson	Female
Himali RM	Bhimanand Pandey	Ward Chairperson, Ward 4	Male
Himali RM	Premlal Bhandari	Ward Chairperson, Ward 6	Male
Himali RM	Rana Bahadur Budha	Member, Ward 2	Male
Himali RM	Raj Bahadur Bhandari	CAO, OIC	Male
Himali RM	Jayendra Malla	Information Officer	Male
Kalikot District Stakeholders			
Suvakalika RM	Bir Bahadur Ramjali	Ward Chairperson, Ward 1	Male
Suvakalika RM	Dipendra Adhikari	Engineer	Male
Suvakalika RM	Gobinda Prasad Acharya	Chairperson	Male
Suvakalika RM	Ganesh Bahadur Shahi	CAO, OIC	Male
Suvakalika RM	Surya Bahadur Rawal	Agriculture Technical Assistant	Male
Suvakalika RM	Nawaraj Chaulagain	Information Officer	Male
Suvakalika RM	Sapana Kumari Shahi	Information Officer	Female
Mugu District Stakeholders			
Chhayanath Rara Municipality	Bishnu Kumar Bham	Mayor	Male
Chhayanath Rara Municipality	Aiswarya Malla	Deputy Mayor	Female
Chhayanath Rara Municipality	Pashupati Shahi	CAO	Male
Rara National Park	Mahesh Neupane	Warden, OIC	Male
Rara National Park	Man Bahadur Thakali	Administrative officer	Male
Bufferzone Management Committee	Bishnu Bahadur Rawal	Chairperson	Male
Division Forest Office	Lalit Kumar Karn	DFO	Male
Division Forest Office	Ram Bahadur Rokaya	Administrative officer	Male
Division Forest Office	Basanti Budha	Information Officer	Female
Division Forest Office	Milan Kumar Sejuwal	Forester	Male
Mugum Karmarong LG	Chhiring Kyapne Lama	Chairperson	Male
Mugum Karmarong LG	Chhiring Putik Lama	Vice Chairperson	Female
Mugum Karmarong LG	Chyawa Tamang	Ward Chairperons, Ward 2	Male
Mugum Karmarong LG	Suvaash Chandra Rawal	CAO, OIC	Male
Mugum Karmarong LG	Sobendra Malla	Information Officer	Male
Bajhang District Stakeholders			
Talkot LG	Kalak Bahadur Rokaya	Chairperson	Male
Talkot LG	Yadav Bhattarai	CAO	Male
Talkot LG	Keshav Raj Bhatta	Administrative officer	Male
Talkot LG	Dipendra Aidee	Agriculture Technical Assistant	Male
Talkot LG	Bijay Raj Joshi	Engineer	Male
Khaptad Channa LG	Bishnu Kumar Thapa	Vice Chairperson	Male
Khaptad Channa LG	Hari Prasad Soti	Education Officer	Male
Khaptad Channa LG	Mahesh Kumar Khatri	Information Officer	Male
Khaptad Channa LG	Rajaram Tharu	Admin assistant	Male
Indigenous Peoples Institution			

Adibasi Janajati Uththan Mahasangh Tatha Uththan Samaj- Tanjakot	Singh Bahadur Budha	Coordinator	Male
Byasi Sewa Samaj-Tanjakot	Kumbha Budha	General Secretary	Male
Byasi Samaj- Adanchuli	Chhyauwkala Rokaya	Member	Female
Adibasi Janajati Magar Sangh- Suvakalika	Nara Bahadur Budha Magar	Chairperson	Male
Adibasi Janajati Magar Sangh- Suvakalika	Suman Ramjali	Secretary	Male
Adibasi Janajati Magar Sangh- Suvakalika	Saure Ramjali	Member	Male

Annex 3: Gender Assessment Report

1. Introduction

WFP serves as the Multilateral Implementing Entity for the proposed Adaptation Fund-financed project entitled "Improving food system resilience of vulnerable communities in Nepal through community-based adaptation". In this capacity, WFP holds primary responsibility for the project's reporting, monitoring/ evaluation, and financial management functions, ensuring full compliance with the operational policies and procedures of both WFP and the Adaptation Fund. WFP also provides technical assistance to the government to facilitate the effective implementation of the project. In consultation with the executing entities, WFP has carried out the gender assessment for the proposed project.

2. Objectives of the Gender Assessment

This Gender Assessment (GA) aims to generate both qualitative and quantitative evidence on gender roles, responsibilities, needs, opportunities, and challenges experienced by women, men, and individuals of diverse gender identities in Nepal, with a particular focus on the proposed project areas. The assessment provides a comprehensive overview of the prevailing gender dynamics to ensure that adaptation interventions are gender-responsive, avoiding the reinforcement of existing inequalities ("do no harm") and actively promoting gender equity and empowerment ("do good"). The GA serves as the analytical foundation for the development of gender-responsive implementation and monitoring frameworks, including the formulation of gender-sensitive indicators. It outlines the socio-economic, political, cultural, and legal contexts that shape gender relations in the project areas and examines the differentiated impacts of climate change on various gender groups and their respective adaptive capacities.

Building on an initial gender analysis conducted during the concept note development phase, through community consultations, WFP identified key gender and social inclusion gaps related to vulnerability and adaptive capacity. The preliminary analysis focused on two core objectives:

- To identify and explain gender equality and women's empowerment gaps - considering intersectional factors - in the context of climate risks, food insecurity, and resilience.
- To inform the development of strategies addressing gender equality, disability inclusion, and broader social inclusion within the programme framework.

An in-depth gender analysis has been subsequently carried out while formulating a fully developed proposal, including community consultation and community-level data collection from project areas from 10 to 19 May 2025. This analysis aimed to ensure that the project design and implementation are fully responsive to existing gender and social inclusion opportunities and constraints. It examined how climate change affects different sub-groups of women and men, taking into account intersecting factors such as age, disability, caste, ethnicity, socio-cultural norms, and economic status. The assessment explores rural livelihoods, gendered divisions of labour, access to and control over resources, access to information and services, decision-making roles, food security, and nutrition practices. It also addresses the prevalence and impacts of gender-based violence and assesses the varying vulnerabilities and adaptive capacities of different groups through an intersectional lens. Each thematic area is accompanied by targeted recommendations. The report is structured into four sections:

- **Section I**: Introduction and background, including objectives and methodology.
- **Section II**: Overview of the national context, highlighting socio-economic, cultural, political, and policy frameworks.
- **Section III**: Analysis of differentiated climate change impacts.
- **Section IV**: Findings and recommendations from the in-depth gender analysis, applying an intersectional approach, followed by annexes.

3. Methodology

As part of the comprehensive proposal development process, gender-responsive Focus Group Discussions (FGDs) were conducted in five selected local governments across Karnali and Sudurpaschim Provinces from April 2–10 2024, May 8–10 2024, 10-19 May 2025 and 22-23 June 2025. These consultations built upon earlier engagements held during the concept note development phase and aimed to validate key gender and social inclusion considerations in the context of climate risks, while also identifying locally appropriate adaptation strategies. A structured discussion tool was employed to guide the FGDs, ensuring alignment with the Adaptation Fund's Gender Policy. A detailed report was prepared to document how the findings from these community-level consultations, conducted across four districts, inform the broader gender assessment, including a cross-district analysis and corresponding recommendations.

To promote inclusivity and open dialogue, discussions in each site were conducted in three separate groups: (i) local government representatives and individuals from Indigenous Peoples (IPs), (ii) women-only groups, and (iii) men-only groups. Prior to the discussions, community members were briefed on the objectives of the consultations. The consultation teams comprised four representatives from WFP Nepal, divided into two groups in three phases to cover

the eleven LGs of the seven districts. Local male and female translators, fluent in local dialects, supported the consultations as needed. The communities consulted reflected Nepal's demographic diversity, including Janajati, Dalit, and hill Brahmin/Chhetri populations, as well as single women, elderly individuals, persons with disabilities, and female-headed households. A total of 565 community members participated in the consultations, disaggregated by sex: 263 women and 302 men. While gender inclusion remains a central priority, the lower participation of women reflects prevailing gender norms and accessibility barriers in the targeted areas. The table below provides a summary of the community consultations:

S.N.	District	Female	Men	Total
1	Kalikot	65	59	124
2	Mugu	57	29	86
3	Humla	62	120	182
4	Bajhang	39	37	76
5	Bajura	8	27	35
	Total	**201**	**262**	**463**

4. Country Context

The Constitution of Nepal aims to establish an egalitarian and prosperous society, free from discrimination based on class, ethnicity, region, language, religion, or gender, including ethnic untouchability. This is to be achieved through the principles of proportional inclusion and participation, ensuring economic equality, prosperity, and social justice. The Sixteenth Periodic Plan (2024-2029) itself envisions "Good Governance, Social Justice and Prosperity," with social justice being fundamental for sustainable, inclusive, progressive, and perceptible prosperity. It targets establishing social justice in key areas such as health, education, employment, settlement, security, and public service delivery. The plan aligns with the Sustainable Development Goals (SDGs), which advocate for "leaving no one behind". Nepal has made notable progress in empowerment, inclusion, and social mobilization through policy and legal efforts. This includes ratifying international conventions like the Convention on Elimination of All Forms of Discrimination against Women (1979) and the Convention on the Rights of Persons with Disabilities (2006). The National Gender Equality Policy, 2021, has led to the adoption of a gender-responsive governance system and budgeting at all three levels of government.

As of April 2024, Nepal's population exceeds 29 million, with women comprising 51.13% and men 48.87%. The annual population growth rate is 0.92%. In Karnali Province, women make up 51.2% of the 1.7 million population, while in Sudurpashchim Province, women represent 52.8% of the 2.7 million population. Across the eleven selected local levels, women constitute 51.6% of the population. The life expectancy in Nepal is 73.8 years for women and 68.2 years for men. Nepal continues to face widespread poverty, influenced by gender, ethnicity, caste, and regional disparities. As of recent data, 20.27% of the population lives below the poverty line, while 17.4% (4.98 million people) experience multidimensional poverty, down from 30.1% in 2014. Despite progress in poverty reduction and its commitment to achieving the SDGs by 2030, Nepal remains one of the poorest nations, with a GDP per capita of US$ 1,336.5 in 2022. In the 2024 Gender Inequality Index, Nepal ranked 117th out of 146 countries, slightly lower than 116th in 2023. Despite constitutional commitments, gender disparities persist, including a gender gap in unemployment (12% for women vs. 9.8% for men) and limited female representation (33.1% of parliamentary seats as of February 2024). While 88.9% of legal frameworks addressing gender equality exist, challenges remain in unpaid care work, the gender pay gap, and ICT skill access. These issues hinder progress toward inclusion and equality in Nepal's development efforts

Social power dynamics in Nepal are deeply nuanced and shaped by intersecting factors such as gender, caste, ethnicity, disability, and socio-cultural norms. While women generally experience multiple and overlapping forms of discrimination not typically encountered by men, their experiences and levels of agency vary significantly across different social groups and contexts. Even within a single household, women may face distinct challenges based on their caste, ethnicity, age, or ability status. For example, Janajati women may have greater mobility and access to productive labour opportunities but often face heightened social marginalization. In contrast, Brahmin women may benefit from higher social status but are frequently constrained by rigid ritual norms and restrictions, including limitations on their participation in economic activities. Similarly, an Indigenous woman with a disability may experience compounded marginalization compared to a non-disabled Brahmin woman. Indigenous persons with disabilities often lack access to essential technologies such as radios, televisions, mobile phones, or the internet, further exacerbating their exclusion.

Climate change and disaster impacts are disproportionately borne by women and children. Globally, women and girls are estimated to be 14 times more likely to die during climate-related disasters due to limited access to timely information, resources, and decision-making power. Approximately 80% of those displaced by climate change are

women and girls. In Karnali and Sudurpaschim Provinces, women's vulnerability is intensified by their traditional roles, which include caregiving, household management, subsistence farming, water and fuelwood collection, and livestock care. These responsibilities increase their exposure to climate risks and necessitate the development of adaptive strategies that contribute to household resilience. However, entrenched socio-cultural norms often lead to seasonal male outmigration for employment, leaving women with increased workloads and limited access to community networks and learning opportunities. Moreover, women's limited control over critical assets and services, such as land, credit, financial services, and technology, further constrains their capacity to plan for and respond to climate shocks. Gendered coping strategies also differ - women often adopt measures such as cultivating high-yield crop varieties and borrowing from social networks, while men tend to migrate seasonally to urban centres or neighbouring countries, such as India, in search of income-generating opportunities.

The National Climate Change Policy, 2076 (2019) for Nepal places a significant emphasis on gender equality and social inclusion (GESI) as a critical component of its climate change management strategy. Here's a summary of its approach to gender equality: A primary objective of the policy is to mainstream gender equality and social inclusion (GESI) into climate change mitigation and adaptation programs. This indicates a systemic integration of GESI concerns across all climate actions. The policy aims to facilitate livelihoods by mainstreaming good governance and GESI into the formulation of policies, institutional frameworks, and the implementation of climate-related programmes. This ensures that gender considerations are embedded from the highest levels of policymaking down to practical implementation. The policy acknowledges that factors such as social disparity contribute to Nepal's high sensitivity to the impacts of climate change. It explicitly states that the concerns of women are among those that will be addressed in matters related to climate change. In the Agriculture and Food Security sector, the policy mandates that "Agriculture-based adaptation programs will be conducted by targeting poor, marginalized, landless, indigenous people and vulnerable households, women and persons with disability". This highlights a direct focus on empowering women in a crucial livelihood sector. It also stipulates that access to climate change-related information and technologies will be enhanced for persons and groups with different languages, classes, cultures, ages, and sexes, as well as persons with disabilities.

Similarly, the National Adaptation Plan (NAP) for Nepal (2021-2050) places a strong emphasis on GESI as a fundamental guiding principle for its climate change adaptation efforts. This commitment is rooted in the "Leave-No-One-Behind" principle, ensuring that all people, especially the most vulnerable, are included in and benefit from adaptation actions. The NAP document highlights that climate change disproportionately affects vulnerable groups, which include women, indigenous people, Madheshi, Tharu, Muslim, oppressed groups, backward class, minorities, landless, marginalized farmers, slum dwellers, youth, children, elderly, pregnant women, incapacitated, and disadvantaged persons or groups. Women, in particular, are noted as highly vulnerable to climate change impacts due to factors such as their traditional roles in unpaid household chores and caregiving, and their reliance on natural resources for livelihoods. Their economic contributions, including unpaid domestic labour and agricultural work, are often overlooked or undervalued. GESI is one of the nine priority adaptation programmes in the NAP. This programme, titled "Gender Equality and Social Inclusion, Livelihoods and Governance," has an estimated budget of US$ 0.7 billion. The four priority adaptation programmes under GESI are designed to:

- Increase quantitative research on GESI and climate change impacts, risks, and adaptation.
- Build human capital for inclusive and climate-resilient societies by strengthening GESI-responsive capacities.
- Integrate climate foresight into social development interventions.
- Enhance resilience through GESI-responsive livelihood programmes.

The NAP emphasizes the need for better data collection and analysis to enhance understanding of GESI issues in relation to climate change. It also aims to strengthen accountability through monitoring and reporting mechanisms that track GESI-responsive adaptation actions. The NAP seeks to increase the leadership and active participation of target groups in policy-making, planning, and implementation processes. This involves the proactive involvement of target groups and communities in the formulation, implementation, monitoring, and evaluation of relevant policies and programmes.

The Disaster Risk Reduction and Management Gender Equality, Disability, and Social Inclusion (GEDSI) Strategy, 2024, underscores a strong institutional commitment to fostering an inclusive, equitable, and resilient disaster risk management system. Acknowledging that disasters and climate-related risks disproportionately impact women, persons with disabilities, Indigenous Peoples, and other marginalized groups, the strategy seeks to mainstream GEDSI principles across all dimensions of disaster risk reduction (DRR) and climate adaptation. Serving as a strategic framework, the GEDSI Strategy ensures that policies, programmes, and emergency responses are inclusive, participatory, and responsive to the diverse needs and capacities of all individuals, ensuring that no one is left behind in the pursuit of a safer and more resilient Nepal. The accompanying Climate Adaptation Action Plan recognizes that the impacts of climate change are unevenly distributed, with systemic inequalities exacerbating the vulnerabilities of marginalized populations.

5. Differentiated climate change impacts

The adverse effects of climate change are intensifying in Nepal's remote and mountainous districts - namely Bajhang, Bajura, Humla, Kalikot, and Mugu - with disproportionate consequences across gender and social groups. Women and marginalized populations are particularly affected. In these districts, women predominantly bear the responsibility for household and subsistence activities, including water and fuelwood collection, childcare, livestock management, and small-scale agriculture. Altered precipitation patterns and declining water availability have significantly increased the time and physical burden on women, especially in Bajhang, Humla, Mugu, and Kalikot, where they report walking several additional hours daily to access water from increasingly distant or depleted sources. In Bajura, Humla, and Kalikot erratic monsoon patterns have resulted in reduced agricultural yields, exacerbating food insecurity and intensifying the pressure on women to sustain household nutrition with limited resources.

These increased burdens constrain women's access to education, income-generating opportunities, and participation in decision-making processes, thereby reinforcing existing gender inequalities. Furthermore, widespread seasonal male migration in all four districts has led to women assuming full responsibility for household and agricultural labour, heightening their exposure to economic and social stressors. For men, particularly youth, declining agricultural productivity due to prolonged droughts and soil degradation, especially in Kalikot, Bajura,and Mugu , has been a key driver of seasonal or long-term migration in search of employment, often to India or urban centres within Nepal. Migrant workers frequently encounter exploitative labour conditions. Those who remain face diminished livelihoods, which can undermine their traditional roles as providers and contribute to psychosocial distress, including frustration, depression, and increased domestic tensions. Community consultations have noted a rise in alcohol abuse and gender-based violence under these conditions.

Dalit and Indigenous communities, particularly in Humla, Kalikot, and Mugu, are often landless or reside in geographically vulnerable areas susceptible to landslides and flooding. Due to insecure land tenure, they frequently lack access to compensation and recovery assistance following climate-induced disasters. These groups also face limited access to information and financial safety nets, resulting in slower and more precarious recovery processes. Persons with disabilities and older individuals within these communities are frequently excluded from local planning and disaster preparedness initiatives, further increasing their vulnerability during climate emergencies.

Different groups of community members highlighted significant challenges to their lives and livelihoods as a result of these climatic changes:

i. Socio-structural inequalities and limited access: Women and girls are frequently disadvantaged in terms of access to information, knowledge, technologies, services, and support networks. This is a direct result of socio-structural inequalities, which in turn limit their capacity to effectively respond to climate-related challenges1. Cultural norms and gender disparities in access to assets, financial capital, and diverse livelihood options further hinder their adaptive capacity.
ii. Increased workload and drudgery: Climate change impacts, particularly those affecting natural resources like water and forests, have significantly increased the workload for women and girls. They often spend longer hours collecting firewood, grass, and water, with some reports indicating over 18 hours a day for women in the project areas. This increased drudgery can lead to injuries, and in some contexts, expose them to risks of harassment or sexual assault, potentially impacting their reproductive health. Water crises, in particular, amplify women's workload as they are often de facto managers of household chores and responsible for providing basic facilities, including water for family members.
iii. Health impacts: Climate change has specific adverse health implications for women. Pregnant women, for instance, are three times more at risk of severe malaria than non-pregnant women. A lack of clean water and sanitation poses particular health challenges to women, especially during menstruation and pregnancy.
iv. Economic and livelihood constraints: Women's economic contributions, including unpaid domestic labour and agricultural work, are often overlooked or undervalued. Despite a significant female workforce in agriculture (73% compared to 56% men), women's land ownership is lower than men's. This limits their decision-making power and access to credit for agricultural investments. Female-headed households are generally more vulnerable to climate shocks and tend to cultivate fewer crop types. Men's control over crop choices can lead to the cultivation of labour-intensive crops (e.g., buckwheat), further increasing women's workload and reducing their time for other livelihood activities.
v. Impact of male labour migration: A significant socio-economic trend in the project area is the rapid increase in male labour migration. This migration is often induced by natural hazards impacting agriculture. his trend leads to an increase in female-headed households (de-facto household heads). While male migration can sometimes lead to women having more comparative control over income and household activities, it also increases the sensitivity of those left behind (elderly, children, and women). These female-headed households become particularly vulnerable to natural disasters due to the loss of family support networks and increased responsibilities Women are more vulnerable in agriculture, which is highly climate-sensitive. They often lack access to climate-resilient seeds and technologies, weather forecasts and early warning systems and land ownership and credit facilities.

6. Findings from the in-depth gender analysis applying an intersectional lens

6.1 Summary of rural Livelihoods

The project areas represent some of Nepal's most geographically isolated and underserved areas. Livelihoods in these high-altitude regions are shaped by limited infrastructure, challenging terrain, and extreme climatic conditions. Households primarily depend on a combination of subsistence agriculture, livestock rearing (including cattle, goats, and sheep), forest-based resources, informal wage labour, and seasonal migration. Remittances constitute a critical, though often unpredictable, source of income.

Agricultural production is largely oriented toward household consumption, with staple crops such as maize, barley, millet, and potatoes. However, productivity is constrained by poor soil quality, erratic rainfall, and inadequate irrigation systems. Livestock, including goats, sheep, yaks, and cattle, contribute to both food security and income generation. Communities also engage in the collection and sale of non-timber forest products (NTFPs), such as Yarsagumba (Cordyceps sinensis) and medicinal herbs, though these are seasonal and unreliable income sources. Climate change poses a significant threat to local livelihoods. Increasingly erratic weather patterns, including unseasonal rainfall, hailstorms, and soil erosion, have adversely impacted crop yields. Livestock health is also deteriorating due to heat stress and water scarcity, particularly in districts such as Mugu and Kalikot. Labour migration, particularly among men to urban centers and India, is a key coping strategy. This trend has led to a rise in female-headed households, where women assume primary responsibility for agricultural work, caregiving, and household management, often with limited access to resources and support.

Adaptive capacity remains uneven and is influenced by gender and social status. In some areas, such as Bajura and Kalikot, women's groups have initiated community-based adaptation measures, including seed banks and water conservation initiatives. However, systemic barriers - such as limited access to finance, technical knowledge, and decision-making platforms - continue to hinder broader participation. Men's greater mobility often affords them better access to information and networks, while women, particularly those from marginalized communities or with low literacy levels, are frequently excluded from adaptation planning processes. Food insecurity remains a persistent challenge, especially during lean seasons. Households adopt various coping mechanisms, including reducing food intake, borrowing, foraging for wild foods, and bartering. Vulnerable groups, such as Dalits and landless populations, face heightened risks due to restricted access to land and communal resources. In Suvakalika, Kalikot, youth have expressed concern over the normalization of temporary coping strategies, such as migration, in the absence of sustainable livelihood alternatives. Despite these challenges, communities demonstrate resilience through strong social networks, traditional knowledge systems, and labour-sharing practices. However, the compounded impacts of climate change, migration, and diminishing local opportunities are placing increasing strain on already fragile socio-economic systems.

Recommendations:

- **Promote climate-resilient agriculture** by improving access to essential services, markets, and appropriate technologies. Invest in skills development and labour-saving innovations to reduce the workload of women and enhance income-generating opportunities, thereby fostering more inclusive and resilient livelihoods.
- **Expand access to financial services** by supporting women-led cooperatives and farmers' groups through tailored savings and credit schemes, enabling them to invest in productive assets and climate adaptation measures.
- **Deliver targeted technical training** for women on sustainable agricultural practices, seed banking, and climate adaptation strategies to strengthen their leadership and technical capacity in local food systems.
- **Enhance women's participation** in local governance by promoting their inclusion in planning bodies, community committees, and decision-making platforms, ensuring their voices shape adaptation and development priorities.
- **Pilot local employment initiatives** - such as green jobs, public works programmes, or community-based enterprises - specifically targeting women, youth, and marginalised groups to reduce reliance on migration and diversify income sources.
- **Ensure inclusive participation** of Dalits, landless households, Indigenous Peoples, and persons with disabilities at all stages of local-level climate adaptation planning, from needs assessment to implementation and monitoring.

6.2 Gender Division of Labour and Climate Change Impacts:

In the project areas, entrenched gender norms continue to shape how communities experience and respond to the escalating impacts of climate change. Across all locations, women, particularly those from marginalised groups, bear a disproportionate burden of unpaid care and domestic responsibilities. Their daily tasks include cooking, caring for children and the elderly, collecting water and firewood, and maintaining household gardens, in addition to engaging in labour-intensive subsistence agriculture such as weeding, cultivation, seed selection, and livestock management. As climate change intensifies, these responsibilities have become increasingly arduous. Unpredictable weather patterns, prolonged droughts, and the degradation of natural resources have significantly increased the time and physical effort

required to secure water, fuel, and food. Women and children are often compelled to travel longer distances to fetch water, frequently carrying heavy containers and risking their health in the process.

Conversely, men - particularly those engaged in cash crop production or seasonal labour, tend to have greater access to resources, training opportunities, and decision-making platforms, including local committees and public forums. Their mobility and economic roles enable them to pursue alternatives such as labour migration or formal credit. In contrast, most women remain confined to informal, home-based livelihoods such as kitchen gardening, poultry rearing, and small-scale food processing. Without access to markets, financial services, or timely information, they are left to manage household survival with limited external support. Across all districts, women's participation in climate-related planning and decision-making remains constrained by heavy domestic workloads, limited educational attainment, and restricted mobility. These factors hinder their access to information and prevent meaningful engagement in community-level planning processes. As a result, local climate adaptation strategies often reflect male perspectives and fail to incorporate the extensive indigenous knowledge held by women. In Tajakot and Adanchuli, for example, women possess valuable expertise in food preservation, seed saving, and biodiversity management - yet this knowledge is seldom integrated into formal adaptation frameworks, thereby reducing the overall effectiveness of community responses.

While some women in the project areas of Humla District -particularly those serving as Female Community Health Volunteers (FCHVs), educators, or small-scale entrepreneurs - have begun to challenge traditional gender roles, the majority continue to face systemic barriers. Men continue to dominate formal employment, political engagement, and community development initiatives, while women remain largely excluded from decision-making processes at both household and community levels, including those related to climate adaptation. These structural inequalities are further exacerbated by caste, ethnicity, and geographic isolation.

Recommendations:

To improve shared responsibilities and decision-making ability among women and men at the household and community levels, gender-responsive strategies are critical. This includes:

- **Invest in essential infrastructure**, including improved access to safe water sources and energy-efficient technologies, to reduce the time and physical burden on women and girls, thereby enabling greater participation in education, livelihoods, and community life.
- **Promote women's leadership** in agriculture, local governance, and both existing and newly formed community committees. This includes creating enabling environments for women to take on decision-making roles and influence local development priorities.
- **Ensure equitable access** to training, financial services, and agricultural inputs for both women and men, with a particular focus on reaching marginalised groups such as Dalits, Indigenous Peoples, and persons with disabilities.
- **Recognise and integrate women's traditional knowledge** - including practices related to seed saving, biodiversity management, and climate forecasting - into local adaptation planning and community-based resilience initiatives.

6.3 Ownership and Access to Productive Resources:

In the project communities, access to and control over key resources - natural, physical, technological, and social—remain unequally distributed, primarily along gender, caste, and ethnic lines. While both women and men engage with community resources, ownership, decision-making authority, and active participation are still predominantly held by men. With regard to natural resources such as residential and subsistence farmland, men typically retain ownership and control, limiting women's authority in land-related decisions. Although community forests are more inclusive in terms of access to fodder and firewood, leadership and governance structures continue to be male dominated. Across all assessed locations, land titles are overwhelmingly registered in men's names, though women may have user rights. In Mugu, and Kalikot districts, most individuals-regardless of gender-possess bank accounts, and women often manage remittances sent by migrant family members. However, men are more likely to own and operate small businesses, with women playing secondary or supportive roles. Both women and men access natural resources, but their roles differ significantly. Women are primarily responsible for collecting firewood and fodder, while men are more engaged in the collection and trade of non-timber forest products (NTFPs). Educational opportunities are available to both genders up to the secondary level. However, disparities emerge in higher education, where boys, particularly from Brahmin, Chhetri, and Indigenous Peoples (IPs) communities, are more likely to pursue further studies in urban centres, depending on household income. Girls, especially from Dalit communities, face higher dropout rates, often leaving school around grades 8 or 9.

Healthcare services are technically accessible to all, but local facilities are under-resourced, and urban hospitals remain financially inaccessible for many marginalised households. There is currently no enrolment in agricultural or livestock insurance schemes. Similar patterns are observed in Humla and Bajura districts. While physical infrastructure -such as

roads, schools, health posts, and markets- is nominally accessible to all, actual utilisation is constrained by factors such as limited mobility, caregiving responsibilities, and gaps in education and information. These constraints disproportionately affect women and marginalised groups.

Social networks within the community are limited. Although both women and men are invited to community meetings organised by the local government, men tend to dominate discussions and decision-making processes due to their more active participation and perceived authority. Critically, there are no functional support structures- such as farmers' groups, water user associations, cooperatives, or local disaster risk reduction (DRR) committees - that typically serve to amplify the voices of women and marginalised populations in development planning. These patterns are consistent across the studied districts and among different social groups, including Dalits and Indigenous Peoples. While these groups may be formally included in community processes, their participation is often symbolic, lacking meaningful influence or control over the resources and decisions that shape their lives.

A range of interconnected barriers continues to hinder women and marginalised groups from accessing and exercising control over key resources. These include:

- **Heavy domestic responsibilities**: Women often carry the primary burden of unpaid care and household work, with limited support from other family members. This significantly restricts their time, energy, and ability to engage in community activities or resource management.
- **Limited awareness and knowledge**: Many women and individuals from marginalised communities lack adequate information about the availability, value, and potential benefits of local resources and services, which limits their ability to access or utilise them effectively.
- **Restrictive social norms and perceptions**: Prevailing societal attitudes often undervalue the leadership potential and decision-making capabilities of women and marginalised groups, reinforcing their exclusion from resource governance and community leadership roles.
- **Inadequate access to technology and information**: Limited access to digital tools and communication technologies further constrains opportunities for women and marginalised populations to access services, participate in training, or benefit from emerging economic and social opportunities.

Recommendations:

- Promote shared household responsibilities by encouraging men and boys to actively participate in domestic and caregiving tasks, thereby reducing the disproportionate burden on women and enabling their greater engagement in public and economic life.
- Raise awareness through targeted outreach and education programmes to improve community knowledge of available services, resources, and rights—particularly among women and marginalised groups.
- Establish inclusive community-based groups—such as cooperatives, savings and credit associations, water user committees, and disaster risk reduction (DRR) groups—with clear quotas or reserved positions to ensure meaningful participation of women and marginalised populations.
- Support leadership development and mentorship initiatives, especially for women, Dalits, Indigenous Peoples, and persons with disabilities, to build confidence, enhance skills, and foster active participation in community decision-making processes.
- Improve access to enabling infrastructure, such as nearby water taps, childcare services, and safe community spaces, to reduce time poverty and create opportunities for women to engage in productive activities and leadership roles.

6.4 Access to Information and Opportunities

A significant digital divide persists within the community, with access to digital resources heavily skewed along gender lines. Mobile phones with internet capabilities are predominantly owned and used by men, granting them greater access to information, communication channels, and online services. In contrast, most women rely on basic mobile phones without internet access, which limits their ability to connect with broader networks, access learning opportunities, or engage in digital platforms that could support their livelihoods and participation in public life. Social networks within the community remain limited. Although both women and men are invited to community meetings convened by the local government, men tend to dominate discussions and decision-making processes due to their more frequent participation and the societal perception of their authority. Critically, there are no active support structures—such as farmers' groups, water user associations, mothers' groups, cooperatives, or local disaster risk reduction (DRR) committees - that could serve as platforms to amplify the voices of women and marginalised groups in development planning and implementation. These patterns are consistent across various social groups, including Dalits and Indigenous Peoples. While these groups may be formally included in community processes, their participation is often symbolic, lacking meaningful influence or control over the resources and decisions that directly impact their lives.

Recommendations:

- **Reactivate or establish community-level institutions**—such as farmers' groups, mothers' groups, water user committees, and disaster risk reduction (DRR) committees—with a strong emphasis on meaningful and sustained participation from women and marginalised groups.
- **Ensure a minimum of 50% representation of women** in all community groups, with leadership roles explicitly reserved for underrepresented populations, including Dalits and Indigenous women, to promote equitable governance and inclusive decision-making.
- **Provide targeted training** on facilitation, leadership, and rights-based advocacy to empower group members and enhance their capacity to influence local development processes.
- **Facilitate gender-sensitisation workshops** for local leaders and committee members to address unconscious bias, challenge discriminatory norms, and promote inclusive participation.
- **Establish robust monitoring and evaluation mechanisms** to ensure that participation translates into real influence over decisions, resource allocation, and community priorities.

6.5 Gendered Decision-Making Processes:

In Bajura and Humla, there is a notable absence of structured community-based organizations or functional local committees. According to women's groups, institutions such as farmers' cooperatives, water user associations, forest user groups, and disaster risk management committees are largely non-existent. This institutional gap significantly limits opportunities for collective action and inclusive participation in local development. In the areas studied within Humla, one notable exception was the Kukurphalna Micro Hydropower Project, which temporarily created space for community mobilization. During canal repair activities, a local committee was established, and a woman was appointed as treasurer - an uncommon but meaningful example of gender-inclusive leadership. Women also participated in manual labour, marking one of the few instances where they were actively involved in both decision-making and implementation.

In contrast, Tajakot presents a more constrained scenario, where even limited engagement has not materialized. While community members are occasionally invited to general meetings, participation remains passive and irregular, particularly among women and historically excluded groups such as Dalits. Similar patterns were reported in other districts, where women are often selected to meet inclusion quotas but are not meaningfully involved in decision-making processes. Women's groups in these areas reported minimal influence over the years. Many women remain hesitant to speak during meetings, and when they do, they often echo male perspectives rather than voicing their own. Low levels of formal education have contributed to reduced confidence and limited capacity to engage in governance processes. Nonetheless, women noted some recent progress. Several development partners have introduced initiatives aimed at empowering women through awareness-raising and capacity-building. These efforts have begun to shift norms, increasing women's participation and visibility in community spaces.

Across all study sites, several structural and social barriers continue to constrain community engagement, particularly for women and marginalized groups. These include:

1.2.1. Geographic isolation and difficult terrain, which limit access to services, networks, and development interventions.
- Limited access to education and information, resulting in low awareness and confidence to engage in governance structures.
- Absence of institutional presence, including civil society organizations, NGOs, or government outreach, to support sustained awareness, group formation, capacity-building, or livelihood opportunities.
- Caste- and gender-based discrimination, which reinforces traditional roles and discourages leadership or public engagement by Dalits and women.
- Unequal distribution of household responsibilities, with women primarily responsible for care work and agriculture, leaving little time for civic participation.
- Persistent male dominance in community affairs, where limited participation by women and marginalized groups often excludes those most in need of representation.

As one woman from Tajakot expressed:
"We are uneducated and do not know how community or development work happens. No one comes here to help us. Maybe that's why men are also ahead of us."

Despite these challenges, there is a growing aspiration for change. Women, including those from marginalized communities, have expressed a strong desire to participate in local groups and committees - even in the absence of formal education. There is widespread recognition that increased engagement would not only benefit individual households but also strengthen community resilience.

As another woman shared:
"We want to learn how to improve our lives. We don't know anything else except farming and household work. No one gives us opportunities. No organization comes here."

And another added:
“If we are able to participate, we can learn skills and earn money and use that for our families. Our families and communities will also respect us.”

Recommendations:

- **Implement continuous awareness, education, and sensitisation programmes** to build the confidence of women and marginalised groups, enabling them to take on more active roles in community life and decision-making processes.
- **Facilitate the formation of inclusive and functional community groups**, ensuring guaranteed representation of women and marginalised populations in leadership positions to promote equitable governance and accountability.
- **Introduce tailored orientation, skills development, and leadership training**, including for individuals with low literacy or limited formal education, to enhance their capacity to participate meaningfully in local development initiatives.
- **Strengthen outreach mechanisms** through civil society organisations (CSOs) and local government bodies to ensure remote and underserved communities have access to timely information, essential services, and organisational support.
- **Promote inclusive norms and practices** through community dialogues and participatory forums, highlighting the collective benefits of diverse participation and shared leadership in building resilient and cohesive communities.

6.6 Food Security and Nutrition:

Bajura, Humla, Kalikot, and Mugu districts are among the most geographically isolated and food-insecure regions of Nepal. Challenging terrain, inadequate infrastructure, and increasingly erratic climate patterns have significantly constrained household access to sufficient and nutritious food. These challenges are particularly acute for female-headed households, persons with disabilities, and marginalised groups, who face compounded vulnerabilities due to entrenched gender norms, limited awareness, and restricted livelihood opportunities. In many households, women-especially those from Dalit and indigenous communities-are the last to eat and often receive smaller portions, a situation that worsens during periods of food scarcity. Female-headed households, which are increasingly common due to male outmigration, are at heightened risk of food insecurity. These households frequently lack access to land, productive assets, and income-generating opportunities, and often do not benefit from community-based nutrition education, as reported during community consultations.

Women reported that they are primarily responsible for food production, collection, preparation, and distribution within the household. These responsibilities include time- and labour-intensive tasks such as fetching water and collecting firewood, which significantly reduce their ability to pursue education, engage in paid employment, or participate in community networks and leadership roles. The impacts of climate change-such as unpredictable rainfall, prolonged droughts, water scarcity, and increased pest infestations severely affected agricultural productivity in these areas. As crop yields decline, men increasingly migrate in search of work, leaving women to manage both agricultural activities and household responsibilities alone. This has led to a significant increase in women’s workload, often without access to training, extension services, or institutional support. Despite these challenges, women continue to demonstrate resilience and a strong commitment to sustaining their families and communities. However, without targeted interventions to address structural inequalities, improve access to resources, and support climate-resilient livelihoods, food insecurity and gender disparities are likely to persist.

Recommendations:

- ✓ Introduce community-based nutrition education programmes to promote equitable intra-household food distribution and improved dietary practices, with a focus on the needs of women, children, and marginalised groups.
- ✓ Establish kitchen gardens, community seed banks, and promote nutrition-sensitive agriculture to diversify local food systems and enhance household nutrition and resilience.
- ✓ Support income-generating activities - such as agro-processing, handicrafts, and forest-based enterprises - tailored for women, particularly those from Dalit and Janajati communities, to strengthen economic independence.
- ✓ Provide climate-resilient agriculture training and support for women farmers, enabling them to manage farms effectively in the absence of male family members due to seasonal migration.
- ✓ Invest in labour-saving infrastructure, including community-managed water systems and fuel-efficient stoves, to reduce the time and physical burden of daily household tasks on women and girls.
- ✓ Organise gender-transformative behaviour change campaigns, targeting men and community leaders, to challenge discriminatory norms and promote shared responsibilities and inclusive decision-making.

- ✓ Create and strengthen women-led groups, cooperatives, and savings associations to provide platforms for collective voice, peer support, and economic resilience.
- ✓ Ensure women's meaningful participation in local planning processes, including those related to climate adaptation, food security, and disaster risk reduction (DRR), through inclusive representation and leadership roles.
- ✓ Deliver leadership and confidence-building training for women and marginalised individuals to enhance their ability to engage in governance, advocacy, and community development.

6.7 Gender-Based Violence and Care Responsibilities:

Discussions with women from diverse socio-economic backgrounds across the study areas revealed a concerning pattern of gender-based protection risks, particularly affecting women and girls within their own households. In communities where alcohol consumption is prevalent, domestic violence emerged as a recurring and deeply rooted issue. Women consistently reported that alcohol use by male family members - particularly husbands - was a key driver of domestic violence. These incidents typically occur within the home and manifest as verbal abuse, shouting, and, in some cases, physical violence. Wives are most frequently the targets of such abuse. Despite the harm caused, these cases are rarely reported to authorities or formal protection mechanisms due to pervasive social stigma, fear of retaliation, and a lack of trust in available support systems. Many women described enduring such treatment in silence, having internalised it as a normal aspect of domestic life. This normalisation of violence is compounded by limited awareness among women of their constitutional rights, available legal protections, and safe reporting channels. As a result, survivors often remain isolated and highly vulnerable, with few avenues for redress or support.

Recommendations:

- ✓ Implement community-wide awareness campaigns to educate all members—especially men and boys—on what constitutes domestic violence, its harmful consequences, and the legal and moral unacceptability of such behaviour. These campaigns should be culturally sensitive and accessible to all literacy levels.
- ✓ Strengthen women-led groups and peer support networks to provide safe spaces for survivors, amplify collective voices, and foster solidarity. These groups can play a critical role in prevention, early identification, and referral.
- ✓ Establish safe, confidential, and accessible reporting mechanisms within communities, ensuring that survivors can report abuse without fear of stigma, retaliation, or breach of privacy. These mechanisms should be community-owned, survivor-centred, and linked to formal protection systems.
- ✓ Raise awareness of survivor support services and referral pathways, including legal aid, psychosocial counselling, health services, and shelter options. Information should be disseminated through trusted local actors, including community health workers, teachers, and women's groups.

6.8 Vulnerability and Adaptive Capacity by Gender applying intersectionality factors (age, ethnicity, disability, etc.)

Across the rural communities studied, the compounding effects of climate change and infrastructural limitations are increasingly evident. Disruptions in essential services - particularly in information access, market connectivity, and water availability - are placing significant pressure on local livelihoods. While all community members are affected, the burdens and coping capacities are highly gendered, reflecting persistent inequalities in roles, responsibilities, and access to resources. One of the most pressing challenges is the lack of reliable water sources, which disproportionately affects women. Women and children are primarily responsible for water collection, and as traditional sources dry up or become more difficult to access, they are forced to travel longer and more hazardous routes across steep terrain. This growing burden consumes substantial time and energy, further limiting women's ability to engage in income-generating activities, education, or community leadership.

In response to recurring socio-economic and environmental stressors, households are increasingly relying on short-term coping strategies. While these are often necessary for immediate survival, they carry long-term risks and reinforce cycles of vulnerability, particularly for women. A common strategy involves taking high-interest loans from wealthier households or informal lenders to meet urgent needs such as food, healthcare, or agricultural inputs. These borrowing practices, while addressing short-term gaps, often entrap households, especially those with limited assets, in cycles of debt. The pressure to repay, combined with unstable incomes, forces families to make difficult trade-offs, including reducing essential consumption or taking on additional loans. Another widespread coping mechanism is borrowing food from neighbours or extended family during times of scarcity. Although rooted in traditional systems of reciprocity, this practice becomes unsustainable during prolonged crises, increasing the risk of food insecurity. As debts accumulate - both in cash and kind- social tensions may rise, weakening the very community networks that households rely on, particularly among marginalised groups. At the household level, male seasonal migration has emerged as a key adaptive strategy to supplement income. While remittances provide some financial relief, they also significantly alter household dynamics. Women are left to manage agricultural work, childcare, elder care, and household decision-making - often without adequate support, resources, or authority. This feminisation of responsibility, without a corresponding increase in agency or access to resources, places additional emotional and physical strain on women

and reinforces existing gender inequalities. It also heightens their exposure to protection risks in the absence of strong support systems.

Recommendations:

- ✓ Invest in climate-resilient and gender-sensitive water infrastructure, including the construction and rehabilitation of water systems that reduce the time and physical burden on women and girls, while ensuring equitable access for all community members, including persons with disabilities.
- ✓ Strengthen women's economic empowerment and livelihood diversification, particularly for marginalised groups, by expanding access to agricultural extension services, childcare support, market linkages, and financial services. This includes promoting inclusive value chains and supporting women-led enterprises.
- ✓ Integrate Gender Equality, Disability, and Social Inclusion (GEDSI) principles into local climate governance and planning processes. This includes ensuring representation of diverse groups in decision-making, applying inclusive budgeting practices, and embedding equity considerations in climate adaptation strategies.

Gender Action Plan based on the Gender Assessment

Strategic Gender Objective:					
Component 1: Component 1: Community and ecosystem resilience: Enhancing community-based participatory climate resilient strategies for adapted livelihoods and sustainable natural resource management.					
Output 1.1. Output 1.1: Climate-resilient agroforestry and livelihood improvement actions implemented for coping with extreme events through climate-resilient agriculture, climate-smart villages, and other nature-based solutions.					
Activities	**Indicators**	**Targets**	**Timeline**	**Responsibilities**	**Costs (US$)**
i) Training/sensitization activities on crop diversification and livelihood diversification to smallholder farmers, especially women and girls ii)Capacity strengthening of women, girls from the marginalized community and persons with disabilities iii)Provide agro-hydro-met information to the smallholder women farmers iv)Promote financial inclusion to women, girls, youth, PWD, including those from IP groups v)Sensitisation activities on the benefits of agricultural insurance, including index-based insurance to manage climate risks, target primarily women, as well as youth, including from IPs	i) Number of smallholder farmers (women and girls and IPs) trained/sensitized on the crop diversification and climate resilient cropping ii) Number of women and girls, persons with disabilities receiving food/cash-based/commodity vouchers/individual capacity strengthening transfers through actions to protect against climate shocks iii) Number of women and girls, including from IPs have access to the climate advisories iv) Percentage of women, girls, youth and PWD engaged in financial literacy and inclusion v) Number of smallholder farmers, disaggregated by gender and age, who report improved understanding of insurance and multi-layered climate risk management	3250	i & ii) Start by Y1; activities conducted annually but in different LGs • By mid-term, 1,350 women, girls and IPs • By Y5, 1,650 women, girls and IPs iiii) Start by Y1; activities conducted annually • By Y3, 900women, youth and IPs • By Y5, 2,100 women, youth and IPs have had more than one training event (total) iv &v) Start by Y1; activities conducted annually • Mid-term: 1,300 women and girls; youths, PWDs and IPs • By Year5: : 1,950 women and girls; youths, PWDs and IPs	MoALD, LGs MoALD, LGs MoALD, LGs	1,050,774
Output 1.2: Capacity of smallholder farmers and value chain actors increased for market readiness and access, reducing post-harvest losses, value addition and managing the marketable surplus by applying climate-resilient practices.					

Activities	Indicators	Targets	Timeline	Responsibilities	Costs (US$)
i)Provide training on post-harvest management technologies and practices to the women, girls, PWDs and IPs (ii) Smallholders agricultural value chain and marketing support for climate-resilient value chains is gender-responsive and facilitates market linkages to enhance diversified livelihoods, focusing mainly on women and youth farmers and entrepreneurs iii) Provide hands-on learning experiences at the farmers/nutrition field school iv) Strengthen women-led informal institutions to sustainably manage the food banks and seed banks	i) Number of women, girls and youth farmers, including PWDs, supported with training in post-harvest management technology and practices. ii.a) Number of farmers (women, men, female and male youth) with increased access to gender-responsive climate-resilient value chains ii.b) Number of farmers (women, men, female and male youth) with increased access to business development support and financial institutions iii) Number of women, girls and youths with enhanced capacity to address causes of malnutrition related to food, diets and food practices iv) Number of women-led institutions formed/capacitated	3000	i, ii a & iii) Start by Y1; activities conducted annually • By Y3 (mid-term): 1200 • By Y5: 1,800 Each of the above time-related targets will aim for 70% women, 20% youth, and 10% PWDs. ii.b) Start by Y1; activities conducted annually • By mid-term (Y3): 480 women and youth • By Y5: 720 women and youth Women: 60%, youth: 40% iv) Start by Year 2: By mid-term: 96 institutions By Y5: 144 institutions	MoALD, LGs MoFE, MoALD, LGs WFP, MoFE, MoALD, LGs	588,281
Output 2.1: Restoration-based actions implemented through rehabilitation of the degraded areas (agriculture and forest), climate-resilient, productive, protective, and green recovery assets to enhance communities' resilience to shocks and stressors.					
Activities	**Indicators**	**Targets**	**Timeline**	**Responsibilities**	**Costs (US$)**
i)Strengthen the livelihood capacity of women, girls, youths and IPs through community assets ii)Promote gender responsive renewable energy-based enterprises for women	i) Number of women, girls, youths and IPs engaged in community assets creation. ii) Number of women-led enterprises using renewable energy	3640	i) Start by Year 1 and activities conducted annually. By mid-term: 1,456 women and girls, youths, and IPs By year 5: 2,184 women and girls, youths, and IPs Women: 60%, youth: 20%, IPs: 20% ii) Start in year 2, and activities conducted regularly every year. By mid-term, 16 women-led enterprises promoted By year 5: 24 women-led enterprises promoted	MoFE, MoALD, WFP & LGs MoFE, MoALD & LGs	1,621,366
Component 2: Climate governance and system strengthening: Capacity/system strengthening for improved last-mile climate information services and local adaptation planning to enable early/adapted actions and informed disaster management of climate risks/disasters.					
Output 3.1: Capacities of key government institutions, local stakeholders and last-mile communities increased to co-produce,					

deliver/disseminate, and utilize tailored climate information services.					
Activities	**Indicators**	**Targets**	**Timeline**	**Responsibilities**	**Costs (US$)**
i) Sensitisation activities to enhance understanding of and access to localized climate services target primarily women, as well as youth	i) Number of smallholder farmer HHs, disaggregated by gender and age, who have enhanced access to localised climate services	7,865	Start by Y1; activities conducted annually but in different LGs • By mid-term, 3,146 women, girls and IPs • By Y5, 4719 women, girls and IPs	MoFE, MoALD WFP and LGs	186,550
Output 3.2: Capacities of local governments and communities increased to plan and implement adaptation solutions and effective climate-induced disaster risk reduction and management through climate-risk-informed local adaptation planning instruments (e.g., Local Adaptation Plan of Action - LAPA) and climate-hazard/disaster preparedness planning and response.					
Activities	**Indicators**	**Targets**	**Timeline**	**Responsibilities**	**Costs (US$)**
Organize and facilitate gender responsive sensitization workshops/orientations /trainings at the community level/LGs on local level planning	i)Number of women, youths, IPs and PWDs sensitized on the climate change impacts and local climate actions	2700	Start in Year 2 and activities conducted annually. By mid-term: 2,160 women and girls, youths, and IPs By year 5: 540 women and girls, youths, and IPs Women: 60%, youth: 15% and IPs: 25%	MoFE, WFP and LGs	285,839
Enhance local government capacity by developing gender gender-responsive local adaptation plan through an inclusive, participatory approach	i) Number of local government staff, elected representatives, capacitated on the gender responsive planning with the main focus on climate change	1,200	Start in Year 2, and activities conducted annually. By mid-term: 126 women and 294 men By year 5: 54 women and 126 men	MoFE, and LGs	
Output 3.3: Knowledge and learning on community-based climate adaptation for vulnerable groups, including women, indigenous peoples, and marginalized communities enhanced.					
Activities	**Indicators**	**Targets**	**Timeline**	**Responsibilities**	**Costs (US$)**
i) Extension of the communication outreach to the community people	i.a) Number of community people from women, girls and youths, marginalized groups and IPs to access the outreach materials i.b) Number of community people, including women, girls, youths, PWD and IPs got access to the information on community-based adaptation through local radios	33,300	Start by Year 3 and activities conducted annually. By year 5: 19,980 women and girls, 4,995 youths, 5,661 IPs and 2,664 PWDs	MoFE, WFP and LGs	126,100

Annex 4: Environmental and Social Screening and Environmental and Social Management Plan

This annex contains the following sections:

1. Summary description of the project
2. Screening and categorization of the project
3. Environmental and Social Management and Monitoring Plan

Summary description of the project

The project aims to address key gaps and barriers to adaptation and resilience identified below:

- ✓ Due to increasing temperatures, altered precipitation patterns, moisture loss, increased severity and frequency of climate extremes, there is increased loss of production, productivity, and nutrients, shifts in altitudinal zones, flowering and fruiting times, species composition, and cropping pattern; Infestation of pest and diseases in the agriculture and livestock sector; loss of agricultural land and forests; drying up of water resources; and damage to infrastructure and assets, within the watershed areas under the Karnali river basin in Karnali and Sudurpashchim Province.
- ✓ Limited access to climate information for the last-mile communities and their lack of capacity to use it for adaptation planning and taking informed early action for adapted farming practices.
- ✓ Limited technical and financial capacity for communities to adapt existing livelihood practices in agriculture and livestock.
- ✓ Limited technical and financial capacity to restore and conserve ecosystems.
- ✓ Lack of awareness and capacity among communities and local governments on existing and potential impacts of climate change scenarios, to carry out early action and adaptation planning.
- ✓ Limited capacity of rural communities to design and implement risk-informed adaptive practices and resilient livelihood strategies.
- ✓ Limited capacity in the development and implementation of tools and sustainable production practices to contribute to diversification and improvement of the resilience of production systems to climate change effects.
- ✓ Limited capacity of local governments to formulate climate-sensitive and climate-specific policies on climate change adaptation (CCA), particularly in the absence of adequate support for Local Adaptation Plans of Action (LAPAs).

The project aims to enhance the resilience of 12,100 smallholder farming households (around 111,000 people) in the selected watershed areas under the Karnali River basin by promoting community-based adaptation activities, climate-resilient agricultural practices, and access to reliable early warning and climate information adopting integrated watershed management and integrated risk management approach. Utilizing a community-based Adaptation (CbA) approach, the project focuses on community-led adaptation tailored to local priorities, knowledge, and capacities. This strategy specifically targets reducing vulnerabilities among female-headed and marginalized households, empowering them to effectively manage climate change impacts. The project is designed to enhance resilience and environmental sustainability through several core objectives. The specific objective of the project is to: Enhance community resilience through community-based adaptation, integrated risk management, resilient natural resource management and strengthened government and community capacities for risk-informed locally-led adaptation. The project has two components, 1) community and ecosystem resilience: enhancing community based participatory climate resilient strategies for adapted livelihoods and sustainable natural resource management; and 2) Climate governance and system strengthening: capacity/system strengthening for improved last-mile climate information services and local adaptation planning to enable early/adapted actions and informed disaster management of climate risks/disasters.

It has three outcomes: 1) Enhanced resilience of livelihoods of vulnerable communities through adapting to climate change sustainably; 2) Strengthened eco- resilience through nature-based protective and productive climate-smart community assets; and 3) Strengthened climate governance and institutional system (policies, plans, institutions, and services) to sustain climate adaptation and disaster risk management actions.

The screening was done during May-June 2025 along with community consultation and gender assessment. The expert from WFP conducted focused group discussion with reference to the ESS questionnaires. The teams held interviews with community members using a mix of open-ended and structured questions,

based on the ESS questions in the WFP tool. Community members then guided the ESS team on a transect walk through their area and communal land to showcase natural resources that they possess and manage together, after which detailed ESS screening was compiled.
The presence of Unidentified Sub-Projects (USPs) is also due to the fact that community members are yet to select the adaptation solutions they will implement from the adaptation menu, and therefore the exact locations of community assets to be developed through the participatory planning process remain undecided. Participatory selection of specific, concrete adaptation sub-activities to be undertaken during project implementation will be facilitated through structured planning in the early stages of implementation, led by local governments (Palikas), as per Nepal's Local Level governance system. To promote sustainable and climate-resilient development, and avoid maladaptation, these choices must be informed—based on awareness, climate risk sensitization, and community-based planning activities carried out under the project. The project design ensures a logical sequence of actions that enables communities to actively participate and make informed decisions. An adaptation menu of options (potential activities) has been pre-identified in consultation with communities. This set of options has been pre-screened during design phase (see the boarder activities in the project/programme description) and activities are expected to be categorized low to moderate risk. Specific community adaptation plans developed for each project site will be screened before their approval to assess the actual risk category of each activity, taking into consideration the location and the social and environmental context. Should a moderate or high risk be identified, the project will take adequate measures to address and mitigate the risk.

1. Screening and categorization of the project

The project has been screened against the 15 Environmental and Social Principles of the Adaptation Fund, using the screening tool presented below. The screening tool consists of a list of around 20 general level 1 questions (indicated with two digits, e.g. 3.1) and around 60 detailed level 2 questions (indicated with three digits, e.g. 3.1.1). They are categorized in fifteen thematic areas that correspond with WFP's eight Environmental and Social Standards . The level 1 questions need to be answered first and they need to be answered ALL. There is a simplified version of the level 1 questions that can be used during community consultations. If a level 1 question is answered with a 'yes', it leads to more detailed questions of level 2. All level 2 questions under a level 1 question that triggered a 'yes' need to be answered. This can be done after community consultation. If a level 1 question is answered with a 'no', then the corresponding level 2 questions do not need to be answered. An explanatory comment should be added to all questions that were answered with a 'no' or 'yes'.

Answers to the detailed Level 2 questions result in one of three degrees of concern. If any Level 2 question is answered with a 'yes', the indicated degree of concern will determine the degree of concern for the whole activity. This means that if a single question indicates a high degree of concern, the activity is classified as an activity of high concern and appropriate measures must be taken. If no question is answered with a high degree of concern, but at least one medium-level concern is raised, then the activity is a medium-concern activity. If no Level 1 or Level 2 questions are answered with a 'yes', then the activity is of low concern and no further action is required. A level 1 question may be answered with a 'yes' and all associated level 2 questions are answered 'no' as they are more detailed and specific questions of the same issue. If all the level 2 questions are answered with 'no', then this area will be of low concern, even if the level 1 questions were answered with a 'yes'. There is no pre-determined degree of concern for level 1 questions.

If a potential impact is not covered by any of the L1 or L2 questions, it can be added in the empty box at the end of each of the nine sections.
Based on the screening, the risk level of this project is identified as Category B, primarily because Component 1 of the project includes USPs that are not fully defined yet. Prior to implementation of the relevant activities, environmental and social risk screening of the USPs will be conducted to ensure the overall project risk category B is not exceeded and applicable ESS instruments to mitigate/minimise/control the risks are in place.

1. Compliance with the law			
1.1 Is there a risk that the activity would not comply with an applicable domestic or international law?		Yes	Low risk: As UN entity, WFP abides by international and national law. WFP, as an autonomous joint subsidiary programme of the United Nations and the Food and Agriculture Organization of the UN, operates under a particular legal framework, enjoying privileges and immunities under Article 105 of the Charter of the United Nations as well as the Convention on the Privileges and Immunities of the United Nations and the Convention on the Privileges and Immunities of Specialized Agencies. WFP's contracted TA-staff are equally obliged to do the same. Moreover, relevant national, provincial, and local authorities have been consulted during the proposal development process and will be partners in the project implementation. Since the project will be executed by the Government of Nepal, all activities will comply with applicable national laws. Examples of legislation that the project may have to comply with include the

			Environment Protection Act 2019, Water Resource Act 1992, Forests Act, 2019, Labour Act, 2017, Disaster Risk Reduction and Management Act, 2019 and Public Procurement Regulations, 2007, National Climate Change Policy, 2019, National Forest Policy 2018, National Water Resources Policy 2020. The project also ensures to comply with the relevant provincial and local laws as well. Given this legal framework and the collaborative implementation approach, there is no risk of non-compliance with international, national, and local laws.
1.1.1 Is there a risk that the activity would not comply with an applicable international law?	High	No	
1.1.2 Is there a risk that the activity would not comply with an applicable national or local law?	High	No	

2. Access and Equity			
2.1 Could the activity lead to changes in local tenure arrangements for existing resources or resources created by the activity?		No	There will be no changes to existing local tenure arrangements. Project activities will be selected through the participatory planning process of the Government of Nepal (as defined by the Local Government Operational Act (2017). This annual planning process of the local government ensures the inclusion of all genders, castes, and ethnicities, in accordance with the Local Level Planning Guidelines (2018) issued by the National Planning Commission. The selection of project activities will begin at the settlement level and proceed through to the local government council. The project will follow transparent procedures as outlined in the Environmental and Social Management Plan (ESMP), ensuring that benefits are shared equally, fairly and without discrimination or favoritism. Participatory assessment and targeting will be conducted to ensure the full and equitable participation of, and benefit to, men, women, and vulnerable or marginalized groups. In addition, the project will support and enhance the Grievance Handling Mechanism (GRM) of the Local Government. Technical assistance from WFP, drawing on lessons learned from its Community Feedback Mechanism (CFM), will be provided to improve GRM procedures. This will ensure that anyone affected by the project can raise concerns or complaints, which will be addressed in a timely and appropriate manner.
2.1.1 Could the activity lead to changes in tenure arrangements that potentially could put groups or individuals at a disadvantage or could lead to disagreements and conflicts?	High	No	
2.2 Could the activity create or exacerbate intra- or inter-community conflicts?		Yes	Medium risk: While the project is expected to bring economic benefits, there is a risk that some individuals or groups may be unintentionally disadvantaged or that disagreements could arise within or between communities. To minimize these risks, the project will be implemented by government entities in close collaboration with relevant and affected stakeholders. This approach will help prevent the worsening of existing intra or inter-community tensions and ensure fair targeting of beneficiaries, with a focus on vulnerable groups such as marginalized communities, persons with disabilities, and women. At the local level, the LG as the executing entity will prepare robust vulnerability assessment tools with technical assistance support to ensure that beneficiary selection is appropriate and fair. The project will introduce new assets, resources, and income-generating activities such as enterprises, fruit farming, small-scale irrigation, and food banks in selected communities. However, there is a risk that local elites may attempt to influence the targeting process. There is also a risk that activities under component one may unintentionally reinforce existing inequalities or create new community tensions. To address these risks, a grievance redress mechanism will be established to continuously capture, resolve, and monitor any grievances, incidents, accidents, or suggestions during project implementation. Additionally, the judicial committee at the local level, chaired by the Vice Chairperson or Deputy Mayor, will be strengthened to address any disputes that may arise. Furthermore, there will be constant stakeholder engagement to discuss any arising concerns and feedback.

2.2.1 Could activities lead to opening up of existing or creating new minor conflicts or disagreements within or between groupings or communities?	Medium	No	
2.2.2 Could activities lead to opening up of existing or creating new conflicts or disagreements within or between groupings or communities which potentially could become entrenched, violent, or spread to additional groups or communities?	High	No	It's a minor conflict like who will get benefitted from the project. As project will have clear process of identifying/targeting the beneficiaries from the vulnerable and marginalized group, the conflict will be solved through meetings and discussions. It is likely that it won't be entrenched, violent or spread to additional groups.
2.2.3 Could the activity bring unequal economic benefits to a limited subset of the target group?	Medium	Yes	The project will include activities that prioritize employment creation. However, conflicts may arise over the criteria used for selecting beneficiaries and the distribution of resulting benefits. Since the project will target the most vulnerable and poorest households, there is a potential risk of creating unequal economic benefits between the poorest and relatively better-off sections of the community. To mitigate this foreseeable risk, the executing agency will strengthen coordination with relevant local and community-level stakeholders, including women, persons with disabilities, and youth, particularly during the development of beneficiary selection criteria to ensure inclusion and fairness. Project sub-activities will be identified and selected through a participatory and deliberative planning process that will follow the established local level planning system.
2.2.4 Could the activity lead to increased un-employment that would not be absorbed by other sectors or activities?	Medium	No	The project will support communities to establish and strengthen small-scale agricultural businesses and NTFP enterprises. These micro-enterprises will generate income and employment opportunities within the community by adding value to local resources and enabling residents to earn a livelihood close to home. The project will also promote climate-smart agriculture practices such as improved crop varieties, water-efficient irrigation, soil conservation, and integrated pest management. These practices require labor and skilled work, creating jobs while enhancing agricultural productivity and resilience. Additionally, the project will invest in building and upgrading climate-resilient infrastructure such as irrigation systems, roads, storage facilities, and water management structures. The construction, maintenance, and operation of this infrastructure will provide employment opportunities for local workers, including vulnerable groups.
2.3 Could the target beneficiaries or stakeholders be dissatisfied due to limited consultation during activity design or implementation (including due to inadequate Complaints and Feedback Mechanisms)?		No	During the design phase, a diverse group of community members, disaggregated by gender, were consulted including FPIC to gather their needs and priorities. The details of this stakeholder consultation process are described in the community consultation section. The project activities have been specifically designed to respond to the needs and aspirations of the targeted communities and groups. The selection of concrete adaptation measures under Component 1 will be carried out with communities through a highly participatory planning process. To address grievances from community members, there is a provision for filing complaints through the GRM of the LG. To ensure community members are aware of the grievance mechanism, GRM awareness sessions will be conducted by the LG at all project sites before implementation of the activities. During these sessions, stakeholders will also be informed about the Adaptation Fund's grievance management system, which allows escalation of issues they feel have not been satisfactorily resolved. All GRM protocols and communication channels will be workshopped at project sites. It will be mandatory to install grievance boxes and information boards at community sites for all service- and site-based activities. The local-level judiciary committee will also be involved as part of the community conflict resolution process.
2.3.1 Could the activity lead to dissatisfaction or negative impacts due to lack of beneficiary or other stakeholder participation in planning, design, implementation, or general decision making?	Medium		
2.3.2 Is there a risk that not all relevant stakeholders, and especially marginalized or vulnerable groups, have been identified and consulted or that they have been exposed to internal or external pressure or coercion or not able to comprehend the consultations?	Medium		

2.3.3 Could there be negative impacts due to an inadequate Complaints and Feedback Mechanism during project implementation?	Medium		

3. Marginalized and Vulnerable Groups			
3.1 Could the activity impose ~~ing~~ disproportionate adverse impacts on marginalized and vulnerable groups?		No	Low/no risk. No significant disproportionate adverse impacts on marginalized and vulnerable groups are anticipated. The project will prioritize the inclusion of vulnerable and marginalized groups, including women, female-headed households, indigenous peoples, and persons with disabilities. These groups will continue to be actively consulted throughout project implementation to ensure their needs and concerns are fully addressed. The project will focus on supporting need-based adaptation and value chain activities that are inclusive of all community members, promoting climate-resilient practices and nutrition-sensitive value chain development aimed at improving the nutritional status of poor and vulnerable populations. To address any future grievances or concerns, a well-functioning and responsive GRM operated by the LG will be maintained, ensuring that issues raised by marginalized and vulnerable groups are promptly and fairly resolved. Gender-responsive and consultative approaches will guide all project activities to prevent adverse impacts.
3.1.1 Is there a likelihood that the activity would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups?	Medium		
3.1.2 Could the activity potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	High		
3.1.3 Could the activity aggravate the situation of vulnerable, marginalized, or otherwise disadvantaged individuals or groups?	High		
3.2 Could the activity lead to influx of a temporary or permanent alien workforce?		No	The project will focus on building the capacity of the local community, which includes diverse groups with various skills. The selection of workers and beneficiaries will prioritize local people to ensure the project aligns with the cultural, social, and economic context of the area. This approach will minimize the need to bring in external workers.
3.2.1 Could the activity lead to influx of a temporary or permanent alien workforce of relatively small size in a relatively isolated or culturally sensitive community?	Medium		
3.2.2 Could the activity lead to influx of a relatively large temporary or permanent major alien workforce (>10% of existing community) or a smaller group which could be expected to have important cultural, health, or socio-economic impact on a local community?	High		

4. Human Rights			
4.1. Could the activity fail to respect human rights?		Yes	Low Risk: The Government of Nepal and Local Government, as executing agencies, fully uphold human rights as guaranteed by the Constitution of Nepal (2015) and international treaties ratified by Nepal, including ICCPR, ICESCR, and CEDAW. The project will follow human rights-based approaches in all activities and consultations. Awareness sessions on the GRM will ensure communities know how to report any human rights concerns. The project will especially focus on protecting the rights of women, girls, youth, and Indigenous Peoples throughout implementation.

4.1.1 Could the activity lead to violation of fundamental human rights as defined by international, national or local law?	High	No	
4.1.2 Could the activity of partners, contractors, or suppliers, lead to violation of fundamental human rights as defined by international, national or local law?	High	No	

5. Gender Equality and Women's Empowerment			
5.1 Could the activity lead to gender-based inequality, discrimination, exclusion, unwanted workload, or violence?		No	Low risk: The project activities will be finalized through a participatory planning process involving a broad range of beneficiaries, with a focus on enhancing community welfare. Livelihood interventions will specifically target female beneficiaries from marginalized groups to guarantee fair and inclusive access to project benefits. Considering asset creation through cash-based transfers (CBT), the executing agency is committed to ensuring equal pay for equal work without discrimination based on gender. Individuals from diverse backgrounds, regardless of sex, caste, or culture, will actively participate in the programme. Nepal has legal provisions that mandate at least 33% women's representation in various state bodies and committees to promote gender equality and social inclusion. The Constitution of Nepal (2015) guarantees women the right to participate in all state bodies based on proportional inclusion and mandates affirmative action to ensure their economic, social, and political inclusion. In addition, the project is designed to promote gender equality and social inclusion in line with the Constitution of Nepal (2015), which guarantees equality and prohibits discrimination (Article 18). It also follows the Gender Equality Act (2015) and the Domestic Violence (Crime and Punishment) Act (2009), which protect against gender-based violence and discrimination. The executing agencies, MoFE and LGs, strictly abide by these laws and ensure that project implementation adheres to them, including guaranteeing equal pay for equal work with no discrimination based on gender or any other factor. The project ensures equitable access to resources and decision-making roles for women and marginalized groups. Awareness-raising activities, a robust Grievance Redress Mechanism (GRM), and provisions for reasonable accommodations will help prevent discrimination, reduce unwanted workloads, and address any gender-based violence promptly and effectively.
5.1.1 Could the activity lead to gender-based violence?	High		
5.1.2 Could the activity create or amplify conditions for gender-based inequalities?	Medium		
5.1.3 Could the activity lead to gender inequities in who makes decisions?	Medium		
5.1.4 Could the activity lead to increased unpaid work for women and girls?	Medium		

6. Core Labour Rights

6.1 Could the activity fail to respect core labour rights?		Yes	Low risk: The project is committed to upholding core labour rights and will be implemented in full compliance with Nepal's national labour laws and international standards. As the executing entities, the LGs and MoFE will ensure that all project activities align with the Labour Act 2017, the Children's Act 2018, and relevant occupational health and safety (OHS) regulations. The project will ensure that there is no child labour, no forced labour or discriminatory practices are tolerated. Under Outcome 2: Food Assistance for Assets (FFA), LGs will lead the transparent selection and registration of workers for labour-intensive public works, with a focus on vulnerable households. These participants will be registered in local unemployment databases to improve access to future employment opportunities. Occupational health and safety standards will be enforced across all worksites, including the provision of personal protective equipment (PPE), regulation of working hours, availability of first aid kits, appropriate insurance coverage, and timely wage payments in line with district norms. The project will not allow the engagement of children, senior citizens, or pregnant and lactating women in heavy construction works. However, safe and dignified light work opportunities will be made available to those who are willing but unable to engage in physically demanding tasks, ensuring inclusivity and respect for individual capacities. A functional grievance mechanism will also be maintained by the LGs to ensure participants can raise concerns freely and have their voices heard. The WFP as the technical assistance provider, will support LGs and MoFE by offering technical guidance, capacity strengthening, and quality assurance to ensure consistent adherence to labour standards and safeguard measures throughout project implementation.
6.1.1 Does the activity involve support for employment or livelihoods that may fail to comply with national and international labour standards (i.e. principles and standards of ILO fundamental conventions)?	High	No	
6.1.2 Could the activity, or that of partners, contractors, or suppliers, involve use of child (<14y) or forced labour?	High	No	

7. Indigenous Peoples			
7.1 Does the activity involve indigenous peoples or could it affect indigenous peoples?		Yes	Low to medium risk: The project aligns with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and ensures the rights of indigenous peoples are fully respected. During the proposal phase of the project, Free, Prior and Informed Consent (FPIC) processes have been carried out in areas where indigenous communities are present. Nepal's ratification of ILO Convention No. 169 further reinforces the country's commitment to the rights of indigenous peoples. In line with this commitment, MoFE and LGs will ensure that indigenous peoples are meaningfully consulted, equitably included in planning and implementation, and able to access project benefits without experiencing harm. The project will also respect and promote indigenous culture, knowledge, and practices throughout its implementation.
7.1.1 Could the activity negatively affect indigenous peoples, culturally or otherwise, without their specific Free, Prior, Informed, Consent (FPIC)?	High	No	

8. Involuntary Resettlement

8.1. Could the activity lead to resettlement?		No	The project activities will not lead to any resettlement. On the contrary, they are designed to address the underlying drivers of displacement and reduce the need for resettlement, including seasonal or climate-induced migration. Through Component 1, the project will support the establishment of community-based enterprises and promote sustainable, climate-resilient livelihoods that enhance income generation at the local level. Additionally, the construction of resilient infrastructure under the project will not only create short-term employment opportunities through labour-intensive approaches but also contribute to long-term livelihood options by improving access, reducing disaster risks, and supporting local economic activities. These integrated interventions aim to strengthen community resilience, retain local populations, and promote inclusive development without triggering displacement.
8.1.1 Could the activity lead to involuntary economic or physical resettlement of households or individuals?	High		

9. Protection of Natural Habitats			
9.1 Could the activity lead to negative impacts on natural habitats?		No	The activities of Component 1 focus on understanding local environments and climate impacts, while Component 2 strengthens climate governance. Although small-scale and community-managed, interventions will take place within buffer zones area of the national parks, creating potential risks of localized habitat disturbance, resource overuse, or invasive species if not carefully managed. To address this, activities will be designed to have minimal impact, building on existing environmental features without introducing new elements or species. Component 1 interventions will emphasize sustainable land management, reforestation, soil and water conservation, and climate-smart agriculture helping restore degraded lands, improve soil fertility, and enhance water retention. Any residual impacts are expected to be negligible and easily mitigated. All activities will comply with Nepal's Environment Protection Act (2019) and Regulation (2020), with additional safeguards such as prohibiting agro-chemicals, promoting organic practices, using only native species, and coordinating with Rara and Khaptad National Park's Buffer Zone Management Committees. **Avoided activities include:** ✓ No activities inside core National Park areas. ✓ No introduction of invasive species. ✓ No use of chemical fertilizers or pesticides. ✓ No large-scale infrastructure, deforestation, or land clearing. ✓ No unsustainable hunting or harvesting of forest products. ✓ No alteration of natural watercourses or wetlands.
9.1.1 Could there be negative impacts on critical migration corridors of endangered or otherwise or important animal or insect species?	High		
9.1.2 Could the activity lead to increase in unregulated or unlicensed collecting, hunting, or fishing?	Medium		
9.1.3 Could a natural habitat be significantly degraded, fragmented, or more than half of extent destroyed?	Medium		
9.1.4 Could a natural habitat be almost fully destroyed or degraded so that it no longer could function as natural habitat for the original fauna/flora?	High		
9.2 Could the activity lead to negative impacts in protected or internationally recognized areas?		No	The communities of the two local governments, Chhayanath Rara Rural Municipality and Khaptadchhanna Rural Municipality are located within the buffer zones of Rara National Park and Khaptad National Park, respectively. The activities under Component 1 and 2 will be carefully designed to minimize environmental impacts by utilizing existing ecosystem features without

				introducing new elements or species. These activities are small-scale, managed at the household or community level, and any residual environmental or habitat impacts are expected to be negligible and easily remediable. In line with Nepal's National Parks and Wildlife Conservation Act, 1973 (amended 2023) and the Buffer Zone Management Regulation, 1996, the project team will coordinate closely with the Rara and Khaptad Buffer Zone Management Committees established under the respective National Parks during planning and implementation phases. **Avoidance measures include:** • Strict prohibition of introducing alien or invasive crop or plant species within buffer zones or protected areas. • No project activities will be conducted inside the core protected areas of the National Parks. All activities will comply fully with the applicable provisions of Nepal's protected area management laws and regulations to safeguard biodiversity and ecosystem integrity. There will be no use of Agro-chemicals, the project will promote conservation sustainable agriculture practices and organic production. The project will not construct any major infrastructure within 200 meters of protected areas, critical habitats, or ecologically significant zones. All interventions are small-scale, community-managed, and will be located in designated community lands or existing agricultural areas, ensuring no encroachment into sensitive ecosystems or core zones of Rara and Khaptad National Parks.
	9.2.1 Will any major constructions be located close (<200m) to critical habitats, protected areas, or areas of particular or locally recognised ecological significance?	Medium		
	9.2.2 Could the activity lead to negative impacts on protected or internationally recognised areas?	High		

10. Conservation of Biological Diversity			
10.1 Could the activity lead to negative impacts on biodiversity or endangered species?		No	One of the project's key interventions is increasing greenery through agro forestry activity, which is not expected to cause negative environmental impacts. Recharge ponds will support groundwater levels and vegetation growth. The project will promote conservation and cultivation of Non-Timber Forest Products and herbal plants through plantations, protection measures, and nurseries. Adaptation activities under Component 1 will take place only on lands previously used for similar purposes, such as continuing agriculture on existing agricultural land. Buffer zones around springs, wetlands, rivers, and gullies will be maintained to protect ecosystems and enhance biodiversity. Awareness sessions will emphasize plantation and forest conservation to beneficiaries. Component 1 also includes NTFP and farm-based enterprises, value addition, climate-resilient infrastructure, and climate-smart agriculture, all designed to minimize harm to biodiversity. These activities comply with Nepal's National Parks and Wildlife Conservation Act 1973, Forest Act 2019, Environment Protection Act 1997, and Local Government Operation Act 2017. Local governments will oversee implementation with beneficiary engagement to ensure sustainable practices and no negative impacts on biodiversity or endangered species.
10.1.1 Could the activity lead to degradation of biodiversity or significant reduction in one or more common animal, insect, or plant species?	Medium		
10.1.2 Could the activity lead to loss (eradication or removal from local area) of one or more animal, insect, or plant species?	High		
10.1.3 Could there be negative impact on any endangered or critically endangered animal, insect, or plant species?	High		

10.1.4 Could the activity lead to introduction of invasive alien varieties or species which could influence local genetic resources?		Medium		
	10.1.5 Could the activity lead to introduction of invasive alien varieties or species which potentially could eradicate, change, or significantly reduce local naturally occurring varieties or species?	High		
	10.1.6 Could the activity introduce genetically altered organisms?	Medium		

11. Climate Change			
11.1 Could the activity lead to increased exposure, increased vulnerability, or reduced resilience of beneficiaries to the effects of climate change?		No	The entire project is designed to reduce beneficiaries' exposure and sensitivity and increase adaptive capacity which results in reducing the vulnerability to the effects of climate change. The project ensures to increase the climate resilience of the community. As the project area is highly vulnerable to the impacts of climate change, all project components and activities will be designed to contribute to increasing local capacities to sustainably face climate change in the long-term, and climate variability in the short -and medium-term. The promotion of i) smart agriculture practices for better management of soil and water resources; ii) organic production and Integrated pest management techniques coupled with the use of organic fertilizers and pesticides; and iii) Restoration-based actions through rehabilitation of the degraded areas (agriculture and forest), climate-resilient, productive, protective, and green recovery assets to enhance communities' resilience to shocks and stressors are expected to reduce the emissions deriving from agricultural activities..
11.1.1 Could the activities result in increased exposure to climate induced hazards?	High		
11.1.2 Could the activity result in beneficiaries being more vulnerable to climate-related stresses?	High		
11.1.3 Could the activity lead to beneficiaries having less means or options to withstand shocks resulting from extreme weather events (floods, storms, drought)?	High		
11.2 Could the activity lead to increases in greenhouse gas (GHG) emissions or to reduction of carbon sinks?		No	As the project promote the plantation in the barren land, it will help to sink carbon dioxide (GHG) instead. The GHG emissions will be reduced with the use of improved cooking stove and other renewable energy.
11.2.1 Could the activity lead to significant increases in GHG emissions during operation phase?	Medium		
11.2.2 Could the activity lead to significant degradation or destruction of elements which absorbs and stores carbon from the atmosphere (trees, plants, soils)?	Medium		

12. Pollution Prevention and Resource Efficiency			
12.1 Could the activity lead to significantly increased release of pollution to air, land, or water during construction or operation?		No	None of the activities in the project will release pollutants into the air, soil or water. The project will not provide any agro chemicals to participants. None of the activities in the project involves high resource use, as energy efficiency, minimization of material resource use, and minimization of the production of wastes has been embedded into project design. Under the project's approach to enhancing agricultural production, conservation agriculture and organic production, chemical inputs will be replaced by locally made biofertilizer and pesticides, use of liquid fertilizer for example from manure will be promoted, and the project will encourage integrated pest management.

12.1.1 Could the activity lead to a dangerous increase in release of pollutants (incl. noise) to air, land, or water during construction or as result of accidents?	Medium		
12.1.2 Could the activity lead to a dangerous increase in release of pollutants (incl. noise) to air, land, or water during normal operation?	Medium		
12.1.3 Will the activity lead to any open burning of plastic waste during construction or operation?	Medium		
12.1.4 Could the activity lead to significant negative impacts on visual aesthetic values?	Medium		
12.1.5 Could the activity lead to discharge of untreated wastewater to the environment?	High		
12.2 Could the activity lead to procurement, transport, or use of chemicals, hazardous materials, or ozone depleting substances subject to international bans?		No	Project will be mostly focused on small to medium sized climate resilient infrastructures which are constructed by humans i.e., no use of heavy machinery equipment and other chemical substances.
12.2.1 Could the activity lead to procurement, transport, or use of chemicals or other hazardous materials, including asbestos and ozone depleting gases which will not be handled and disposed of safely by following normal Standard Operating Procedures?	Medium		
12.2.2 Could the activity lead to procurement, transport, or use of chemicals or other hazardous materials subject to international bans?	High		
12.3 Could the activity lead to increased use of agro-chemicals?		No	
12.3.1 Could the activity lead to use of agro-chemicals that potentially could be replaced or reduced by alternative environmentally friendly products or techniques?	Medium		
12.3.2 Could the activity lead to use of pesticides or other chemicals, which could have an unintended effect on non-target species and environment?	Medium		
12.3.3 Could the activity lead to use of WHO class 1a, 1b, or Class II pesticides without proper application of the International Code of Conduct on Pesticide Management?	High		
12.3.4 Could the activity lead to use of pesticides, herbicides or other chemicals or materials containing or polluted by Persistent Organic Pollutants (POP's) as listed by the Stockholm Convention?	High		
12.4 Could the activity lead to very high resource use (such as fuel or water) during operation?		No	While agricultural and irrigation construction activities will increase water consumption, this increase is expected to be manageable. Water demand may rise as improved production takes place both at the community and household levels. The project will promote climate-smart agriculture practices that encourage sustainable water use, including the introduction of drought-resistant crop varieties where appropriate. Many water sources used by communities, such as springs and valley-bottom wetlands, depend on upstream conditions. Since the project includes activities to reduce land degradation, prevent erosion, and rehabilitate rangelands, it is expected that groundwater recharge and water availability will improve over time.
12.4.1 Could the activity lead to more than 100,000 litres per year of diesel, in vehicles and/or generators?	Medium		
12.4.2 Could the activity lead to major use of water from unsustainable sources (bottled and transported, gradual depletion of ground- or surface-water, change of local waterways etc.)?	Medium		

12.5 Could the activity lead to generation or transport of hazardous or non-hazardous waste which could have negative environmental impacts?		Yes	Low to medium risk: Non-hazardous waste may be generated during NTFP processing, mostly organic residues like plant fibers. Climate-resilient infrastructure construction may also produce leftover materials and debris. Proper waste management practices, including safe disposal and recycling, will be followed to minimize impacts. The project will raise awareness among workers and beneficiaries to ensure waste is managed responsibly.
12.5.1 Could the activity lead to significant increase in generation of waste that will not be disposed of in an environmentally friendly manner (recycled, re-used, or recovered) by WFP, beneficiaries, or third parties?	Medium	No	Although the amount of waste generated will be limited, it will be managed and disposed of in an environmentally friendly manner. Measures will be taken by the LG, beneficiaries, and TA to ensure proper recycling, re-use, or recovery of waste, preventing an increase in undisposed waste at the project sites.
12.5.2 Could the activity lead to generation of hazardous waste which will not be handled and disposed of safely by following normal Standard Operating Procedures?	Medium	No	

13. Public Health			
13.1 Could the activity lead to increased risk to community health and safety from use of equipment, materials, transportation, or natural hazards?		Yes	Medium risk: Construction of climate-resilient infrastructure may cause minor health and safety risks. Since unskilled workers will be involved, there is a higher chance of injuries from handling equipment, materials, or transportation. Natural hazards could also increase risks during construction. Proper safety training and precautions will help minimize these risks.
13.1.1 Could activities during construction or operation phase lead to increased community risks from e.g. increased traffic, inappropriate design or use of equipment and materials which would not be handled by following normal Standard Operating Procedures?	Medium	Yes	To some extent, community members involved in the construction activities under the FFA program may face risks of injury while participating in the works. These risks could arise from improper use of equipment or materials, or design issues if standard safety procedures are not strictly followed.
13.1.2 Could the activity cause community exposure to water-born, water-based, water-related, vector-born or communicable diseases?	Medium	No	The project area is located at a high altitude where the risk of mosquito-borne diseases is minimal. Additionally, the project will improve access to safe drinking water, which will enhance sanitation and overall public health in the community.

14. Physical and Cultural Heritage			
14.1 Could the activity negatively affect heritage?		No	
14.1.1 Could the activity negatively impact any form of physical or cultural heritage?	Medium		

15. Land and Soil Conservation			
15.1 Could the activity lead to negative impacts on soils, groundwater, water bodies, water ways, coastal areas, or the sea		Yes	Medium risk: The irrigation systems to be supported are Farmer-Managed Irrigation Systems (FMIS), meaning that most canals are already constructed and in use. The project will only rehabilitate certain sections where needed. Most of these systems cover less than 25 hectares of land, and as a general guideline, the canal size will not exceed 30 cm × 30 cm. Even during rehabilitation, excavation may cause soil erosion if not properly managed. Diverting water from streams into canals could also reduce downstream flow, affecting aquatic ecosystems and water availability for other users. To minimize these impacts, erosion control measures will be applied, and environmental flows will be maintained throughout the system.
15.1.1 Could there be significant impacts on quality or quantity of surface- or ground-water?	Medium	Yes	The project activities may partially reduce the natural flow of water in the stream, which could affect the overall quantity of surface water available downstream. This

			reduction may also have some influence on groundwater recharge in the area. To address these issues, suitable mitigation measures will be put in place to ensure minimal impact on both water quantity and quality..
15.1.2 Could the activity lead to major changes in flow regimes of local waterways, conditions of water bodies, or coastal areas?	High	No	While the project will involve partially diverting water from the natural drainage system for irrigation purposes, this water will be carefully redirected back into the stream after use, ensuring minimal alteration to its flow. As a result, the overall flow regime of the stream and the health of the watershed are expected to remain largely unaffected. The design and operation of the irrigation system will be managed to avoid causing major or lasting changes to local water bodies or downstream ecosystems.
15.1.3 Could the activity lead to increased soil erosion, run-off, or significant changes to soil characteristics?	Medium	Yes	Excavation work for the irrigation canals may cause some degree of soil erosion and increased surface run-off. However, since the canals are relatively small in scale, the overall impact on soil erosion and soil properties is expected to be limited. Proper mitigation measures, such as erosion control practices and vegetation management, will be implemented to further minimize any potential negative effects on the soil.
15.1.4 Could the activity lead to serious soil erosion (e.g. major gullies, sheet erosion etc.) or major detriments to soil quality over a large or locally important area?	High	No	It doesn't lead to serious soil erosion, only slight soil erosion.
15.2 Could the activity lead to negative impacts on forests, wetlands, farming or grazing land, or other landscape elements of ecological or economic importance?		No	The project activities will focus on management rather than control of farming and grazing land and other landscape elements of ecology. Establishment and proper regulation of system will be more important for the adaptation. Plantation, conservation of NTFPs and indigenous herbs and rotational grazing will be the few examples of the activities that the project will implement.
15.2.1 Could the activity lead to degradation or fragmentation of local forest areas, wetlands, prime farming or grazing land, or other landscape elements of ecological or economic importance?	Medium		
15.2.2 Could forests, wetlands, prime farming or grazing land, or other landscape elements of ecological or economic importance be almost fully destroyed or degraded or heavily fragmented?	High		
15.2.3 Could the activity lead to significant increase in consumption of locally sourced fuel-wood?	Medium		

The screening was conducted at project proposal stage and based on information available at this time. Due to the unidentified sub-projects (USPs) of Component 1, some of the screening questions triggered a "Medium risk" categorization, or **ESS category B**.

This screening, led by the Department of Environment (MoFE) with WFP technical support, will ensure the project risk category does not exceed Category B and that appropriate safeguards are in place. Any activities classified as high risk (Category A) will be redesigned to fall under Category B.
Before implementation, environmental specialists will complete the screening tool using information from community consultations and government stakeholders. Activities will be classified as Category A, B, or C, determining necessary follow-up:

- **Category C (Low concern):** Minimal or no adverse impacts expected; standard safeguards and grievance mechanisms apply, with no additional action needed unless activity scope changes.
- **Category B (Medium concern):** Some reversible impacts of limited magnitude expected; mitigation measures must be planned in an Environmental and Social Management Note (ESMN) and integrated into project planning, monitoring, and reporting.
- **Category A (High concern):** Significant or irreversible impacts expected; activities must be redesigned to reduce risk to Category B or C.

The ESMP will be updated post-screening of USPs to include newly identified risks, expected impacts, mitigation measures, and responsible parties.
Monitoring of identified impacts and mitigation implementation will follow schedules outlined in the project plan and comply with national laws, WFP Environmental and Social Standards and Safeguards, and the Adaptation Fund's 15 principles and policy. While screening is led by WFP with MoFE and MoALD, implementation related to natural resource management and livelihoods is carried out by MoFE and MoITFE. Monitoring of the ESMP will be a collaborative effort between these ministries, the Project Management Unit, and WFP, which will provide technical support and oversight.
Finally, the identification and screening outcomes of USPs will be reported annually to the Adaptation Fund through the Project Performance Report, specifically in the section dedicated to projects with unidentified sub-projects.

Annex 5: Environmental and Social Management and Monitoring Plan

w	Risk identified	Possible impact	Level of Risk	Mitigation measures	Responsible	Monitoring arrangements and/or indicators
Compliance with the Law	No risks identified	NA	NA	NA	NA	NA
Access and Equity	Potential to create or exacerbate intra- or inter-community conflicts	While the project is expected to bring economic benefits, some individuals or groups may be unintentionally disadvantaged or disagreements could arise within or between communities. Risks include influence by local elites in beneficiary selection and reinforcement of existing inequalities. This may increase social tension and reduce cooperation.	Medium	1.2.2. Project implemented by government entities in close collaboration with affected stakeholders to ensure inclusivity. LG to prepare vulnerability assessment tools with technical support to guide fair beneficiary selection. 1.2.3. Introduce new assets and income activities carefully to avoid elite capture. • Update/maintain GRM to capture, resolve, and monitor complaints continuously. • Strengthen local judicial committees (chaired by Vice Chairperson or Deputy Mayor) to address disputes promptly.	Technical Support Team (Project Coordinator, Social Mobilization Coordinator) and Local Government	• Number of consultations with vulnerable communities for targeting criteria. • Documentation and analysis of grievances through the GRM. • Records of judicial committee dispute resolutions. • Field monitoring reports on any emerging conflicts.
	Potential for unequal economic benefits to a limited subset of the target group	Conflicts may arise over beneficiary selection criteria and benefit distribution, potentially creating economic disparities between the poorest and relatively better-off community members, weakening social cohesion.	Medium	• Strengthen coordination with local stakeholders, including women, persons with disabilities, and youth, during development of beneficiary selection criteria to ensure fairness and inclusion. • Use participatory, deliberative planning aligned with local planning systems for sub-activity selection.	Technical Support Team and Local Government	• Number of stakeholder meetings and consensus reached on beneficiary criteria. • Monitoring equitable distribution of benefits among target groups. • Reports from participatory planning sessions.
Indigenous Peoples	Presence of indigenous communities and their involvement in project activities.	Potential exclusion from benefits, cultural insensitivity, misunderstandings, grievances, or delays if participation is not properly managed	Low to Medium	• Conduct Free, Prior, and Informed Consent (FPIC) consultations before project activities. • Develop and implement an Indigenous Peoples Plan (IPP) to ensure equitable participation, access to benefits, and	Technical Support Team, Local Government	• Number of FPIC consultations conducted and documented. • IPP developed, approved, and implemented. • % of indigenous community members actively participating in planning and implementation. • Grievances received and

				respect for culture and traditional knowledge. • Ensure indigenous community representation in project committees and decision-making. • Provide culturally appropriate awareness, training, and guidance for project activities. • Establish grievance mechanisms and address concerns promptly		resolved. • Feedback from indigenous communities on inclusiveness and cultural respect.
Pollution Prevention and Resource Efficiency	Generation of small amounts of non-hazardous waste (e.g., organic residues from NTFP processing, debris from construction)	Improper disposal could lead to localized environmental pollution; however, waste is mostly biodegradable and manageable.	Low to Medium	• Residue ("peena") from NTFP processing reused as livestock feed and organic fertilizer. • Bamboo furniture waste managed locally at household level. • Waste management mechanisms included in enterprise business plans. • Community awareness programmes on proper waste handling.	Technical Support Team, Local Government	• Quantities of waste reused or properly disposed of. • Verification of waste management plans. • Attendance and feedback from community awareness sessions.
Public Health	Increased risk to health and safety from construction activities involving unskilled labor, equipment, and materials; natural hazards may exacerbate risks	Potential injuries to workers and community members, safety hazards near ponds after construction, and health risks from inadequate safety measures.	Medium	• Pre-construction training on health, safety, and security for workforce. • Provide PPE, first aid kits, and necessary equipment onsite. • Group health insurance for labours. • Pond safety: install awareness boards and fences to restrict entry. • Post-construction training for safe operation and maintenance of ponds. • Avoid use of heavy machinery to reduce risk.	Technical Support Team, Local Government	• Number of safety trainings conducted. • Number and type of accidents reported. • % of workers equipped with PPE. • % of labours insured. • Number of ponds with safety measures installed. • Post-construction training sessions held. • Provision of budget in the cost estimate of each scheme to ensure the mitigation measures in place.
Land and soil conservation	Excavation for irrigation canals may cause soil erosion.	Soil degradation and increased landslide risk if erosion is not managed properly.	Medium	• Maintain slope stability during excavation. • Apply bioengineering techniques (vegetative stabilization). • Balance cut and fill to minimize excess soil displacement. • Construct toe and retaining walls where necessary. • Design irrigation canals to minimize scouring velocity; line canals if needed.	Technical Support Team (Engineer), Local Government	• Sites monitored for soil erosion incidents. • Application and effectiveness of bioengineering techniques. • Monitoring reports from field visits.

	Reduced downstream water flow	Diversion of stream water into irrigation canals may reduce water quantity and quality downstream, affecting aquatic life and other users.	Medium	• Design irrigation canals to maintain at least 20% of natural stream flow at all times, exceeding legal minimum. • Implement catchment restoration: planting vegetation, building recharge ponds to maintain water flow and reduce erosion. • Install fish screens at intake points to protect aquatic biodiversity from entrapment.	Technical Support Team (Engineer), Local Government	• Quarterly measurements of natural stream flow. • Documentation of catchment restoration activities. • Inspection reports on fish protection devices.

The budget for all mitigation measures will be assessed during the preparation of individual scheme ESRS and management plans, and these costs will be integrated into the overall cost estimates of each scheme.

Annex 5: Cost-effectiveness Analysis Report

1. Background:

Nepal's agriculture sector and climate-sensitive livelihoods are under mounting stress due to the escalating impacts of climate change. Recent assessments for an Adaptation Fund project proposal highlight increasing risks from erratic rainfall, prolonged droughts, and recurrent floods, which are resulting in significant economic losses and threatening national food security. The World Bank's Nepal Development Update (April 2025) reports that floods and landslides during the first half of FY 2024/25 caused damages equivalent to 0.8% of GDP, severely affecting infrastructure, agriculture, and essential services. By 2050, climate change impacts on agriculture, hydropower, and water-related disasters in Nepal could cost 2–3% of current GDP annually (CDKN, Government of Nepal).In 2024 alone, extreme rainfall in late September resulted in economic damages of US$ 345 million, with infrastructure accounting for 83% of this loss. Over the past five years, disaster-related losses have totalled US$ 174.81 million, predominantly from floods and landslides.

The Karnali and Sudurpashchim provinces are among the most climate-vulnerable and socio-economically disadvantaged regions. These mountainous areas experience frequent droughts, floods, landslides, and irregular rainfall. Between 1971 and 2007, droughts and floods accounted for 38.9% and 23.2% of agricultural losses, respectively. Over 80% of the population relies on subsistence farming, with limited access to irrigation, markets, and extension services. Annual agricultural losses due to climate impacts are estimated at 1.5–2% of GDP, potentially rising to 4% by 2030 without effective adaptation measures. Water scarcity is a pressing challenge, especially in Karnali, where only 4% of the population has access to safe drinking water, leading to increased migration and reliance on unsafe water sources. Only 35.21% of irrigable land in Karnali is irrigated, contributing to declining paddy cultivation and a shift to less water-intensive crops such as apples and vegetables. These climate-induced stresses exacerbate poverty and malnutrition. Sudurpashchim has the highest poverty rate in Nepal (34.16%), followed by Karnali (26.69%), with child stunting affecting nearly 50% in Bajura district. Additionally, 82.2% of Karnali households still use firewood for cooking, contributing to deforestation and health hazards from indoor air pollution.

Nepal's National Adaptation Plan (NAP) outlines 64 priority programmes across ten key sectors, requiring an estimated US$ 47.4 billion by 2050. The proposed project for the Adaptation Fund serves as a catalytic investment aligned with NAP priorities, focusing on climate-resilient development in the most at-risk regions. National and provincial vulnerability assessments consistently identify the mid- and high-hill districts of Karnali and Sudurpashchim as highly exposed due to geographic isolation, entrenched poverty, fragile infrastructure, and dependency on rain-fed agriculture. The project will adopt a multi-component, community-based approach to enhance adaptive capacity and climate resilience. It will prioritize nature-based solutions and climate-resilient agriculture, post-harvest management, climate services, inclusive governance, and institutional capacity building. Unlike conventional grey infrastructure, the initiative emphasizes cost-effective and scalable solutions, such as bioengineering, ecosystem restoration, and sustainable farming, that offer co-benefits like biodiversity conservation, improved water retention, carbon sequestration, and employment generation. Sustainability is embedded through the strengthening of local systems such as Local Adaptation Plans of Action (LAPAs), climate service provision, and community asset management. The programme specifically targets the most vulnerable groups, including women, indigenous peoples, and smallholder farmers, promoting inclusive and equitable adaptation while reducing reliance on humanitarian aid.

WFP has carried out a comprehensive cost-effectiveness analysis of the project. The cost-effectiveness analysis includes the economic analysis, sensitivity analyses, cost-benefit analyses and trade-off analyses for each output of the project. The summary and detailed cost-effective analyses of all five proposed 5 project outputs are presented below.

2. Cost-effectiveness analysis by project output:

2.1 Summary of the cost-effectiveness analyses for output 1.1:

Output 1.1: Climate-resilient agroforestry and livelihood improvement actions implemented for coping with extreme events through climate-resilient agriculture, climate-smart villages, and other nature-based solutions.

- ✓ Output 1.1 of the proposed initiative aims to empower climate-vulnerable communities by strengthening ecological resilience, improving food security, and diversifying income sources. With an allocated investment of US$ 2,077,275, this output is not merely a livelihood enhancement intervention but a transformative mechanism that enables communities to transition from subsistence-based vulnerability to adaptive resilience. Through an integrated package comprising climate-smart agriculture, agroforestry, nature-based solutions, and risk-informed financial inclusion, the intervention delivers cross-cutting benefits across environmental, social, and economic dimensions.

- ✓ **Establishment of climate-resilient orchards:** a core component of Output 1.1 is the development of climate-resilient orchards spanning 776 hectares, featuring the planting of approximately 240,000 saplings of apple, walnut, and citrus trees. Unlike conventional monoculture or cash crop systems, this orchard-based agroforestry model delivers multiple ecosystem and livelihood benefits. It stabilizes erosion-prone slopes and improves soil moisture retention. Upon reaching full productivity (typically within 5–7 years), these orchards are projected to generate annual revenues of approximately US$ 4.8 million from fruit sales alone. Intercropping with cereals and legumes is expected to yield an additional US$ 425,000 annually.
- ✓ **Support for climate-resilient vegetable cultivation:** Simultaneously, the project will support 5,000 farmers in cultivating climate-resilient vegetables across 525 hectares using improved seed varieties and soil-friendly farming practices. The Farmer Field School (FFS) approach, supplemented by demonstration plots and community-based learning, will be utilized to deliver practical training. Under optimal productivity conditions, this activity is projected to generate US$ 4.4 million in annual value. Even under a conservative scenario - assuming the project contributes only 60% of total productivity due to existing traditional practices or post-harvest losses -the estimated annual value remains at US$ 2.4 million. This outcome significantly exceeds the average impact of conventional training programmes, which often yield limited results due to inadequate follow-up and low adoption rates.[62]
- ✓ **Promotion of local seed value chain:** An important innovation under Output 1.1 is the establishment of community-managed seed production and seed bank systems. These reduce reliance on external seed markets, enhance crop resilience, and promote seed sovereignty. Each household is expected to save approximately US$ 15–20 per year, with total community-level savings surpassing US$ 100,000 annually. These systems contribute to climate adaptation by preserving indigenous varieties and enhancing genetic diversity.
- ✓ **Adoption of sustainable land management practices:** The project will promote sustainable land management techniques such as Sloping Agricultural Land Technology (SALT), water-smart agriculture, contour planting, and mulching. Evidence from ICIMOD and IWMI trials in Nepal's mid-hills suggests these practices can reduce water usage by up to 40% and pesticide application by 25%. The anticipated annual savings for beneficiaries exceed US$ 216,000 through reduced agricultural input costs[63].
- ✓ **Nutritional and public health benefits:** In addition to economic and ecological outcomes, Output 1.1 contributes to improved public health, particularly for women and children. Diversification of household diets through home-based production of leafy greens, legumes, and fruits has been associated with a 25% increase in iron intake in comparable contexts, as evidenced by studies from SPRING Nepal and Helen Keller International[64]. These dietary improvements reduce the incidence of anaemia and undernutrition without requiring additional investments in social protection or supplementary feeding programmes.
- ✓ **Strengthening financial inclusion through VSLAs:** The integration of Village Savings and Lending Associations (VSLAs) enhances structural financial inclusion by providing women, landless individuals, and other marginalized groups with access to capital for agriculture and small-scale entrepreneurship. These VSLAs are expected to mobilize and circulate over US$ 150,000 annually, fostering community-based economic self-reliance.
- ✓ **Facilitating enhanced access to risk transfer through Weather-Index Crop Insurance:** A forward-looking component of this output is the facilitation for farmers to access the existing weather-index (WI) crop insurance services. This mechanism offers protection against climate-related crop failures by using rainfall data, satellite imagery, and agro-climatic thresholds to automate payouts-thereby avoiding delays and administrative challenges associated with traditional indemnity-based insurance. Based on pilot programmes in India and Nepal, WI insurance can provide benefits of US$ 150–200 per household in years affected by droughts or floods. With a projected uptake of 20–25% among beneficiary households, the expected annual benefit is approximately US$ 40`,000 in avoided losses and enhanced resilience. This compares favourably with conventional post-disaster cash transfers (as per national relief standard of Nepal), which typically offer one-time relief (US$ 555,555 in total or US$ 111.11 per household) but do little to promote long-term risk reduction or adaptive planning[65].
- ✓ **Climate-Smart Village (CSV)approach:** This will provide a cost-effective strategy for building long-term community resilience by integrating climate models, risk assessments, and participatory planning to design targeted and scalable interventions. Unlike reactive adaptation methods, CSV promotes efficient resource use through seven "smartness" criteria, which include weather, water, nutrients, biodiversity, knowledge, energy, and markets. This results in multiple co-benefits such as reduced input costs, increased productivity, and enhanced adaptive capacity. In this project, villages that meet these smartness criteria will be officially declared as Climate-Smart Villages in accordance with Government of Nepal (GoN) guidelines. By combining complementary actions such as seed banks, agroforestry, and renewable energy, CSV interventions have demonstrated measurable annual economic benefits at the household level, making the approach a sound investment with high returns and lasting impact in climate-vulnerable areas.
- ✓ **Cost-effectiveness and comparative advantage:** The integrated approach under Output 1.1 offers a distinct improvement over conventional agricultural development intervention. Fertilizer subsidy programmes, while

[62] *Field Studies on Water-Efficient Agriculture and Resilient Farming Systems in Nepal*, 2019.
[63] ICIMOD and IWMI. *Field Studies on Water-Efficient Agriculture and Resilient Farming Systems in Nepal*, 2019.
[64] SPRING Nepal and Helen Keller International. *Impact of Homestead Food Production on Nutritional Outcomes in Nepal*, 2016.
[65] UNDRR. *From Relief to Resilience: The Role of Insurance in Disaster Risk Reduction*, 2018.

politically popular, tend to yield marginal productivity gains of 10–15%, while imposing long-term costs on soil health and public finances. Despite their political popularity, such schemes are estimated to result in annual inefficiencies exceeding US$ 500,000[66]. Similarly, top-down agricultural extension services typically achieve less than 5% improvement in productivity due to limited contextual relevance. Monoculture plantations (e.g. eucalyptus, pine) demand high initial investment costs (over US$ 2.92 million) without offering short-term returns and often exacerbate environmental degradation, including water depletion, soil acidification, and biodiversity loss[67].

- ✓ **Cost-benefit comparison:** The following table presents a comparative analysis of benefit-cost (B/C) ratios between the proposed climate-resilient agriculture project, a similar initiative implemented by ICIMOD, and conventional farming (business-as-usual - BAU), using a 10% discount rate:

Interventions	AF proposed programme	ICIMOD implemented the project	Conventional farming (BAU)
B/C ratio	1.99:1	1.81:1	1.02:1

The results demonstrate that the proposed project is both highly profitable and economically viable. With a benefit-cost (B/C) ratio of 1.99, it significantly outperforms comparable initiatives, including the ICIMOD project (1.81) and conventional farming practices (1.02[68]). This indicates a strong potential to generate higher economic returns while simultaneously enhancing climate-resilient agricultural outcomes.

Table 1: Cost-effectiveness analyses for output 1.1

Project Approach/Activities	Input Cost (US$)	Direct Beneficiaries	Benefits Generated / Losses Averted	Alternatives to the Project Approach and Cost (US$)
Activities: ✓ Promote drought/flood-resilient crops (e.g. foxtail millets, proso millet, legumes, wheat, buckwheat). ✓ Establish and manage Nursery for the fruits and NTFP saplings. ✓ Introduction of SALT ✓ Support farmers to plant fruits and nuts (agroforestry). ✓ Establish and operate a community seed bank (for vegetables and drought-resilient variety seeds). ✓ Establish climate-smart demonstration farms and FFS ✓ Support for the NTFP and agroforestry-based enterprises ✓ Weather-index based climate insurance ✓ Climate-smart village development ✓ Intercropping system ✓ Local seed production ✓ Promotion of village Saving and Lending groups	2,077,275	7,200	✓ 35% productivity increase in cereal and Legume and 65% from fruits ($490/HH = $2,451,620/year- 5k HHs), if consider 100 % benefit=$4.54 million ✓ Input cost reduces ($30/HH = $30*7200 HH/year=$ 216,000) ✓ Improved nutrition status (20% increase in iron intake, esp. among women/children) ✓ Water use reduces by 35% (lower irrigation cost (>$ 50/HH = $150,000 /year, 60 % of 5k HHs) ✓ Pesticide use reduces by 25% (health savings $20/HH = $144,000/year, 7.2 k HHs) ✓ Resilience to 2–3 dry spells/year ✓ Local seed and sapling use increases from 30% to 70% increases the survival rate ✓ Seed and sapling cost reduction ($20/HH = $ 100,000/year- 5k HHs) ✓ Income from NTFP/agroforestry enterprises ($80/HH = $320,000/year- 4k HHs) ✓ Insurance value via weather-index ($20/HH = $40,000/year) ✓ Intercropping & soil health gains ✓ Increase financial access through savings groups ($25/HH = $150,000/year- 6k HHs) ✓ Enhance long-term resilience and adaptive capacity through climate-smart village development, integrating multiple adaptation strategies across farming, water, energy, and knowledge systems.	✓ Input subsidy models (e.g., fertilizer and monocropping): Provide an estimated benefit of $681,000/year (total $ 4.54 million) through a 10–15% productivity increase. However, such models have shown declining returns over time and environmental degradation. *Sources: World Bank (2019) "Agricultural Subsidies: Reallocating for Better Outcomes"; MoALD Nepal (2022).* ✓ Standalone social protection (e.g., post-shock cash transfers): Offer short-term relief, estimated at = $555,555/year ($111.11/HH), but do not build long-term adaptive capacity or productive assets. Sources: *UNICEF & World Bank (2020) "Social Protection Responses to Climate Risks".* ✓ Top-down government extension programmes: Deliver limited productivity gains (5% = $227,282/year of total $ 4.54 million) due to poor localization, low adoption among marginalized groups, and lack of participatory methods. *Sources: FAO (2016) "Farmer Field Schools: Impact Assessment"; Government of Nepal (2020) "Agriculture Development Strategy Mid-Term Review"* ✓ Monoculture plantation forestry (e.g., eucalyptus, pine): No near-term benefits with high upfront costs ($2.92 million). Environmental downsides include water use conflict, poor biodiversity outcomes, and negligible food/nutrition benefits in the short run, Total land=1301 HA, per ha cost =$2,244. *Sources: CIFOR (2019) "Tree Plantations in the Global South"; MoFE Nepal (2021) "National Forest Policy Review".* ✓ Market-driven high-input farming (chemical fertilizers/pesticides): Can increase yield by 25% (gross $1.13M), but after deducting high input costs, net benefit is $500,000/year. Leads to input dependency and environmental degradation. *Sources: IFPRI (2018) "Intensive Farming and Climate Resilience"; FAO Nepal (2020) "Sustainable Agriculture Practices".* ✓ One-Off training or awareness campaigns (Yield minimal benefit ($50,000/year) due to low adoption when not paired with inputs or demonstration plots. *Sources: World Bank (2019) "Nepal Climate-Smart Agriculture Profile"; UNDP/ICIMOD (2018) "Lessons from Climate Adaptation Pilot Projects in Nepal".*

Note: Beneficiaries- 7,200 HHs (5k- Climate Resilient Agriculture, 4k Enterprises (2k overlapped with CSA) and 200 for Nursery and Seed bank).

[66] Ministry of Agriculture and Livestock Development (MoALD). *Review of Agricultural Subsidy Programs in Nepal*, 2021
[67] FAO. *Impacts of Monoculture Forests on Water and Biodiversity*, FAO Forestry Paper No. 169, 2014
[68] Rajesh Rai, Laxmi Bhatta P. (2018). *Assessing climate-resilient agriculture for smallholders* https://www.sciencedirect.com/science/article/abs/pii/S2211464518300630

Detailed Economic Analysis for Output 1.1:

1. Introduction and objective:
The primary objective of this Cost-Benefit Analysis (CBA) is to rigorously evaluate the economic feasibility of interventions implemented under Output 1.1 by comparing the total discounted costs with the total discounted benefits over a 10-year project period. By converting all projected costs and benefits into present monetary values, the analysis facilitates evidence-based decision-making regarding resource allocation and investment prioritization. This approach ensures transparency and accountability, enabling stakeholders to assess whether the anticipated benefits outweigh the associated expenditures and thereby determine the overall value and justification of the proposed interventions.

2. Methodology:
To ensure a comprehensive and credible assessment, the CBA employs a multi-method approach that integrates both quantitative and qualitative analyses. The methodology includes:

- **Literature/document review**: A thorough review of relevant literature, project reports, and official government documentation has been conducted to establish contextual understanding and benchmark data.
- **Stakeholder engagement**: Structured interviews and consultations were carried out with key stakeholders, including project beneficiaries, local government representatives, and subject-matter experts at national, provincial and local levels. This participatory approach provided contextual depth, validated assumptions, and helped triangulate data across sources.
- **Data triangulation**: The integration of primary and secondary data enhances the reliability of the findings and ensures a robust evidence base.
- **Mixed-methods analysis**:
  - ✓ *Quantitative analysis* focused on measurable economic outcomes such as productivity gains, income generation, and cost savings, providing a solid foundation for financial estimation.
  - ✓ *Qualitative analysis* captured broader social and environmental impacts, including improved household well-being and increased resilience to climate-induced shocks. This dual lens strengthens the CBA by valuing outcomes that are not easily monetized but are critical to sustainable development.
- **Seven-step analytical framework**: The CBA follows a systematic process comprising:
  1. Defining project scope and objectives.
  2. Identifying all relevant costs and benefits, including capital, operational, and maintenance expenditures.
  3. Quantifying these costs and benefits in measurable units.
  4. Assigning monetary values based on current national market prices.
  5. Discounting future costs and benefits to present value using an appropriate discount rate.
  6. Calculating financial indicators such as Net Present Value (NPV) and Internal Rate of Return (IRR).
  7. Conducting a sensitivity analysis to test the robustness of results under varying assumptions.

3. Identifying all relevant costs:
Over the 10-year project period, total investment is estimated at US$ 15.2 million, which includes both project investments and community contributions such as labour, seeds, compost, and the operation and maintenance of project assets. While the project will provide initial financial and technical support, local communities are expected to sustain and expand these efforts over time. The investment strategically targets key components, including FFS, diversified orchard and crop systems, legume and vegetable promotion, cereal and potato production, seed system strengthening, and agro-enterprise development. A breakdown of major cost components is provided below:

Farmer Climate/Nutrition Schools (FFS): US$ 308,148
The project will establish 200 FFS, engaging 5,000 households in experiential learning focused on improved agricultural practices, climate adaptation strategies, and nutritional diversification. In Year 0, startup costs supported 20 FFS (US$ 30,815), which will be scaled up to 140 FFS in Year 1, reaching over 3,500 households. These schools will play a vital role in fostering behaviour change, facilitating the adoption of climate-smart technologies, and enhancing nutritional awareness among climate-vulnerable populations.

Fruit Tree Plantations (Apple, Walnut, Citrus): US$ 918,519
To promote long-term income generation and ecosystem restoration:

- Apple: 80,000 seedlings will be planted over four years with a total cost of US$ 296,296.
- Walnut: 80,000 seedlings, costing US$ 444,444.
- Citrus: Similar scale and cost of US$ 177,778.

These plantations support agroforestry, slope stabilization, and diversified income, particularly for hills and mid-hill regions.

Promotion of legumes and vegetables: US$ 3.73 million
Climate-resilient legumes will be promoted on 115.2 HA over 4 years using improved seed varieties:

- **Seed and labour for legumes**: Totaling US$ 818,752.
- **Vegetables (60 ha/year)**: Investment in seed and labour will reach US$ 2.91 million, supporting intensive off-season and home garden production.

This approach will reduce market dependency for nutrition, increased income opportunities for women, and enriched soil fertility.

Potato and cereal production enhancement: US$ 8.61 million

To support food security:

- **Potato seed and labour**: will be expanded to 300 ha/year by Year 4, totaling US$ 7.63 million.
- **Cereal (mainly buckwheat, wheat and millet)**: Moderate annual investments totaling US$ 980,726 will help maintain staple crop production while enabling a shift to high-value crops.

This integrated strategy will balance food self-sufficiency with market-oriented production.

Community Seed and Nursery Systems: US$ 877,296

- **Nursery O&M**: Annual seedling care, labour, and input costs amounted to US$ 470,333.
- **Nursery Establishment**: 3 nurseries built at a cost of US$ 222,222.
- **Seed Bank Construction & O&M**: With 10 seed banks, the project invested US$ 184,141 in infrastructure and operational support.

These systems will ensure year-round seed availability and climate-resilient germplasm for local farmers, while promoting agro-biodiversity.

Enterprises and Value Chain Support: US$ 328,889

- **NTFP and Agri-enterprise establishment**: USD 88,889will be allocated for infrastructure and machinery.
- **Enterprise labour**: US$ 240,000 to support processing and aggregation.
- **SALT (Sloping Agricultural Land Technology)**: US$ 4,723 will be invested in 10 locations.
- **Technical Assistance (TA)** and innovation costs: US$ 460,700.

3. Calculation of benefits:

Year 1: The initial year will mark the commencement of field-level interventions. A total of 100 ha of vegetables, cereals, and legumes will be cultivated, generating an estimated gross value of USD 173,133. Additionally, 30 ha of potatoes will be cultivated, contributing another USD 266,666. After adjusting for a 40% post-harvest loss (retaining 60% of gross production), the total net value will reach USD 264,000. Livelihood diversification through 10 community enterprises will generate USD 16,000. The cumulative economic value for Year 1 amounted to USD 280,000.

Year 2: Production will be expanded significantly. Vegetables will be cultivated on 60 ha, cereals on 65 ha, legumes on 30 ha, and potatoes on 90 ha. The resulting gross production will be valued at USD 1,615,555.6, with a net post-harvest value of USD 969,333. Livelihood diversification will be introduced through the formation of savings and credit groups involving 500 HHs, generating collective savings of USD 12,500. Additionally, 30 community enterprises will be established, supporting 600 HHs and generating USD 64,000. The total economic impact in Year 2 will reach USD 1,045,833.3.

Year 3: With steady progress in cropping activities, the project will introduce fruit orchards. Citrus orchards will be established with 10,000 saplings (yield realization at 20%), generating USD 13,333. Nursery production will begin, producing 105,000 saplings valued at USD 37,333. Community-based savings will involve 1,500 HHs, accumulating USD 37,500. Three seed banks will be adding benefit of USD 8,000, and 70 community enterprises will contribute USD 176,000. Combined with continued crop and potato production, the total value generated in Year 3 will amount to USD 1,960,166.7.

Year 4: As orchards mature, yields will improve. Citrus and walnut production will increase, and the nursery sector will expand, producing 350,000 saplings valued at USD 145,185. Community-based savings groups will involve an additional 3,000 HHs, contributing USD 75,000. Community enterprises will be scaled up by 90 units, generating a combined income of USD 320,000. With continued agricultural production, the total value generated in Year 4 will reach USD 3,042,283.

Year 5: The project will begin generating substantial returns. Agricultural production is expected to yield USD 2,495,125. Citrus will generate USD 206,667, apples USD 36,267, and walnuts USD 93,867. Nursery production will produce 350,000 saplings valued at USD 145,185. Around 6,000 households will save a total of USD 150,000, while seed banks will receive USD 44,444. Two hundred enterprises will contribute USD 320,000. Overall, the total projected value for Year 5 will reach USD 3,491,555.

Year 6: Citrus orchards will generate USD 293,333, apples USD 202,667, and walnuts USD 750,933 as yields improve. Vegetables, cereals, legumes, and potatoes will contribute USD 2,495,125. Nursery production, savings (USD 150,000), seed banks, and enterprises will add further value. Total economic impact will reach USD 4,401,688.3, marking significant growth and diversification.

Years 7–9: During the final three years, orchards reach full productivity across all perennial crops. Citrus production stabilizes at 80,000 trees with 80% yield, generating USD 480,000 annually. Apple orchards achieve 80% yield, producing USD 810,666.7, while walnut orchards mature to 75% yield, reaching USD 3,520,000 per year. Nursery production, community savings (USD 150,000 annually), enterprises, and seed systems continue to provide steady value addition. As a result, the total annual economic value for Year 7 reaches USD 6,312,088.3, while Years 8 and 9 each generate USD 8,125,421.6, reflecting sustained, long-term economic, agricultural, and social impacts.

A discount rate of 10% is primarily applied to convert future costs and benefits into present values, aligning with standard project appraisal practices and reflecting the opportunity cost of capital. Sensitivity testing with higher discount rates of 12%, 16%, and 17% is conducted to evaluate robustness.
The discount factor for each year has been calculated as:

Discount Factor = 1 / (1 + r) ^t
where r = 0.10 (10% discount rate) and t is the year number.
Present Value of Costs (PVC) for each year is calculated as:
PVC_t = Cost_t × Discount Factor_t
The Net Present Value (NPV) is calculated as:
NPV = Σ (PVB_t - PVC_t)
The BCR indicates the economic efficiency of the project and is calculated as:
BCR = Total PV of Benefits / Total PV of Costs
Using the data at the 10% discount rate:
BCR = 19,797,752.64 / 9,955,371.96 = 1.99

Total Costs and Benefits

- The total undiscounted cost of the project over the full implementation period is estimated at USD 15.24 million, while the total undiscounted benefits are projected to reach USD 36.78 million. This results in a net benefit of USD 21.54 million across the project's lifespan.
- When applying a 10% discount rate, the present value (PV) of total costs amounts to USD 9.9 million, and the PV of total benefits is calculated at USD 19.79 million. This yields a Net Present Value (NPV) of USD 9.8 million and a BCR of 1.99. This means that for every dollar invested, the project is expected to deliver USD 1.99 in economic returns, demonstrating strong financial viability and value for money.

Cash Flow Dynamics

- The project demonstrates an initial negative net cash flow, primarily due to substantial upfront capital investments in Year 0 (USD 416,759) and significant implementation expenditures during Years 1 and 2. However, benefits begin to materialize from Year 1 onward, and by Year 3, the project transitions to positive net cash flows, reflecting the cumulative impact of early interventions.
- From Year 4 onwards, net cash flows rise markedly each year, driven by increasing returns from climate-resilient livelihood activities, ecosystem service enhancements, and sustainable infrastructure outcomes, while annual costs stabilize. This upward trend culminates in a peak net benefit of USD 6.52 million in Years 8 and 9, corresponding with the period of full operational maturity of the project interventions.

5. Key Findings:
The cost-benefit analysis indicates that the total undiscounted benefits over the 10-year project period amount to approximately USD 36.7 million, substantially exceeding the total undiscounted costs of USD 15.24 million. When applying a 10% discount rate, the project yields a positive NPV of approximately USD 9.84 million, demonstrating that the present value of benefits significantly outweighs the costs, even when accounting for the time value of money. The BCR at the 10% discount rate is calculated at 1.99, indicating that for every dollar invested, the project delivers approximately two dollars in return. This high BCR reflects the strong economic efficiency of the proposed interventions. Moreover, sensitivity analysis reveals that even at an elevated discount rate of 12%, the BCR remains close to 2.0, affirming the financial resilience and robustness of the project. The project begins to generate positive net cash flows from Year 3, illustrating relatively early economic returns and reinforcing the overall financial viability and timely impact of the investment.
Sensitivity Analysis:
To evaluate the resilience of the project's economic feasibility, a sensitivity analysis has been performed by adjusting key parameters - specifically, project costs and benefits. This assessment examines how variations in these factors influence core cost-benefit indicators, namely the NPV and the Benefit-Cost Ratio (BCR), applying a standard discount rate of 10%.

1. **Scenario 1: 10% Increase in Costs (Benefits unchanged):** A 10% rise in project costs, while benefits remain constant, reduces the NPV from USD 9.84 million to approximately USD 8.84 million, with the BCR declining from 1.99 to 1.81. Despite this cost escalation, the project retains strong viability, as benefits continue to substantially outweigh expenditures.
2. **Scenario 2: 10% Decrease in Benefits (Costs unchanged):** A 10% reduction in benefits, with costs held steady, results in an NPV of USD 7.86 million and a BCR of 1.79. This outcome underscores the project's robustness, as it remains economically efficient and generates positive net returns even under diminished benefit assumptions.
3. **Scenario 3: Combined 20% Increase in Costs and 20% Decrease in Benefits:** Under a more conservative assumption, simultaneously increasing costs by 20% and decreasing benefits by 20%, the NPV declines to USD 3.89 million, while the BCR falls to 1.33. Although profitability margins narrow, the project retains a positive net value, with benefits still exceeding costs, thereby sustaining its economic justification under adverse conditions.
4. **Scenario 4: 10% Increase in Benefits (Costs unchanged):** A 10% improvement in benefits, with costs remaining stable, enhances the NPV to $11.82 million and elevates the BCR to 2.19, further reinforcing the project's strong economic returns.

Below is the summary of the sensitivity analyses.

Table 2: Sensitivity analysis:

Scenario	Net Present Value (NPV, million US$)	Benefit-Cost Ratio (BCR)
Base Case (10% discount rate)	9.84	1.99
10% increase in cost	8.84	1.81
10% decrease in benefit	7.86	1.79
20% increase in cost & 20% decrease in benefit	3.89	1.33
10% increase in benefit	11.82	2.19

The Cost-Benefit Analysis shows that the project under Output 1.1 is economically sound. At a 10% discount rate, the project has a Net Present Value (NPV) of USD 9.84 million and a BCR of 1.99. This means the project gives back double the value of every dollar invested.

The project remains strong even when costs go up or benefits go down. If costs increase by 10% or benefits drop by 10%, the BCR stays above 1.75. Even with a 20% cost increase and 20% benefit loss, the BCR is still 1.33, and the NPV is positive. If benefits increase by 10%, the BCR improves to 2.19, and the NPV goes up to USD 11.82 million. In summary, the output 1,1 is cost-effective, delivers good value for money, and is financially resilient under different conditions.

Cost Effectiveness Ratio (CER) analysis:

The CER compares the PV of costs to the PV of benefits. A CER less than 1 means the benefits exceed the costs, which indicates that the investment is economically sound.

Discount Rate	PV Costs (US$)	PV Benefits (US$)	CER	Interpretation
3%	15.24 million	36.78 million	0.41	For every dollar invested, the project generates $2.41 in benefits, reflecting very high cost-effectiveness under low discounting.
10%	9.96 million	19.80 million	0.50	At the standard economic analysis rate, each dollar of cost returns about $2.00 in benefits, showing high cost-effectiveness.
12%	9.32 million	18.04 million	0.52	Even under stricter assumptions, the project remains strongly justified, delivering $1.92 per dollar invested.

The analysis under Output 1.1 demonstrates that the project is highly cost-effective across all discount rates evaluated. Even when applying a conservative assumption using a higher discount rate of 12%, the CER remains well below 1. This clearly indicates a strong economic justification for the investment. The consistently low CER values affirm that the project delivers substantial value for money, ensuring efficient use of resources. Moreover, the project's financial viability is maintained under varying economic conditions, highlighting its resilience and robustness in the face of potential economic uncertainties.

Table 3: Data analysis for economic analysis of output 1.1 (in US$):

Cost category:

Year	Farmer nutrition school (FFS)	Apple plantation	Walnut plantation	Citrus plantation	Seed for legume	Labour and Animal for legume	Seed vegetables	Labour for vegetables	Seed for potato	Labour for potato	Seed for Cereal	Labour for cereal	O&M for Nursery (labour and seeds)	O&M for seed bank	Nursery establishment	Seed bank construction and operationalize for one year	Eestablishment of enterprises (NTFP and agri.)	Labour cost enterprises	SALT	TA	Total (USD)
Year 0 detail	500 HHs /20 FFS/$1540.74	0	0	10000 no ($2.22)	25 HA @ 60 Kg /HA -$1.48	110 person/HA@$6.66	20 HA @10 kg -$44.44	200 person/ha/$6.66-20 HA	30 HA-2200kg/HA-$0.74	30 Ha- 200 P-day -$6.66	55 HA /25 kg/ha- $ 0.74	55 HA/75 person-$6.66			3 no -$22222.22	3 no-$7407.40	10 no- $444.44	10 no@25p-day/$6.66	3 no # $ 472.31		
0	$30,815			$22,222	$2,222	$19,980	$8,889	$26,667	$48,889	$40,000	$1,019	$27,500		Per seed bank@$111.11-month	$66,667	$22,222	$4,444	$1,667	$1,417	$92,140	$416,759
Year 1 detail	3500 HHs/140 FFS	40000 no/$3.7	40000 no/$	40000 no	30 HA	30 HA	60 HA	60 HA	90 HA		65 HA	65 HA	$148.14/m-care 35000 no*0.11-		7 no	7 no	20 no	20	5		
1	$215,704	$148,148	$222,222	$88,889	$4,889	$41,958	$35,556	$106,667	$195,556	$173,333	$2,222	$60,000	$17,000	$4,000	$155,556	$51,852	$8,889	$5,000	$2,362	$92,140	$1,631,941
Year 2 detail	1000H/40 FFS	30000	30000	30000	35 HA	35 HA	60 HA	60 HA	90 HA		90 HA	90 HA		Seed and labour			40		2		
2	$61,630	$111,111	$166,667	$66,667	$8,000	$67,599	$62,222	$186,667	$342,222	$306,667	$3,889	$105,000	$56,667	$13,333			$17,778	$11,667	$945	$92,140	$1,680,869
Year 3 detail		10000	10000		25.2	25.2	60 HA	60 HA	90 HA		5.2 Ha	5.2					60				
3		$37,037	$55,556		$10,240	$86,061	$88,889	$266,667	$488,889	$440,000	$3,985	$107,600	$56,667	$13,333			$26,667	$21,667		$92,140	$1,795,396
Year 4 detail		**Total**			115.2 HA	115.2 HA	200 HA	200 HA	300 HA	300 HA	215.2 HA						70				
4					$10,240	$86,061	$88,889	$266,667	$488,889	$440,000	$3,985	$107,600	$56,667	$13,333			$31,111	$33,333		$92,140	$1,718,915
5					$10,240	$86,061	$88,889	$266,667	$488,889	$444,444	$3,985	$107,600	$56,667	$13,333				$33,333			$1,600,108
6					$10,240	$86,061	$88,889	$266,667	$488,889	$444,444	$3,985	$107,600	$56,667	$13,333				$33,333			$1,600,108
7					$10,240	$86,061	$88,889	$266,667	$488,889	$444,444	$3,985	$107,600	$56,667	$13,333				$33,333			$1,600,108
8					$10,240	$86,061	$88,889	$266,667	$488,889	$444,444	$3,985	$107,600	$56,667	$13,333				$33,333			$1,600,108
9					$10,240	$86,061	$88,889	$266,667	$488,889	$444,444	$3,985	$107,600	$56,667	$13,333				$33,333			$1,600,108
Total	$308,148	$296,296	$444,444	$177,778	$86,791	$731,961	$728,889	$2,186,667	$4,008,889	$3,622,222	$35,026	$945,700	$470,333	$110,667	$222,222	$74,074	$88,889	$240,000	$4,723	$460,700	$15,244,419

Note: Over the first 0–4 years, the project will support Farmer Field Schools, orchard development (apple, walnut, and citrus), nursery and seed bank establishment, enterprise development, and the implementation of SALT and technical assistance activities. Subsequent activities will be sustained by farmers and the community, using income generated from these initiatives or their initial investment.

Assumptions: The analysis assumes adoption of climate-smart agricultural practices, improved seeds, and proper crop management by beneficiaries, with post-harvest losses of 40%. Participation in Farmer Field Schools, VSLAs, and community enterprises is projected at 80–100%, while weather-indexed insurance uptake is estimated at 20–25%. Costs include both project and community contributions, and benefits are calculated over a 10-year period using a 10% discount rate.

Table 4: Benefit category from the activities of output 1.1 (US$):

Year	Vegatable cereal and legume (A)	Potato (B)	60% of(A+B), 40 % -Post harvest loss and current production	Citrus	Apple	Walnut	Nursery	Saving and Credit (saving)	Seed bank	Enterprises	Total (USD)
Year 0											
Year 1 detail	Veg-20 HA/18t/$0.25, Cer-55Ha/1.2t/$0.37 ,	30 t/ HA/30 HA/$0.29								10 no *20 HHs@ $80	
1	$173,333.3	$266,666.7	$264,000.0							$16,000.0	$280,000.0
Year 2 detail	Veg. -60 HA, Cer -65 Ha and Leg-30	90 Ha						500 HHs*$25-2000 p-saving		30 no*20 HH*$80	
2	$548,888.9	$1,066,666.7	$969,333.3					$12,500.0		$64,000.0	$1,045,833.3
Year 3 detail	Veg. -60 HA, Cer -90 Ha and Leg-35 Ha	90 Ha		(20%)/$0.29/kg, 9t/ha spacing 5*5m			3*35000sapling @$0.59* 60 %	1500 HHs/4500 saving	of the operational cost/3 no	70 no - $80	
3	$946,666.7	$1,866,666.7	$1,688,000.0	$13,333.3			$37,333.3	$37,500.0	$8,000.0	$176,000.0	$1,960,166.7
Year 4 detail	Veg. -60HA, Cer -5.2 Ha and Leg-25.2 Ha	90 HA		Cit 10k (50%)+40 k (20%)			10*35000 sapling /70%	3000 HHs/6000 saving	10 no	90 no	
4	$1,284,977.8	$2,666,666.7	$2,370,986.7	$86,666.7			$145,185.2	$75,000.0	$44,444.4	$320,000.0	$3,042,283.0
Year 5 detail				10k (80%)+40 k (50%)+30k(20%)	40k (10%), $0.29/kg,8.5t/ha, 6m*6m spacing	40k (5%), $2.96/kg,4.4t/ha, 6m*6m spacing	10*35000 sapling/70%	6000 HHs/7500 saving	10 no	200 no	
5	$1,491,875.6	$2,666,666.7	$2,495,125.3	$206,666.7	$36,266.7	$93,866.7	$145,185.2	$150,000.0	$44,444.4	$320,000.0	$3,491,555.0
Year 6 detail				Cit 10k (80%)+40 k (60%)+30k(40%)	40k (50%), yield 9.5	40k (40%)	10*35000 sapling@40*70 %	6000*25*135		200*20*80	
6	$1,491,875.6	$2,666,666.7	$2,495,125.3	$293,333.3	$202,666.7	$750,933.3	$145,185.2	$150,000.0	$44,444.4	$320,000.0	$4,401,688.3
Year 7 detail				Cit (80K)-80%	40k (70%)+40k(30%)	40k (60%)+40k(30%)					
7	$1,758,542.2	$2,666,666.7	$2,655,125.3	$480,000.0	$405,333.3	$2,112,000.0	$145,185.2	$150,000.0	$44,444.4	$320,000.0	$6,312,088.3
Year 8 detail				Cit (80K)-80%	80k(80%)	80k (75%)					
8	$1,758,542.2	$2,666,666.7	$2,655,125.3	$480,000.0	$810,666.7	$3,520,000.0	$145,185.2	$150,000.0	$44,444.4	$320,000.0	$8,125,421.6
9	$1,758,542.2	$2,666,666.7	$2,655,125.3	$480,000.0	$810,666.7	$3,520,000.0	$145,185.2	$150,000.0	$44,444.4	$320,000.0	$8,125,421.6
	$9,721,368.9	**$16,533,333.3**	**$18,247,946.7**	**$2,040,000.0**	**$2,265,600.0**	**$9,996,800.0**	**$908,444.4**	**$875,000.0**	**$274,666.7**	**$2,176,000.0**	**$36,784,457.8**

Table 5 : Economic analysis for activities under output 1.1

Year	Cost (USD)	Benefit (USD)	Discount Factor (10%)	PV Costs	PV Benefits	Net cash flow	@ 16%	@ 17%	Cost (12%)	Benefit (12%)
0	$416,759.15	$0.00	1.00	$416,759.15	$0.00	-$416,759.15	-$416,759.15	-$416,759.15	$416,759.15	$0.00
1	$1,631,941.03	$280,000.00	0.91	$1,483,582.76	$254,545.45	-$1,351,941.03	-$1,165,466.41	-$1,155,505.16	$1,457,090.21	$250,000.00
2	$1,680,868.81	$1,045,833.33	0.83	$1,389,147.77	$864,325.07	-$635,035.47	-$471,934.80	-$463,902.02	$1,339,978.32	$833,731.93
3	$1,795,396.08	$1,960,166.67	0.75	$1,348,907.65	$1,472,702.23	$164,770.59	$105,561.54	$102,877.91	$1,277,927.46	$1,395,207.92
4	$1,718,914.59	$3,042,282.96	0.68	$1,174,041.80	$2,077,920.20	$1,323,368.37	$730,884.57	$706,215.59	$1,092,401.30	$1,933,425.82
5	$1,600,107.93	$3,491,554.96	0.62	$993,541.13	$2,167,980.93	$1,891,447.04	$900,542.55	$862,710.09	$907,944.21	$1,981,202.05
6	$1,600,107.93	$4,401,688.30	0.56	$903,219.21	$2,484,638.29	$2,801,580.37	$1,149,886.96	$1,092,164.15	$810,664.47	$2,230,032.28
7	$1,600,107.93	$6,312,088.30	0.51	$821,108.37	$3,239,099.35	$4,711,980.37	$1,667,237.80	$1,570,010.08	$723,807.57	$2,855,268.19
8	$1,600,107.93	$8,125,421.63	0.47	$746,462.16	$3,790,569.16	$6,525,313.70	$1,990,386.79	$1,858,294.33	$646,256.75	$3,281,721.52
9	$1,600,107.93	$8,125,421.63	0.42	$678,601.96	$3,445,971.96	$6,525,313.70	$1,715,850.68	$1,588,285.75	$577,014.96	$2,930,108.50
Total	$15,244,419.30	$36,784,457.78		$9,955,371.96	$19,797,752.64	$21,540,038.48	$6,206,190.54	$5,744,391.56	$9,249,844.41	$17,690,698.20
Benefit Cost Ratio(B/C) =		1.99	at 10%		1.91	at 12%				

Despite the strong cost-effectiveness and transformative potential of Output 1.1, several trade-offs must be acknowledged to ensure a realistic and balanced implementation strategy, which is outlined below:

1. **Balancing short-term returns with long-term gains:** A central trade-off in Output 1.1 lies in managing the time lag between investment and return. Interventions such as fruit orchards and agroforestry systems typically require five to seven years to reach full productivity. This extended maturation period presents a challenge for resource-constrained households that may face temporary declines in income, potentially reducing their willingness to participate or increasing dropout rates. To mitigate this, the project will promote intercropping systems, combining fast-growing legumes and vegetables with long-term tree crops. In parallel, households will be engaged in short-term employment opportunities through FFA interventions. This dual strategy is designed to deliver immediate food and income benefits, enhancing the economic feasibility and appeal of long-term resilience-building interventions.

2. Breadth vs. depth of support: The project targets over 5,000 households across diverse agroecological zones with varying climatic, geographic, and socio-economic characteristics. While wide geographic coverage promotes inclusivity, it may dilute the intensity and customization of support per household, particularly for marginalized or resource-poor groups who require more tailored technical assistance and inputs. To address this, the project will implement localized FFS, phase implementation, and differentiated support models. These approaches are designed to ensure context-specific, equitable delivery of services, enabling households at different starting points to meaningfully engage and benefit.

3. Capacity for innovation and institutional readiness: Introducing innovative tools, such as weather-indexed insurance and advanced sustainable land management (SLM) practices, offers substantial potential to enhance smallholder climate resilience. However, effective implementation requires a high level of institutional capacity, including technical knowledge, enforcement mechanisms, and reliable data infrastructure. Local governments and community-based organizations may initially lack the capacity to manage these systems effectively. To address this, the project will deploy a multidisciplinary TA team, embedded within local authorities. This team will support capacity-building, ensure quality control, and facilitate knowledge transfer, thereby increasing the institutional readiness and sustainability of innovative interventions.

4. Economic efficiency vs. social inclusion: Targeting traditionally excluded groups - including women, landless individuals, and marginalized communities - through mechanisms like VSLAs strengthens equity and empowerment. However, such inclusive strategies may yield lower short-term economic returns than interventions focused exclusively on commercially viable actors. This could impact the project's productivity and cost-effectiveness indicators. To address this, the project will explicitly value social and resilience co-benefits within the CBA framework. In addition, graduation pathways will be established to support subsistence-oriented participants in transitioning toward market-linked production, thereby aligning inclusion goals with long-term economic viability.

2.2 Summary of the cost-effectiveness analyses for output 1.2:

Output 1.2 of the programme: Smallholder farmers and value chain actors have increased capacity for market readiness and access, reducing post-harvest losses, value addition and manage the marketable surplus by applying climate-resilient practices.

- Output 1.2 seeks to enhance the capacity of smallholder farmers and value chain actors to reduce post-harvest losses, improve value addition, and strengthen market access by promoting climate-resilient technologies and practices. With an AF investment of US$ 1,230,565, this output will deploy solar dryers, solar-powered cold storage systems, post-harvest handling tools, and packaging materials. It will also establish community-based food banks and support the Home-Grown School Feeding (HGSF) programme. Targeted capacity building - especially for women-led cooperatives - will focus on post-harvest management, value addition, and the processing of non-timber forest products (NTFPs), while facilitating market linkages and aggregation models. These integrated interventions are expected to generate significant economic, social, and nutritional benefits, including reduced losses, increased household incomes, improved school attendance, and strengthened food security and climate resilience in vulnerable communities.
- In Nepal, traditional post-harvest practices are characterized by inefficiencies that lead to considerable losses in both quality and quantity, undermining farmer incomes and resilience. These methods typically involve drying produce in open air or on plastic sheets, and storing it in basic, non-insulated huts. Market access is informal, and many farmers depend on external vendors to access institutional markets such as school feeding programmes. These outdated techniques result in post-harvest losses of 30–40% for perishable crops, driven by suboptimal drying, inadequate storage, pest infestation, and weather exposure. By contrast, improved practices can cut losses by approximately 15% - saving an estimated 838 metric tonnes (MT) of produce annually and generating an additional US$ 335,200 in income, assuming an average price of US$ 0.40/kg[69].
- Despite this progress, several shortcomings persist. Lack of controlled drying environments leads to contamination and nutrient loss, while storage facilities without temperature regulation still result in up to 30% losses - equivalent to US$ 36,000 annually for 300 MT of produce[70]. Informal and fragmented markets expose farmers to unstable prices and exploitative intermediaries, diminishing both income and market security.
- The proposed project addresses these constraints through investment in solar drying and solar-powered cold storage technologies. These systems provide hygienic drying conditions and low-temperature storage, preserving the freshness and nutritional value of fruits, vegetables, dairy products, and NTFPs[71]. These interventions are projected to reduce post-harvest losses by over 40%, saving approximately 2,234 MT of produce each year - and substantially increasing marketable volumes and farmer revenues.
- Market access will be improved by linking farmer cooperatives - especially those led by women and marginalized groups - to institutional buyers through the HGSF programme. This structured, demand-driven model enhances price stability through bulk procurement and provides predictable income streams. Unlike the traditional system where farmers operate individually in dispersed markets with limited bargaining power, the HGSF initiative is supported by public investment in school meals, which aim to meet 30 per cent of students' nutritional needs. The model demonstrates a strong return on investment, delivering approximately US$ 5 in benefits for every US$ 1 spent, making it more inclusive and cost-effective than conventional market mechanisms[72].
- Currently, many farmers and agroforestry enterprises sell unprocessed NTFPs, missing out on value addition opportunities that could generate an estimated US$ 280,000 annually. Inadequate processing and market linkages contribute to income losses and seasonal price volatility. The project will therefore invest in processing, packaging, and aggregation infrastructure to increase competitiveness and product shelf life.
- A core component of the project is capacity building through cooperative-based farmer field schools, focusing on post-harvest technologies and value chain development. Unlike traditional systems with minimal training support, this approach promotes peer learning, institutional sustainability, and cost-efficiency. It is expected to increase the shelf life of perishables by over 200 % and support the development of approximately 200 agro enterprises, with special emphasis on women and youth empowerment. This inclusive model strengthens local institutions and supports equitable economic growth.
- An innovative feature of the project is the establishment of community food banks to store surplus produce during harvest peaks and mitigate seasonal food insecurity. Traditional reliance on individual storage exacerbates food shortages and financial vulnerability during lean periods. Community food banks will also help stabilize prices by preventing market gluts and promoting equity and resilience, thereby reducing reliance on emergency food assistance.

[69] World Bank. (2018). Agricultural productivity and post-harvest losses in Nepal
[70] IFAD. (2019). Smallholder value chains and market access in Nepal.
[71] Sharma, P., et al. (2018). Solar drying and cold storage technologies for post-harvest management in Nepal. Journal of Agricultural Engineering, 5(2), 123-130
[72] Ministry of Education, Science and Technology (MoEST). (2024). Home-Grown School Feeding Programme Framework.

- Economically, traditional practices yield net annual incomes of approximately US$ 299,200 after losses and limited drying benefits. In contrast, the project's integrated interventions are expected to generate US$ 959,000 per year - over three times greater - driven by reduced losses, enhanced value addition, secure market access, and extended marketing windows.
- Beyond financial gains, the project will deliver substantial co-benefits. Approximately 8,000 schoolchildren will benefit from improved nutrition through fresh, locally sourced meals, which have been associated with a 10–15% increase in school attendance. Support to women-led cooperatives also fosters social inclusion and gender equity - benefits largely absent in traditional models. The project's reliance on solar-powered, low-emission technologies enhances sustainability, especially in remote, off-grid rural areas. These systems have low operational costs and are maintainable by trained local cooperatives, ensuring long-term viability. In contrast, conventional fuel-based systems are expensive, environmentally harmful, and challenging to scale[73].
- By aligning with national strategies, such as the HGSF policy framework, the project maximizes cost-effectiveness through government co-financing, local land contributions, and community engagement. This reduces dependency on external contractors, which often increases costs and limits local economic multipliers. Under the AF-funded CAFS-Karnali programme, which included similar components, an independent evaluation reported a benefit-cost (B/C) ratio of 1.48. The proposed project, however, is expected to achieve a significantly higher B/C ratio of 2.33, reflecting greater economic efficiency and broader impact in post-harvest management and value chain development.

In conclusion, Output 1.2 presents a highly cost-effective and sustainable model for enhancing smallholder farmers' market engagement, reducing post-harvest losses, increasing household incomes, and improving nutritional outcomes in rural Nepal. By addressing interconnected constraints through a holistic approach, the project delivers synergistic benefits far exceeding the incremental improvements achievable under conventional practices.

[73] Nepal Ministry of Energy. (2017). Renewable Energy Technologies in Rural Nepal.

Table 6: Cost effectiveness of proposed measures under output 1.2:

Project Approach/Activities	Input Cost (US$)	Direct Beneficiaries	Benefits Generated / Losses Averted	Alternatives to the Project Approach and Cost (US$)
▪ Provide post-harvest tools, equipment, and packaging materials to farmer groups. ▪ Supply and install solar dryers for food and fruit processing. ▪ Set up solar-powered cold storage facilities to reduce post-harvest loss of perishable produce. ▪ Establish community food banks as a buffer stock to store surplus food to enhance resilience. ▪ Organize training sessions on post-harvest handling, storage, and value addition techniques for cooperatives and farmer groups. ▪ Conduct specialized training on post-harvest technologies and NTFP (non-timber forest product) value chains, including support for small agroforestry enterprises. ▪ Promote and implement the HGSF programme in community schools. Support farmer groups and cooperatives especially those led by women and marginalized communities, to supply fresh produce for the school feeding programme. ▪ Facilitate market linkages and aggregation mechanisms to enable smallholder farmers to access HGSF and other structured markets. ▪ Provide kitchen and basic utensil support to schools participating in the HGSF approach.	1,230,565	5800	1. 40 % reduction in post-harvest loss of perishables (2234 MT/year), total loss= 5585 MT/year. 2. $959,000 additional annual income through value addition and market access. ($621k from saving from post-harvest loss + $280 k from price gain from value addition + $58k from HGSF) 3. 700 MT/year of produce stored in cold storage/food banks, preventing seasonal price crashes. 4. 200*20 agro-enterprise jobs created, especially for women/youth. 5. Nutrition improved for 8,000 children receiving fresh local food in schools. (from 100 schools) 6. School attendance increases by 10–15% due to HGSF meal incentive. 7. 120 women-led cooperatives trained in improved handling and marketing. 8. 200% increase in shelf-life of fruits and vegetables. 9. Enhanced household food availability during lean periods (3+ months).	1. Open-air/plastic drying reduces post-harvest loss by only 15%: 838 MT saved/year (5,585 MT x 15%) = $335,200/year (838,000 kg x $0.40). 2. Traditional insulated boxes/huts lose 30% value on stored 300 MT of produce: $36,000/year loss (300,000 kg x $0.40 x 30%). 3. No structured market linkage: Farmers miss $58,000/year in extra income. 4. No value addition for 350 MT NTFPs = Lost gain of $280,000/year. 5. School meals from external contractors: No direct benefit to local farmers. 6. Net annual income = $335,200 - $36,000 = $299,200/year vs. $959,000/year from proposed.

Economic Analysis for output 1.2:

1. Introduction and objective:

Smallholder farmers in Nepal experience significant post-harvest losses and face constraints in accessing markets, undermining both their income and resilience to climate-related and economic shocks. Output 1.2 of the programme seeks to enhance climate-resilient post-harvest management systems, support value addition, and strengthen market linkages, with the overarching aim of improving household incomes and promoting sustainable agricultural livelihoods. This CBA evaluates the economic feasibility of the proposed interventions under Output 1.2 over a ten-year period. The objective is to quantify the expected costs and benefits, particularly in terms of reduced post-harvest losses, increased product value, and improved market access, and to provide decision-makers with robust evidence to inform resource allocation and strategic planning.

2. Methodology

This CBA assesses the economic viability of interventions designed to improve post-harvest handling, value addition, and market integration for climate-resilient agricultural products. The analysis aims to determine whether the projected benefits outweigh the associated costs over the life of the project.

- The CBA employs a quantitative methodology, converting all relevant costs and benefits into monetary terms and projecting them over a 10-year time period.
- Key financial indicators calculated include Net Present Value (NPV), Benefit-Cost Ratio (BCR), and Internal Rate of Return (IRR), providing a measure of the economic efficiency and attractiveness of the proposed interventions.
- A discount rate of 10% is applied to future costs and benefits to reflect the time value of money and opportunity costs.
- Sensitivity analysis is performed to test the robustness of results under variations in critical parameters, including discount rate, cost inputs, and benefit estimates.

Data Collection:

- **Primary data** were obtained through field surveys, focus group discussions, and structured interviews with smallholder farmers, cooperatives, traders, and other stakeholders engaged in post-harvest processes and value chains. This data includes:
  - ✓ Baseline information on current post-harvest losses and management practices.
  - ✓ Costs of adopting improved technologies and infrastructure.
  - ✓ Changes in output quantity, quality, and market price due to interventions.
  - ✓ Income differentials linked to improved value addition and access to markets.
- **Secondary data** were sourced from project documents, government statistics, market studies, and academic publications to complement primary data and provide broader context. This includes:
  - ✓ Historical price trends and market data.
  - ✓ Technical and cost specifications of post-harvest technologies.
  - ✓ Regional economic and demographic indicators.
  - ✓ Evidence from previous post-harvest and value chain studies.

Cost elements analyzed include capital investments (infrastructure and equipment), operational costs (labour, maintenance), and facilitation costs (training and market development). Benefits are derived from reduced post-harvest losses, increased product value through processing, and enhanced market access, resulting in higher revenues and economic resilience. The combination of mixed-methods data collection and rigorous financial modelling ensures a comprehensive and realistic evaluation of cost-effectiveness and scalability potential.

A 10% discount rate is commonly used in development project appraisals to reflect the opportunity cost of capital, the time value of money, and the risk profile associated with public investments in developing countries like Nepal[74]. Sensitivity tests using higher discount rates at 12%, 16%, and 17% are conducted to examine the robustness of the project's NPV, BCR, and IRR under more conservative or adverse financial assumptions, ensuring that the project remains economically viable even when future benefits are valued less due to higher uncertainty or inflation.

Cost calculation:

To improve climate resilience, reduce post-harvest losses, and strengthen food and nutrition security in vulnerable areas, Output 1.2 focuses on enhancing local post-harvest systems, promoting value addition, and supporting school-based nutrition initiatives. The total estimated cost of implementation is US$ 2,512,533, covering capital investments and operational support across the following components:

- **Post-Harvest Management (PHM) training and support:** PHM training will be provided to 5,000 smallholder households across four scaling scenarios. Training and materials are budgeted at US$ 45.72 per household, totalling US$ 228,618.5. This includes practical demonstrations and capacity-building on handling, drying, grading, and storage practices.
- **Installation of solar dryers:** To enhance the value of non-timber forest products (NTFPs) and fruits, 20 solar dryers will be installed at a unit cost of US$ 925.9, totalling US$ 18,518.5. These dryers enable the preservation of high moisture produce and facilitate off-season sales.
- **Operation of solar dryers and dry apple packaging:** Operational support includes labour (0.25 person/day for 120 days) and annual packaging costs of US$ 111,111. With apples priced at US$ 0.44/kg and labour at US$ 6.66/day, the total operational cost across the project period is US$ 69,300.0.

[74] Asian Development Bank (ADB). (2017). *Guidelines for the Economic Analysis of Projects*. Manila: ADB. https://www.adb.org/documents/guidelines-economic-analysis-projects

- **Cold storage facility operations:** Four cold storage units (5MT each) will support the preservation of apples and vegetables. Staffing and power costs (US$ 148.14/month), along with annual maintenance, bring the total operational cost to US$ 148,592.6. This helps mitigate seasonal price volatility and post-harvest spoilage.
- **Community food bank operations:** Ten food banks (20MT capacity each) will be established to address food insecurity. With monthly operational costs of US$ 111.11 and maintenance of US$ 74.04/year, and stored food valued at US$ 0.56/kg, the cumulative cost is US$ 1,064,074.1.
- **Establishment of food banks:** The capital cost of establishing 10 community food banks and 4 cold storage units is US$ 362,963.
- **Technical Assistance:** A total of US$ 250,096.0 is allocated for technical assistance, covering monitoring, on-site training, and development of standard operating procedures to ensure quality implementation across all components.

Summary of the Cost Components (Total: US$ 2,512,533)

Intervention	Unit Cost	Total Cost	Coverage
PHM Training (5,000 HHs)	US$ 45.72/HH	US$ 228,618	Improved drying/storage practices
Solar Dryers (20 units)	US$ 925.9/unit	US$ 18,518	NTFP and fruit processing
Cold Storage (4 units)	US$ 30,296.3/unit	US$ 252,296	Perishable crop preservation
Community Food Banks (10 units)	US$ 44703/unit	US$ 1.3 million	Food security buffer
HGSF Support (100 schools)	US$ 3,703.7/school	US$ 370,370	HGSF programme

4. Benefit Analysis

The total estimated gross benefits from Output 1.2 over 10 years amount to US$ 7,379,355.6, generated from the following five sources:

- **Income from dry fruits:** Drying apples using solar dryers yields higher-value products. With 200g of dried product from 1kg of fresh apples and a value of US$ 5.92 per kg of raw apple, this intervention scales from two dryers in Year 1 to eight by Year 3, generating US$ 100,977.8.
- **Income from dried NTFPs:** Dried NTFPs (e.g., medicinal herbs) yield US$ 6.70 per kg of raw input. With a similar scale-up plan for dryers, this generates US$ 56,800.0 over 10 years.
- **Income from cold storage:** Cold storage allows for off-season sale of apples and vegetables, capitalizing on price differences (US$ 0.37/kg in-season vs. US$ 1.11/kg off-season). With a 1.5x value addition factor for vegetables and increased capacity over time, the benefit totals US$ 225,000.0.
- **Income from community food banks:** Strategic food storage reduces seasonal shortages and price spikes. With benefits estimated at US$ 0.70/kg (minus 2% spoilage), scaling from two units in Year 1 to four by Year 2, this yields US$ 1,088,888.9.
- **Savings from reduced Post-Harvest Losses:** This is the largest benefit, estimated at US$ 0.37/kg. Scaling from 500 households in Year 1 to 1,800 by Year 3, cumulative savings reach US$ 5,907,688.9. These savings directly enhance household food security and income in vulnerable regions.

The summary of benefit analyses is presented below:

Benefit Stream	Calculation Basis	10-Year Value
Reduced Post-Harvest Losses	US$ 0.37/kg saved (scaling to 1,800 HHs)	**US$ 5,907,689**
Solar-Dried Fruits/NTFPs	Value addition: US$ 5.92/kg (apples), US$ 6.70/kg (NTFPs)	**US$ 100,977**
Cold Storage Facility	Off-season price premium (US$ 1.11/kg vs. US$ 0.37/kg)	**US$ 225,000**
Community Food Banks	Price stabilization (US$ 0.70/kg, 2% spoilage)	**US$ 1,088,889**

3. Sensitivity analysis

A sensitivity analysis was undertaken to assess the robustness and resilience of the project's economic viability under varying assumptions related to costs and benefits. This analysis tests the extent to which changes in key financial parameters may influence the overall outcome, thereby providing insight into the project's reliability under different risk scenarios.

In the base case scenario, which assumes the most likely estimates for both costs and benefits, the project yielded a BCR of 2.33 and a NPV of US$ 2,467,183. These results indicate that for every dollar invested, the project is expected to generate US$ 2.33 in economic benefits. A BCR above 1.0 signifies that benefits exceed costs, while a ratio well above 2.0 reflects strong economic returns and efficient resource allocation. The results are summarized in the table below:

Scenario Analysis

Scenario	Benefit-Cost Ratio (BCR)	Net Present Value (NPV)	Interpretation
Base Case	2.33	US$ 2,467,183	Indicates a highly viable intervention with strong economic returns.

10% Decrease in Benefits	2.10	US$ 2,034,670	Project remains economically sound, demonstrating resilience to moderate reductions.
20% Decrease in Benefits	1.86	US$ 1,602,156	BCR remains above 1.0, indicating continued viability despite significant losses.
10% Increase in Costs	2.12	US$ 2,281,388	Economic performance remains strong, with modest viability reduction.
20% Increase in Costs	1.94	US$ 2,095,593	Project retains solid economic justification despite notable cost increases.
20% Increase in Costs & 20% Decrease in Benefits (Worst-Case Scenario)	1.55	US$ 1,230,566	Returns are reduced, but the project remains economically viable and robust.

Even under the worst-case scenario, characterized by a 20% increase in costs and a 20% reduction in benefits, the BCR remains well above 1.0, and the NPV remains positive. This underscores the intervention's continued economic viability and its resilience to implementation uncertainties and external shocks.

4. CER Analysis:

The project demonstrates strong cost-effectiveness across all discount rates. At a 10% discount rate, the CER is 0.43, and even under a conservative 12% rate, it remains low at 0.45. An estimated CER of 0.38–0.40 at 3% further highlights the project's economic efficiency. These consistently low CER values confirm that the project delivers high value for money and remains financially viable under varying economic conditions.

Table 7: Cost for the activities under 1.2

Year	PHM support to farmers (T&M) and training	Solar dryer for the NTFP/fruits	Operation cost for solar dryer and packaging (apple)	Operation cost for cold storage	Operation cost for the community food bank	Establishment of Community Food Bank and cold storage	Kitchen and basic utensil support to schools	Technical Assistance	Total (US$)
Year 0 detail	500 HHs, $45.72	2 no @- $925.9	20 kg apple/4 day @120 days, 0.25 person/day + maintenance cost/packaging $111.11 k/year, apple- $0.44/kg, labour- $6.66/day	5 MT capacity/1 person + power @148.14-/month/ maintenance cost - $370.37 /per year, electricity charge- 2 season use (1 season apple and other vegetables)- $0.44/kg	20 MT capacity/1 person @$111.11-/month/ maintenance cost - $74.04 /per year, food -$0.56/kg	Construction cost for community food bank 2 no	10 schools-$3703.7		
0	$22,861.85	$1,851.85	$855.56		$25,037	$51,852	$37,037	$50,019	$189,514
Year 1 detail	2000 HHs	4 no	4 no	2 no	4 no	6 no	30 schools	8	
1	$91,447	$3,704	$2,567	$8,741	$75,111	$155,556	$111,111	$50,019	$498,255
Year 2 detail	1500 HHs	8 no	8 no	2 no	1 no	3 no	40 schools		
2	$68,586	$7,407	$5,989	$17,481	$87,630	$77,778	$148,148	$50,019	$463,038
Year 3 detail	1000 HH	6 no	6 no		3 no	3 no	20 schools		
3	$45,724	$5,556	$8,556	$17,481	$125,185	$77,778	$74,074	$50,019	$404,373
Year 4 detail									
4			$8,556	$17,481	$125,185			$50,019	$201,241
5	$0.0	$0.0	$8,556	$17,481	$125,185		$0		$151,222
6			$8,556	$17,481	$125,185				$151,222
7			$8,556	$17,481	$125,185				$151,222
8			$8,556	$17,481	$125,185				$151,222
9			$8,556	$17,481	$125,185				$151,222
	$228,618.5	**$18,518.5**	**$69,300.0**	**$148,592.6**	**$1,064,074.1**	**$362,963.0**	**$370,370.4**	**$250,096.0**	**$2,512,533.0**

Table 8: Benefit for the activities under output 1.2

Year	Gross income from dry fruits	Gross income from NTFP	Gross income of cold storage due to value addition	Gross income from the community food bank	Saving from post-harvest loss	Total (US$)
0						$0.0
Year 1 detail	1 kg apple= 200 gm dry product, income from 1 kg= $5.92 @2 nos solar dryer	1 kg NTFP= 200 gm dry product, income from 1 kg= $6.7 @ 2 no	1 kg apple price = $0.37 during season and $1.11 during off season 2 nos, 1.5 multiplied for the value addition in vegetables	20 MT storage / one kg = $0.7 benefit @ 2 nos - 2 % loss	2234MT/5000HHs- MT saving , 500 HHs @$0.37/kg	
1	$1,422.22	$800.00		$29,037.04	$82,740.74	$114,000.0
Year 2 detail	4 nos	4 nos		4 nos	1200 HHs	
2	$4,266.67	$2,400.00	$15,000.00	$87,111.11	$281,318.52	$390,096.3
Year 3 detail	8 nos	8 nos	2 nos	1 nos	1800 HHs	
3	$9,955.56	$5,600.00	$30,000.00	$101,629.63	$579,185.19	$726,370.4
Year 4 detail	6 nos	6 nos		3 nos	1500 HHs	
4	$14,222.22	$8,000.00	$30,000.00	$145,185.19	$827,407.41	$1,024,814.8
5	$14,222.2	$8,000.0	$30,000.0	$145,185.2	$827,407.4	$1,024,814.8
6	$14,222.2	$8,000.0	$30,000.0	$145,185.2	$827,407.4	$1,024,814.8
7	$14,222.2	$8,000.0	$30,000.0	$145,185.2	$827,407.4	$1,024,814.8
8	$14,222.2	$8,000.0	$30,000.0	$145,185.2	$827,407.4	$1,024,814.8
9	$14,222.2	$8,000.0	$30,000.0	$145,185.2	$827,407.4	$1,024,814.8
	$100,977.8	**$56,800.0**	**$225,000.0**	**$1,088,888.9**	**$5,907,688.9**	**$7,379,355.6**

Table 9: Economic analysis for activities under 1.2

Year	Cost (US$)	Benefit (US$)	Discount Factor (10%)	PV Costs	PV Benefits	Net cash flow	Cash flow @16%	Cash flow @ 17%	Cost @12%	Benefit @12%
0	189514	0	1	189514	0	-189514	-189514	-189514	189514	0
1	498255	114000	1	452960	103636	-384255	-331255	-328424	444871	101786
2	463038	390096	1	382676	322394	-72942	-54208	-53285	369131	310982

3	404373	726370	1	303811	545733	321998	206290	201046	287824	517016
4	201241	1024815	1	137451	699962	823573	454852	439500	127893	651288
5	151222	1024815	1	93897	636329	873593	415929	398455	85808	581507
6	151222	1024815	1	85361	578481	873593	358559	340560	76614	519203
7	151222	1024815	1	77601	525892	873593	309103	291077	68405	463574
8	151222	1024815	0	70546	478084	873593	266468	248784	61076	413906
9	151222	1024815	0	64133	434622	873593	229714	212636	54532	369558
Total	**2512533**	**7379356**		**1857950**	**4325133**	**4866823**	**1665939**	**1560835**	**1765668**	**3928821**

Benefit Cost Ratio(B/C) = 2.33 at 10% 2.23 at 12%

Tradeoff for output 1.2

- The adoption of technologies such as solar dryers and cold storage significantly reduces post-harvest losses (by over 40%), enhances product quality, and extends shelf life while offering environmentally sustainable, low-operating-cost solutions. However, these benefits come with challenges, including higher upfront investment, the need for technical training, and reliance on solar energy, which can be affected by weather variability. These issues will be addressed by the programme through supporting the investment cost, community-based training programme, and the integration of hybrid or backup energy systems to ensure reliability.
- Establishing market linkages and implementing the HGSF programme creates stable demand for local produce, offers better prices through bulk procurement, and empowers women-led cooperatives and marginalized groups. However, there are risks of dependency on government budgets, potential distortion of local markets, and coordination difficulties among stakeholders. These will be managed by diversifying markets beyond institutional buyers, designing balanced procurement policies, and strengthening coordination platforms involving all actors.
- Solar technologies used in processing and storage contribute to a low-carbon footprint and are scalable in remote, off-grid areas. However, concerns around the eventual disposal of components and potential underuse due to a lack of maintenance exist. These can be mitigated through environmentally responsible disposal plans and regular maintenance supported by local technical capacity.

3.3 Summary of cost-effectiveness analysis for Output 2.1:

Output 2.1 of the programme: Restoration-based actions implemented through rehabilitation of degraded areas (agriculture and forest), climate-resilient, productive, protective, and green recovery assets to enhance women and vulnerable communities' resilience to shocks and stressors.

Output 2.1 of the proposed project aims to combat land degradation in agricultural and forest landscapes by restoring and establishing climate-resilient, productive, and protective green assets. This integrated approach prioritizes the empowerment of women and vulnerable groups, who are disproportionately affected by climate-related stocks such as landslides, droughts, and erratic rainfall. These populations often have limited access to resources and adaptive technologies, heightening their exposure to climate stressors. To address these challenges, the project utilizes the *Food Assistance for Assets Plus* (FFA Plus) delivery model, a unique mechanism that combines ecosystem-based engineering solutions with direct livelihood support through cash-for-work initiatives. The total allocation for this output is US$ 3,332,205, of which approximately US$ 1.7 million is earmarked for wages, directly benefiting an estimated 5,600 households. This approach enables communities to restore their environments while simultaneously earning income.

The project encompasses a suite of mutually reinforcing interventions designed to maximize climate resilience and socio-economic gains. A central focus is slope stabilization across approximately 120 hectares of degraded land, using Nature-based Solutions (NbS) such as reforestation, contour planting, vegetative strips, and live fascines. These bioengineering measures offer a cost-effective alternative to conventional grey infrastructure (US$ 4,000–6,000/ha versus US$ 8,000–10,000/ha) and deliver multiple co-benefits - including biodiversity enhancement, improved soil moisture retention, carbon sequestration, and the creation of supportive microhabitats. While grey infrastructure may offer rapid deployment, it tends to entail higher maintenance costs and limited adaptability to climate variability, making NbS a more sustainable long-term option[75]. In tandem, the project promotes small-scale, renewable energy-powered irrigation systems across 600 hectares of farmland. These systems are designed to replace traditional diesel-powered irrigation, which incurs high operational costs (US$ 0.8–1 per hour) and contributes approximately 2 metric tons of CO_2 emissions per pump annually. The proposed renewable solutions offer zero-emission operations, reduced maintenance requirements, and improved suitability for remote and hilly terrains. As a result, cropping intensity is projected to increase by 95% - from 110% to 205%—enhancing food security and dietary diversity for rural households[76].Complementary efforts include improving access to safe drinking water and promoting kitchen gardening. The project will install community-managed piped water systems with integrated greywater reuse, increasing efficiency and reliability compared to expensive (US$ 0.14–0.30 per litre), tanker-based alternatives. This decentralized model supports local food production and reduces the burden of water collection on women, allowing them more time for education, care work, and economic activities[77].

The adoption of improved cookstoves (ICS) is another key component, aimed at reducing firewood consumption by 30–40%, which translates to an average reduction of 3 metric tons of CO_2 emissions per household annually. ICS alleviate pressure on forests, reduce indoor air pollution - thereby lowering rates of respiratory illnesses - and mitigate the time poverty experienced by women and girls who spend 3–4 hours daily collecting fuelwood. The time savings contribute to improved health, education, and livelihood outcomes[78].

Post-harvest resilience is strengthened through renewable energy-powered seed banks and food storage systems. In areas where grid electricity is unreliable and diesel generators are costly (approximately US$ 222.22 annually) and polluting, solar-powered alternatives offer a cleaner and more affordable solution. Operating at US$ 0–0.014 per kWh (compared to US$ 0.05–0.06 per kWh for conventional systems), these facilities help reduce food losses and ensure food availability during climate-induced disruptions[79].

The project's FFA Plus model offers significant advantages over contractor-led implementation approaches. While externally managed infrastructure development may expedite timelines, it often reduces local employment by 50–70% and undermines community ownership - key to sustaining long-term assets. In contrast, FFA Plus promotes participatory planning, capacity development, and accountability, ensuring the sustainability of interventions.
An important design consideration is the integration of upstream catchment restoration with downstream infrastructure development. Without upstream rehabilitation, infiltration rates may decline by up to 30%, reducing spring recharge and increasing the risk of irrigation system failure. Sedimentation further degrades ecosystems and lowers resilience.

[75] Climate Resilience Infrastructure (2022). Comparative Costs and Lifespan of Grey vs. Nature-based Infrastructure
[76] Renewable Energy for Irrigation (2022). *Benefits of Solar-powered Irrigation in Mountainous Regions*. REI Journal, 15(4), 35-47.
[77] Nepal Water Supply Corporation (2023). *Community-managed Water Systems and Nutritional Outcomes*. NWSC Technical Brief.
[78] Clean Cooking Alliance (2023). *Health and Environmental Impacts of Improved Cookstoves in Nepal*. CCA Report No. 45.
[79] Sustainable Energy Solutions (2023). *Cost Comparison of Renewable vs. Diesel-powered Seed Storage*.

The project's integrated catchment approach enhances the ecological functionality and sustainability of built infrastructure, improving both environmental and economic returns.

The rehabilitation of micro-hydropower (MHP) systems is budgeted at US$ 208,038.6 over the project duration. By Year 5, energy generation valued at US$ 0.064 per unit for 8 hours daily is expected to yield cumulative benefits of US$ 78,211, recovering nearly 38% of the initial investment. Given the 15–20-year lifespan of MHP systems and their low maintenance costs post-rehabilitation, the long-term return on investment is projected to be significantly higher.
Micro-hydro systems also enable downstream benefits, including rural agro-processing (e.g., milling and oil pressing), market lighting, and refrigeration - facilitating post-harvest value addition. These spillover effects enhance the productivity of other interventions such as cold storage and agricultural training, thereby increasing the economic return per dollar invested.

In remote or water-scarce regions, solar-powered mini-grids (SMGs) may be considered as alternatives to MHP. Though slightly more expensive (US$ 230,000 for 160 kW), SMGs offer modular, low-emission, and terrain-appropriate energy solutions. Nevertheless, in areas with existing MHP infrastructure and reliable water availability, rehabilitation remains more cost-effective (US$ 208,000 for 160 kW), leveraging past investments and requiring only targeted upgrades.

Comparison of the activities with the same kind of activities in terms of economic terms:

Type of infrastructure	Proposed project	Other projects
Irrigation system	EIRR- 25.76%	ADB- Irrigation Modernization Enhancement Project (RRP NEP 56218-001)- Hill -15.5%
WASH	Per HH cost- $529.10	FCDO-funded Local Infrastructure Support Programme (LISP) implemented by WFP Nepal- $550 in the same region

Table 10: Matrix for cost-effective analysis of output 2.1:

Project Approach/Activities	Input Cost (US$)	Direct Beneficiaries	Benefits Generated / Losses Averted	Alternatives to the Project Approach and Cost (US$)
▪ Slope stabilization with Nature-based Solutions (NbS) technology ▪ Construction of small irrigation systems ▪ Drinking water supply system with kitchen gardening ▪ non-conventional irrigation systems ▪ Rehabilitation of micro-hydro system ▪ Construction of water mills integrated with irrigation and micro-hydro ▪ Improved cookstoves (ICS) support ▪ Renewable energy (RE) support for seed banks and food storage systems	3.33 million (1.7 million for the wage to the vulnerable people)	5,600 HHs	▪ 2,500 HHs. Stabilizes 120 ha; reduces landslide/erosion risk by 60%; protects homes, roads, and farmlands. ▪ 3,000 HHs. Enhances food production, cropping intensity, and water availability year-round through irrigation facility in 600 HA. ▪ 700 HHs. Improves WASH access; reduces waterborne diseases; enhances household nutrition via gardening. ▪ 700 HHs. Clean, reliable energy for households and agro-processing; supports night-time education and livelihoods. ▪ 1,100 HHs. Reduces firewood use by 30–40% (~0.8 tons/year/HH); cuts indoor air pollution by 60–70%; saves 2–3 hours/day for women. ▪ RE-powered seed banks and food storage reduce post-harvest loss and enhance community preparedness ▪ Social protection through FFA strengthens resilience of the most vulnerable 5600 HHs.	▪ *Grey infrastructure for slope stabilization* *Replaces nature-based solutions (e.g., vetiver, brush layering) with concrete.* • High capital cost: ~$8,000–10,000/ha vs. $4,000–6,000/ha for NbS. • No biodiversity or water retention benefits; higher maintenance needs and lower lifespan and no soil moisture content. *Diesel-Powered Surface Irrigation* *Uses fuel-based pumps without considering solar or non-conventional systems.* ▪ Recurring fuel costs: USD 0.8–1/hour; CO_2 emissions: 2 tons/pump/yea and high O&M cost (USD 70 /year/pump) and vulnerability to fuel price shocks. • Not climate-resilient or suitable for remote/hilly terrain. ▪ *Centralized or tanker-based drinking water supply relies on tankers* • Tanker water costs: USD 0.1–0.15/litre. • Unreliable during dry months; no greywater reuse or support for kitchen gardening. ▪ *Continued firewood-based cooking (BAU)* No intervention to improve household energy use. • Firewood consumption: ~2 tons/HH/year. • 3–4 hours/day spent by women/girls collecting wood; deforestation increases climate vulnerability. ▪ *Grid/Fuel-based energy for storage & seed banks* Uses diesel generators or grid power for food storage. • Electricity cost: USD 0.05–0.06/kWh vs. USD 0–0.014 /kWh for solar. ▪ *Implementation alternatives:* *Contractor-led delivery Without community role* *Replaces community participation and cash-for-work with contractor-based implementation.* • Reduces direct wage benefits: 50–70% fewer employment days. • Lower ownership, weaker accountability, and frequent delays. • Higher corruption risks and minimal capacity building. ▪ *Focus only on grey infrastructure without upstream watershed management.* • Reduces water availability by ~30% due to poor infiltration and spring depletion. • Increases risk of irrigation failure and sedimentation. • Misses long-term benefits of erosion control, aquifer recharge, and biodiversity support.

Under Output 2.1, irrigation interventions will primarily target the lower belt of the LG areas, which are characterized by relatively flat terrain, paddy fields, and a hot climate with comparatively higher water availability. These agroecological conditions are well-suited for water-intensive cereal crops such as rice and wheat. To enhance cereal production and boost agricultural productivity, the project will implement conventional irrigation systems in these areas, ensuring efficient water delivery to support staple crop cultivation. Conversely, Output 1.1 will focus on the upper belt regions, which feature steeper slopes, cooler temperatures, and limited water availability. In these upland zones, the project will promote non-conventional irrigation technologies including drip, sprinkler, and lift systems, tailored to support the cultivation of vegetables, orchards, and drought-tolerant cereals. These efficient systems are designed to optimize water use, improve climate resilience, and sustain agricultural livelihoods in ecologically fragile and water-scarce environments. The cost-effectiveness analysis for Output 2.1 is based on a combination of primary and secondary data sources. Yield improvements and cropping intensity increases are derived from government statistics, previous project experience (e.g., CAFS-Karnali), and field surveys conducted with local smallholder farmers. Labour costs and participation rates reflect local wage rates and household availability for cash-for-work activities, while maintenance costs of 2% annually cover routine upkeep of infrastructure.

Economic analysis: The cropping calendar for the irrigation system under output 2.1 is as follows:

Table 11: Future Cropping Pattern (after the project intervention)

NCA: 600 ha

Crops	Coverage (%)	Coverage (Ha)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
M Paddy	70.0%	**420.00**																								
W Wheat	45.0%	**270.00**																								
W Potato	20.0%	**120.00**																								
M Pulses	10.0%	**60.00**																								
M Vegetables	15.0%	**90.00**																								
S Vegetables	15.0%	**90.00**																								
W Garlic/Onion	10.0%	**60.00**																								
W Vegetables	20.0%	**120.00**																								
Total Coverage:		**1230.00**																								
Cropping Intensity:		**205** %																								

Table 12: Existing Cropping Pattern

NCA: 600 ha

Crops	Coverage (%)	Coverage (Ha)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
M paddy	47.5%	**285**																								

W Wheat	40.0%	**240.00**																											
M Maize	13.3%	**80.00**																											
W Potato	6.7%	**40.00**																											
M Pulses	0.8%	**5.00**																											
W Pulses	2.0%	**12.00**																											
Total Coverage:		**662.00**																											
Cropping Intensity:		**110 %**																											

Based on the existing and projected cropping patterns in the project area, the cost of production for various crops has been calculated for both the "with project" and "without project" scenarios. These calculations include inputs such as seeds, labour, and organic pesticides in the "with project" scenario, reflecting the project's emphasis on organic and sustainable farming practices. In contrast, the "without project" scenario includes the cost of commercial fertilizers, which the project aims to phase out. Crop yield estimates have been sourced from credible government data and consistently applied to ensure reliability in benefit estimation. Using these inputs, the annual economic benefits under each scenario have been determined. The difference between the two provides the incremental economic benefit per hectare per year, offering a clear measure of the project's contribution to improved agricultural productivity and farm-level profitability.

Table 13: Derivation of Incremental Benefit

Crop Name	Without Project (Area in ha, Yield T/ha, Benefit/ha US$)	Total Benefit (US$)	With Project (Area in ha, Yield T/ha, Benefit/ha US$)	Total Benefit (US$)
Main Paddy	285 ha, 3.00 T/ha, 536.66 US$/ha	152,948.02	420 ha, 3.60 T/ha, 762.44 US$/ha	320,225.60
Winter Wheat	240 ha, 2.50 T/ha, 335.11 US$/ha	80,426.67	270 ha, 2.10 T/ha, 985.48 US$/ha	266,079.11
Main Maize	80 ha, 3.00 T/ha, 127.92 US$/ha	10,233.70	0 ha	0.00
Winter Potato	40 ha, 16.80 T/ha, 2,911.36 US$/ha	116,454.56	120 ha, 18.00 T/ha, 2,738.44 US$/ha	328,612.24
Main Pulses	5 ha, 1.00 T/ha, 127.92 US$/ha	639.61	60 ha, 1.00 T/ha, 161.83 US$/ha	9,709.75
Winter Pulses	12 ha, 1.00 T/ha, 127.92 US$/ha	1,535.06	0 ha	0.00
Main Vegetables	Not cultivated	0.00	90 ha, 16.00 T/ha, 2,944.86 US$/ha	265,036.52
Spring Vegetables	Not cultivated	0.00	90 ha, 16.00 T/ha, 2,944.86 US$/ha	265,036.52
Garlic/Onion	Not cultivated	0.00	60 ha, 18.00 T/ha, 2,738.44 US$/ha	164,306.12
Winter Vegetables	Not cultivated	0.00	120 ha, 16.00 T/ha, 2,944.86 US$/ha	353,382.02
Total Area	**662 ha**	**362,237.62**	**1,230 ha**	**1,972,387.87**

Incremental Benefit Calculation

The total annual economic benefit without the project is estimated at US$ 362,237.62, while the total annual benefit with project implementation is US$ 1,972,387.87. Thus, the incremental benefit per year resulting from the project intervention is: US$ 1,972,387.87 - US$ 362,237.62 = US$ 1,610,150.25 for 1230 HA.

Cost calculation:

- The economic analysis for Output 2.1 includes a detailed estimation of the costs required to implement climate-resilient and community-based infrastructure interventions. The cost of slope stabilization has been calculated at US$ 5,216 per hectare, incorporating a mix of bioengineering measures and structural elements such as gabions and check dams. These interventions aim to mitigate landslide and erosion risks in environmentally vulnerable areas.

- Small-scale and non-conventional irrigation systems are projected to cost US$ 1,975.30 per hectare, including gravity-fed, drip, and sprinkler technologies designed to enhance water-use efficiency and increase agricultural productivity. To ensure access to safe water for drinking and domestic use, the construction of household-level water supply systems, including intake structures, pipelines, storage, and distribution is budgeted at US$ 529.10 per household.
- The rehabilitation of existing off-grid micro-hydropower systems is estimated at US$ 1,300.24 per kilowatt, enabling reliable renewable energy access for remote communities. To maintain the sustainability of these investments, an annual maintenance provision equivalent to 2% of the capital cost has been allocated for each infrastructure asset. Additional energy support will be provided through the installation of 20 solar-powered units for community-based food and seed banks, at a cost of US$ 355.55 per unit, ensuring lighting, cooling, and secure storage for agricultural inputs. The project also supports the adoption of clean energy through the distribution of improved cooking stoves, budgeted at US$ 88.88 per household, to reduce indoor air pollution and dependence on biomass fuels
- To ensure quality and sustainability, TA has been integrated into the cost structure. TA includes engineering design, supervision, capacity-building training, and community mobilization activities. The TA cost is estimated at US$ 167,559.20 per year, totalling US$ 837,796.00 over five years. This investment is critical for institutional strengthening and ensuring the technical integrity and long-term viability of Output 2.1 interventions.

Table 14: The cost calculation for output 1.1 is as follows:

Year	Estimated cost for implementing slope stabilization measures	Construction of small irrigation incl. non conventional irrigation system	Construction of water supply system	Rehabilitation of Micro-hydropower	Maintenance of the created assets	Solar power inputs for food bank and seed banks	Improved cooking stove support	Technical Assistance	Total US$)
Year 0 detail	6.39 HA @ $ 5216/HA	37.5 HA @ $1975.3							
0	$33,333	$74,074						$167,559	$274,967
Year 1 detail	56.80 HA	225 HA	140 HHs $ 529.10/HH	102.5 KW @ $ 1300.24	2 % of created asset	3 no , $ 355.55/no	$ 88.88 /HH, 200 HH		
1	$296,296	$444,444	$74,074	$133,333	$2,148	$1,067	$17,778	$167,559	$1,136,700
Year 2 detail	56.80 HA	225 HA	280 HHs			9 no	500 HHS		
2	$296,296	$444,444	$148,148		$21,111	$3,200	$44,444	$167,559	$1,125,204
Year 3 detail		112.5 HA	280 HHs	57.5 KW		8 no	400 HHs		
3		$222,222	$148,148	$74,705	$38,889	$2,844	$35,556	$167,559	$689,924
Year 4 detail									
4					$47,790			$167,559	$215,350
5					$47,790				$47,790
6					$47,790				$47,790
7					$47,790				$47,790
8					$47,790				$47,790
9					$47,790				$47,790
	$625,926	**$1,185,185**	**$370,370**	**$208,039**	**$348,891**	**$7,111**	**$97,778**	**$837,796**	**$3,681,096**

Benefit calculation for output 2.1

- In **Year 1**, the irrigation system will begin generating returns of US$ 40,254 (40% productivity), while slope stabilization will add US$ 3,430 in partial benefit. The total benefit in Year 1 will therefore be US$ 43,683.
- In **Year 2**, time and health cost savings from improved water supply schemes for 140 households will result in US$ 12,709. Irrigation benefits will expand significantly to US$ 342,156, while the rehabilitated micro-hydropower will generate US$ 19,155. Slope stabilization will provide US$ 39,060, and ICS support will add US$ 3,000 in firewood savings. Year 2 benefits will total US$ 416,080.
- In **Year 3**, water supply benefits will rise to US$ 38,126, irrigation will increase to US$ 945,962, micro-hydropower will generate US$ 19,155, slope stabilization will contribute US$ 115,273, and ICS benefits will reach US$ 10,500. Total benefits for Year 3 will be US$ 1,129,016.
- In **Year 4**, water supply will provide US$ 76,252, irrigation US$ 1,429,006, micro-hydropower US$ 29,901, slope stabilization US$ 161,001, and ICS firewood savings US$ 16,500. The total benefit will reach US$ 1,712,660.
- From **Year 5 onward**, all developed assets will operate at full capacity. Annual benefits will stabilize at US$ 1,893,802, composed of water supply (US$ 76,252), irrigation (US$ 1,610,148), micro-hydropower (US$ 29,901), slope stabilization (US$ 161,001), and ICS savings (US$ 16,500).
- For each of Years 5 through 9, the annual benefit will remain consistent at US$ 1,893,802, reflecting stable, recurring benefits from fully functional and well-maintained infrastructure and systems.

Table 15: The following table shows the benefit calculation for output 2.1:

Year	Water supply schemes	Irrigation system	Rehabilitation of Micro hydropower	Slope stabilization	Saving in firewood due to ICS support	Total (USD)
0						$0.0
Year 1 detail	Time saving - per HH- 0.25 Hr/day, $6.66 for 8 Hr +$14.81 saving from health expense- 140 HH	37.5 HA @ $2683.58/HA yearly benfit - 40 % for first year	102.5 KW/hr- 8 hour operation/day , $0.064/unit	6.39 HA, 50 % of slope stabilization will be cultivated land- benefit 40 % for forst year	Saving firewood - 1500 kg/HH- $0.01/kg-200 HHs	
1		$40,254		$3,430		$43,683
Year 2 detail		Year2-225 HA *40% + year 1- 100%		56.80 HA/year 2 *40% , year 1=100%		
2	$12,709	$342,156	$19,155	$39,060	$3,000	$416,080
Year 3 detail	280 HHs	Year3-225 HA *40% + year 1 and 2- 100%		56.80 HA/year 3 *40% , year 1 and 2=100%	500 HHs	
3	$38,125.76	$945,961.95	$19,155.20	$115,273.18	$10,500.00	$1,129,016
Year 4 detail	280 HHs	112.5 HA*40 %- Year 1,2,3-100%	57.5 KW	Year 1,2,3-100%	400 HHs	
4	$76,252	$1,429,006	$29,901	$161,001	$16,500	$1,712,660
Year 5 detail		100 % for 112.5				
5	$76,252	$1,610,148	$29,901	$161,001	$16,500	$1,893,802
6	$76,252	$1,610,148	$29,901	$161,001	$16,500	$1,893,802
7	$76,252	$1,610,148	$29,901	$161,001	$16,500	$1,893,802
8	$76,252	$1,610,148	$29,901	$161,001	$16,500	$1,893,802
9	$76,252	$1,610,148	$29,901	$161,001	$16,500	$1,893,802
	$508,344	**$10,808,118**	**$217,715**	**$1,123,771**	**$112,500**	**$12,770,448**

To assess the economic viability of the project, a discounted cash flow (DCF) analysis has been undertaken using discount rates of 10%, 12%, 16%, and 17%, representing a range of opportunity costs of capital. This methodology enables a comprehensive evaluation of the project's sensitivity to variations in financial assumptions.

At a 10% discount rate, the PV of project costs is estimated at US$ 3,027,424, while the present value of anticipated benefits has been calculated at US$ 7,304,949. This yields an NPV of US$ 4,277,525 and a BCR of 2.41, clearly indicating that the economic benefits substantially exceed the associated costs. Even under higher discount rates, the project remains strongly viable: at 12%, the NPV is US$ 3,742,928 with a BCR of 2.31; at 16%, the NPV is US$ 2,702,301; and at 17%, it is US$ 2,497,755.

This outcome demonstrates the project's robustness in the face of less favourable financial conditions and affirms its capacity to generate strong economic value under a range of capital cost scenarios.

Benefit-Cost Ratio (BCR)

The benefit-cost ratio (BCR), a key measure of economic efficiency, was also computed. At a 10% discount rate, the BCR is 2.41, and at 12%, it is 2.31. These results imply that for every US$ 1 invested, the project yields return of US$ 2.41 and US$ 2.31, respectively. As both values significantly exceed the viability threshold (BCR > 1), the project is clearly demonstrated to be economically sound.

Economic Internal Rate of Return (EIRR)

While the exact economic internal rate of return (EIRR) was not computed, the analysis revealed consistently positive annual net cash flows over the 10-year project timeframe. In conjunction with the strong NPV and BCR outcomes, maintained even at discount rates as high as 17% , these findings strongly suggest that the EIRR likely exceeds 25%. This further substantiates the project's solid economic justification and underscores its potential to deliver high returns.

Economic Feasibility Summary:

Metric	10% Discount Rate	12% Discount Rate	16% Discount Rate	17% Discount Rate
Metric	10% Discount Rate	12% Discount Rate	16% Discount Rate	17% Discount Rate
Present Value (PV) of Costs (US$)	3,027,424	2,858,320	2,702,301	2,497,755
Present Value (PV) of Benefits (US$)	7,304,949	6,601,248	5,789,653	5,297,136
Net Present Value (NPV) (US$)	4,277,525	3,742,928	3,087,352	2,799,381
Benefit-Cost Ratio (BCR)	2.41	2.31	2.14	2.12

Table 16: The following table shows the NPV calculation for output 2.1.

Year	Cost (USD)	Benefit (USD)	Discount Factor (10%)	PV Costs	PV Benefits	Net cash flow	16%	17%	Cost (12%	Benefit (12%
0	274,966.61	0.00	1.00	274967	0	-274967	-274967	-274967	274967	0
1	1,136,699.94	43,683.32	0.91	1033364	39712	-1093017	-942256	-934202	1014911	39003
2	1,125,203.64	416,079.74	0.83	929920	343868	-709124	-526995	-518025	897005	331696
3	689,923.76	1,129,016.09	0.75	518350	848246	439092	281308	274156	491074	803611
4	215,349.60	1,712,660.06	0.68	147087	1169770	1497310	826951	799040	136859	1088426
5	47,790.40	1,893,801.71	0.62	29674	1175902	1846011	878910	841986	13535	1074594
6	47,790.40	1,893,801.71	0.56	26976	1069002	1846011	757681	719646	10516	959459
7	47,790.40	1,893,801.71	0.51	24524	971820	1846011	653173	615082	8171	856660
8	47,790.40	1,893,801.71	0.47	22295	883472	1846011	563080	525711	6349	764875
9	47,790.40	1,893,801.71	0.42	20268	803157	1846011	485414	449326	4933	682924
Total	**3,681,095.56**	**12,770,447.74**		**3027424**	**7304949**	**9089352**	**2702301**	**2497755**	**2858320**	**6601248**

Benefit Cost Ratio(B/C) =	2.41	at 10%		2.31	at 12%

Sensitivity analysis of output 2.1

Under the baseline assumption, the PV of costs is estimated at US$ 3,027,424, while the PV of benefits amounts to US$ 7,304,949. This results in a NPV of US$ 4,277,525 and a BCR of 2.41. These values clearly demonstrate that the project is economically viable and provides strong value for money.

The results from sensitivity tests show that even under adverse conditions, the project maintains solid economic justification:

- With a 10% increase in costs, the NPV remains positive at US$ 3,367,525, and the BCR is 2.15.
- With a 10% decrease in benefits, the NPV is US$ 3,033,474, and the BCR stands at 2.18.
- With a 20% increase in costs, the project still yields an NPV of US$ 2,822,525, and a BCR of 1.96.
- With a 20% decrease in benefits, the NPV remains positive at US$ 2,224,474, with a BCR of 1.85.
- In the combined worst-case scenario, where costs increase by 20% and benefits decrease by 20%, the project still produces a positive NPV of US$ 1,524,474 and a BCR of 1.61.

These findings underscore the project's resilience and sustain economic justification, even under the most conservative financial assumptions.

Cost Effectiveness Ratio Analysis:

The cost-effectiveness analysis of the output 2.1 demonstrates strong economic justification across all discount rates. At a 3% discount rate, the CER is 0.42, indicating that the project yields more than three times the value of its costs. Even under more conservative assumptions, with higher discount rates of 10% and 12%, the CER remains low at 0.48 and 0.50 respectively. These consistently low CER values, well below 1, confirm that the intervention delivers substantial benefits relative to its investment. This affirms the project's strong value for money, financial viability, and resilience under varying economic scenarios.

3.4 Summary of the cost-effectiveness analyses for Output 3.1:

Output 3.1: Capacities of key government institutions, local stakeholders and last-mile communities increased to co-produce, deliver/disseminate, and utilize tailored climate information services.

- Output 3.1 aims to strengthen the capacity of key government institutions and communities in Nepal's Karnali and Sudurpashchim provinces to co-produce, disseminate, and utilize tailored climate information services (CIS). The proposed interventions, including the establishment of Provincial Climate Change Management Information Systems (PCCMIS), Municipal Agro-Meteorological Information Centres (MAICs), the development of a One-Stop Climate Portal, and targeted end-user training—are strategically designed to close the last-mile delivery gap and reinforce institutional capacity for climate resilience.
- The total investment of US$ 673,245 is expected to directly benefit approximately 27,165 households (137,376 people), including smallholder farmers, local officials, and provincial stakeholders. Drawing on lessons from similar initiatives such as the CAFS-Karnali project, the intervention is projected to generate annual benefits of at least US$ 1.5 million through reduced crop losses, improved agricultural productivity, and decreased input inefficiencies. This corresponds to an estimated benefit-cost ratio (BCR) exceeding 2.5, indicating a strong return on investment and substantial contributions to resilient agriculture and proactive disaster risk reduction.
- While this localized, institutionalized model entails higher initial costs, its comparative effectiveness is evident when evaluated against more conventional or lower-cost alternatives:
    - **National-level dissemination**: Federal-level climate information dissemination via national radio, television, or centralized websites incurs lower operational costs (approximately US$ 250,000) but typically delivers generic forecasts that lack local specificity. These messages are often untimely and not easily actionable for marginalized rural farmers. Furthermore, uptake is limited due to language barriers and insufficient contextual relevance.
    - **Automated Weather Station (AWS)-only model**: A model relying solely on AWS infrastructure, transmitting raw data via mobile platforms, may cost around US$ 480,000. While offering extensive meteorological coverage, this approach lacks the advisory and interpretive support needed for smallholder farmers to translate data into meaningful decisions. The projected BCR is close to 1.0, suggesting limited cost-effectiveness due to constraints in usability, inclusivity, and sustainability.
    - **Private sector agri-tech solutions**: Outsourcing agro-climatic advisories to private technology providers or app-based platforms may appear innovative and relatively cost-efficient (estimated at US$ 360,000). However, such models are frequently not adapted to Nepal's diverse agro-ecological zones. They risk excluding vulnerable groups with limited smartphone access and, without integration into government systems, they offer limited potential for scale-up or sustained institutional ownership.
    - **NGO-led or awareness-based initiatives**: Bulletin-style seasonal advisories and school-based awareness campaigns, typically led by NGOs (costing approximately US$ 300,000), are valuable in raising awareness but often lack real-time applicability and are not formally embedded within governmental structures. These interventions are generally short-term and fragmented, resulting in lower and less sustainable impacts.
- In contrast, the proposed intervention under Output 3.1 is intentionally designed for systemic and transformative impact. By embedding climate service delivery within public institutions and facilitating co-production with local stakeholders, the model ensures long-term sustainability and adaptive capacity. Digital tools and user-oriented training ensure that climate advisories—ranging from weather forecasts to early warnings—are timely, relevant, and actionable. This approach directly enhances farmers' decision-making, supports disaster preparedness, and improves livelihood security.
- Although lower-cost models may offer partial or short-term solutions, they fall short in delivering the depth, accuracy, and institutional resilience needed to transform climate services in Nepal's most vulnerable regions. The integrated, localized, and government-led model proposed under Output 3.1 is not only cost-effective but also catalytic, unlocking co-benefits such as improved climate governance, behavioural change, and strengthened adaptive capacity.
- Due to limitations in the availability of reliable data specific to Output 3.1, a comprehensive economic analysis could not be conducted. As a result, a cost-effectiveness analysis has been employed as the primary evaluation framework. The data presented in the subsequent table provides the foundation for this assessment, offering a comparative view of relative costs and expected benefits in the absence of complete economic indicators.

Table 17: The cost-effectiveness analysis matrix for output 3.1 is as follows:

Project Approach/Activities	Input Cost (US$)	Direct Beneficiaries	Benefits Generated / Losses Averted	Alternatives to the Project Approach and Cost (US$)	Project Approach/Activities
1. Support the provincial government in updating/setting up the provincial climate change management information system (PCCMIS) in Karnali and Sudurpashchim Provinces. 2. Support Local Governments in setting up municipal agro-meteorological information centres (MAIC) to enable last-mile climate services to farmers (scaling up of the innovative initiatives piloted through the CAFS-Karnali project). 3. Strengthen the capacity of the local government and its technical staff to produce tailored climate services to the end users. 4. Provide training to farmers to access, understand and utilize vital climate information (agro-meteorological advisories, early warning, forecasting etc). 5. Development of a One-Stop Climate Portal at the provincial level.	673,245	27,165 HHs(137,376 People) (farmers, LG staff, provincial stakeholders)	Improved agricultural productivity and disaster preparedness; reduced crop loss and input costs; improved early warning responses. Estimated benefit of $1.5M annually in avoided crop losses and improved yields.	Alt 1: Rely on national-level climate info dissemination via radio and TV. Alt 2: Use mobile SMS alerts only from federal authorities without local interpretation. Alt 3: Depend on NGOs/CSOs for temporary seasonal advisory distribution.	Alt 1: Info is too generic; limited reach in remote areas; low trust/use by farmers. Alt 2: Lack of context-specific recommendations; language and timing issues; poor feedback loops. Alt 3: Unsustainable; fragmented approach; lacks institutional ownership and continuity.

Trade-off for output 3.1:
High initial cost vs. institutional sustainability: The model needs higher upfront investment than generic national-level systems. However, embedding CIS in provincial/municipal systems (MAICs, PCCMIS) promotes ownership and long-term use. Digital tools and co-financing from subnational government help reduce ongoing costs.
Local relevance vs. national scale-up: Tailored services offer better local impact but take longer to scale. As a scalable prototype, the model allows replication through digital platforms, knowledge sharing, and alignment with national CIS systems

3.5 Summary of the cost-effectiveness analyses for Output 3.2:

Output 3.2: Capacities of local governments and communities strengthened to plan and implement adaptation solutions and effective climate-induced disaster risk reduction and management through climate-risk-informed and inclusive local adaptation planning instruments (e.g., LAPA) and climate-hazard/disaster preparedness planning and response.

1.2.4. Output 3.2 of the proposed adaptation initiative focuses on enhancing the capacities of LGs and communities to formulate and implement inclusive Local Adaptation Plans of Action (LAPAs) and costed disaster preparedness and contingency plans. These instruments are designed to be both context-specific and aligned with national policies, while fully embedded within local governments' annual planning and budgeting frameworks. A central feature of this approach is the integration of Gender Equality, Disability, and Social Inclusion (GEDSI), ensuring that adaptation planning is inclusive and responsive to the needs, rights, and voices of the most vulnerable groups.

1.2.5. The total estimated cost of this intervention is US$ 759,800, targeting approximately 27,165 direct beneficiary households across 11 municipalities. These beneficiaries include populations traditionally underrepresented in local planning processes, such as women, persons with disabilities, pregnant and breastfeeding women, older adults, and marginalized ethnic groups. Institutional beneficiaries include municipal planners, disaster risk reduction (DRR) focal points, ward-level representatives, and community user groups, all of whom are essential to effective local governance and service delivery.

1.2.6. The benefits of this investment are both measurable and transformative. By fostering climate risk-informed local planning, the initiative is expected to avert an estimated US$ 3–5 million in disaster-related losses over five years. These savings derive from reduced damage to public and private infrastructure, improved early warning and response systems that reduce casualties during events such as floods and landslides, and more efficient, equitable recovery processes. Beyond financial returns, the intervention enhances institutional capacity, builds knowledge for long-term resilience, and strengthens public trust in local governance systems.

1.2.7. The cost-effectiveness of Output 3.2 is particularly evident when compared to prevailing alternatives. One common approach involves centralized, top-down planning, where national agencies or external consultants develop standardized adaptation or disaster management plans. Although technically sound, these plans often lack contextual relevance, community ownership, and integration with local budgeting processes. As a result, they are infrequently implemented, fail to address localized vulnerabilities, and tend to exclude marginalized groups, leading to recurring losses and inefficiencies.

1.2.8. Moreover, centralized approaches are typically reactive, deploying resources post-disaster rather than pre-emptively. Such reactive responses are frequently delayed, fragmented, and insufficient to meet the multifaceted needs of communities already affected by loss and trauma. By contrast, Output 3.2 promotes a proactive, participatory, and preventative planning model. The LAPA-based approach ensures communities and local institutions are prepared in advance, thus significantly enhancing their capacity to manage and mitigate future climate risks. This transition from reactive to anticipatory planning is critical to achieving effective and sustainable adaptation outcomes.

1.2.9. Admittedly, this localized and inclusive model requires greater upfront investment and longer timelines, given the need for capacity-building, inclusive stakeholder engagement, and iterative planning processes. Additionally, challenges may arise from variations in local government capacity and political dynamics. However, these trade-offs are mitigated through targeted technical support, continuous facilitation, and alignment with national systems that encourage accountability and institutional ownership. The projected return on investment (ROI) ranges from 1:4 to 1:6, indicating that each dollar invested may yield savings of four to six dollars in future disaster-related costs.

1.2.10. Importantly, this approach also contributes to systems-level strengthening. The intervention directly supports the operationalization of Nepal's LAPA framework and aligns with key national policies, including the National Adaptation Plan (NAP) and the Disaster Risk Reduction and Management Act. By embedding planning tools within LG institutions, the initiative enhances the likelihood that adaptation and preparedness will continue to be prioritized beyond the life of the project. It also fosters innovation and learning that can be scaled up or replicated in other regions. Crucially, the intervention ensures that no one is left behind. Inclusive planning processes that actively engage women, persons with disabilities, the elderly, and Indigenous groups not only ensure equitable distribution of resources and risk reduction measures but also strengthen the overall adaptive capacity of communities. This is because when planning reflects the full spectrum of community knowledge and needs, the resulting actions are more legitimate, relevant, and sustainable. Due to limited and unreliable data, a comprehensive economic analysis for Output 3.2 was not feasible. Instead, a cost-effectiveness analysis was conducted using available data to estimate the relative costs and benefits of the interventions.

Trade-off for output 3.2

- ✓ **Higher upfront costs vs. long-term benefits:** Output 3.2 requires more initial investment in capacity-building and inclusive planning compared to traditional top-down approaches. However, embedding these plans within local government budgets ensures sustainability and reduces future emergency costs. The strong return on investment (1:4 to 1:6) justifies these upfront expenses.
- ✓ **Time-intensive inclusive planning vs. timely action:** Inclusive, participatory planning takes longer due to extensive stakeholder engagement, but it ensures plans are relevant and equitable. To balance this, the project uses a phased approach with rapid early actions supported by ongoing technical assistance aligned with local level planning cycles.
- ✓ **Varying local capacity vs. consistent quality:** Local governments have different capacities, risking uneven plan quality and implementation. The project addresses this through targeted capacity building and peer learning, promoting ownership and institutionalizing the planning process for lasting impact.

Table 18: The cost-effectiveness analysis matrix for output 3.2 is as follows:

Project Approach/Activities	Input Cost (US$)	Direct Beneficiaries	Benefits Generated / Losses Averted	Alternatives to the Project Approach	Cost-Effectiveness Rationale
1. Support the local government to formulate, mainstream and implement the GEDSI-integrated and climate-risk-informed Local Adaptation Plan of Action (LAPA) and promote locally led adaptation. 2. Support the local governments for risk-informed, evidence-based and needs-based (specific needs of women, children, persons with disabilities, pregnant and breastfeeding mothers, older people etc) costed disaster preparedness, contingency planning, early actions, and effective response linked with the government's annual planning and budgeting system. 3. Sensitize the local stakeholders and communities on predicted climate change scenarios/impacts and formulate and implement locally led adaptation strategies/actions.	759,800	Approx. 27,165 households across 11 vulnerable municipalities - Women - Children - Persons with disabilities - Pregnant and breastfeeding mothers - Elder citizens - Indigenous and marginalized groups Also includes indirect institutional beneficiaries: LG planners, DRR focal points, ward representatives, user committees.	- Estimated avoided disaster-related losses of USD 3–5 million over 5 years through better planning and preparedness. - Improved early warning and early action capacities leading to faster evacuation and reduced casualties during floods/landslides. - Better targeting of vulnerable groups in response and recovery phases. - Strengthened community resilience and adaptive capacity. - Enhanced budgetary efficiency through forward planning. - Reduced reliance on emergency response funding.'	Top-down, centrally driven emergency response planning without integration of local knowledge, inclusive processes, or proactive LAPAs. Existing NAPA or DRR plans often generic, not linked to LG budgets, and not gender- or socially inclusive.	Proactive investment in planning is more cost-effective than repeated humanitarian responses. - Localized, inclusive planning ensures actions are relevant, prioritized, and sustainable. - GEDSI-integrated LAPAs ensure no one is left behind. - Building institutional capacity at LG level creates multiplier effects for future climate actions. - Return on investment (ROI) estimated at 1:4 to 1:6 (i.e., $1 investment averts $4–6 in losses). - Leverages and aligns with government systems and policies, ensuring long-term sustainability and upscaling potential. - Promotes locally led adaptation aligned with national frameworks (e.g., NAP, LAPA guidelines).

Conclusion:

Based on the cost-effectiveness analyses, the proposed project demonstrates strong cost-effectiveness across its three principal outputs, each delivering substantial economic, social, and environmental benefits.

Output 1.1, which focuses on climate-resilient agriculture, yields a BCR of 1.99, indicating that each dollar invested generates approximately two dollars in benefits. This result is driven by interventions such as agroforestry, sustainable land management, and weather-indexed insurance, which collectively enhance agricultural productivity while reducing exposure to climate-related risks.

Output 1.2, targeting improvements in post-harvest management and market access, records a BCR of 2.33. The efficiency gains stem from reduced post-harvest losses, enhanced value addition, and improved access to stable markets, thereby contributing to increased income security for farming communities.

Output 2.1, which emphasizes restoration-based adaptation, achieves the highest BCR of 2.41. This underscores the cost-effectiveness of nature-based solutions and resilient infrastructure, which deliver long-term environmental and livelihood benefits.

The US$ 1.43 million investment will benefit 78,000 people, with **Output 3.1** achieving a BCR >2.5 and **Output 3.2** delivering an ROI of 1:4 to 1:6. This localized, inclusive approach ensures high returns, long-term resilience, and strong alignment with national systems.

The proposed interventions of the project align closely with the CSV framework of Government of Nepal by addressing critical resilience gaps through the seven smartness criteria. It enhances climate resilience by promoting adaptive farming practices and integrating climate forecasts, enabling communities to better manage weather variability and reduce losses. Investments in efficient water use, soil conservation, and nutrient management improve resource use efficiency, while support for biodiversity conservation strengthens ecosystem stability. Capacity-building activities and improved access to climate information ensure communities can make informed decisions, increasing overall adaptive capacity. Additionally, the intervention promotes energy-efficient technologies and labour-saving solutions, further improving cost-effectiveness by reducing resource and labour demands. From an enabling environment perspective, the intervention improves access to markets, finance, and policy support, fulfilling important market and policy-smart criteria. By strengthening institutional capacities and promoting climate-informed planning, the intervention supports sustainable adoption of climate-smart practices. This integrated approach addresses key components of the CSV model, ensuring that investments yield substantial economic returns by enhancing community resilience in a participatory and forward-looking manner. The proactive nature of the interventions improves its cost-effectiveness compared to reactive, short-term measures, making it a financially sound strategy for long-term climate adaptation.

A unifying feature across all outputs is the programme's strong emphasis on community participation, inclusive planning processes, and the prioritization of gender equality and social inclusion. By addressing the distinct needs of women, marginalized groups, and vulnerable populations, the programme not only enhances resilience but also fosters empowerment and equity. Moreover, the integration of multiple co-benefits, such as improved food and nutrition security, biodiversity conservation, and carbon sequestration, amplifies the overall impact and sustainability of the interventions. The programme's deployment of innovative technologies, including solar-powered systems and weather-indexed insurance products, further reflects its alignment with principles of climate resilience and sustainable development. Simultaneously, investments in institutional strengthening and capacity building are designed to ensure the durability of programme benefits well beyond the implementation period.

Overall, the project represents a holistic, integrated, and transformative approach to climate adaptation. It combines economic viability with environmental sustainability and social equity, thereby serving as a model for effective and inclusive climate action in vulnerable contexts.

Recommendations

- ✓ **Strengthen institutional capacity:** Sustaining the long-term benefits of the programme requires robust institutional capacity at the local level. This entails providing targeted training for municipal officials, promoting participatory planning processes, and embedding climate-resilient practices within local government policies and budgeting frameworks. Reinforcing institutional structures will enable municipalities and communities to effectively manage climate risks and adapt to evolving challenges.
- ✓ **Promote private sector engagement:** Engaging the private sector is essential to complement public investment and scale up impact. Strategic partnerships with agribusinesses, renewable energy providers, and technology firms can support the development of climate-smart value chains, enhance agricultural productivity, and introduce innovative solutions for post-harvest management. Such collaboration can also stimulate local economies and drive long-term sustainability.
- ✓ **Ensure inclusive planning and implementation:** The programme's effectiveness depends on its ability to respond to the needs of vulnerable and underrepresented populations, including women, marginalized communities, and persons with disabilities. Promoting their meaningful participation in planning, implementation, and decision-making processes is vital to achieving equitable outcomes. Tailored interventions and targeted support should be prioritized to ensure inclusive access to programme resources and benefits.
- ✓ **Harness technology for climate resilience:** Investments in technology are critical for enhancing climate resilience and improving programme efficiency. Promoting the use of climate information services, weather-indexed insurance, and renewable energy solutions can empower communities to make informed, risk-aware decisions. Additionally, the integration of digital platforms and data management systems will facilitate more effective programme delivery, real-time monitoring, and adaptive learning.

Annex 6: Report on Free, Prior, and Informed Consent (FPIC) with Indigenous Peoples: Byasi, Bhote, Magar, Tamang and Mugal (Karmarong) for the Adaptation Fund Project

Country: Nepal

Project Title: Improving Food System Resilience of Vulnerable Communities in Nepal Through Community-Based Adaptation

Implementing Entity: UN World Food Programme (WFP)

Executing Entities: Ministry of Forests and Environment, and Ministry of Agriculture and Livestock Development, together with respective provincial and local governments

Donor: Adaptation Fund

Funding size: US$ 10 million

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Date: May-June 2025

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1. Background:

Nepal, a country characterized by its diverse topography and multiethnic population, is experiencing significant climate-induced changes, including rising temperatures, glacial retreats, erratic rainfall patterns, shifting agricultural patterns, and increased frequency of extreme weather events which have disproportionately and profoundly affected the indigenous and multiethnic communities whose livelihoods are intricately tied to the natural environment - agriculture, forestry, and pastoralism etc. Nepal's diverse ethnic groups have developed a wide range of cultural-ecological adaptation strategies to cope with the challenges posed by the country's varied ecological zones, from the lowland Terai to the high Himalayas. Cultural identity plays a critical role in shaping perceptions of environmental/climate change, risk assessment, and the adoption of adaptation measures. These communities have historically developed unique ways of interacting with their environment, shaped by their cultural beliefs and knowledge systems, practices, and social structures. These traditional adaptation strategies -such as terrace farming, agroforestry, rotational grazing, and water management systems have been in practice through generations of interaction with the environment. They not only reflect the communities' deep knowledge of the local ecosystems but also serve as critical tools for maintaining resilience in the face of environmental uncertainty. However, the intensifying impacts of climate change, such as erratic rainfall, prolonged droughts, increased frequency of landslides, and shifting agricultural patterns, are straining these traditional systems. The challenges are compounded by socio-economic transformations, such as outmigration, modernization, and the decline of traditional knowledge systems, which further erode the effectiveness and continuity of these cultural-ecological practices. In this context, consultation with the indigenous peoples on their cultural-ecological adaptation practices, their traditional/indigenous knowledge system, the impact of climate change and potential climate actions to address the climate change impact while designing and implementing the climate change adaptation project is essential.

Free, Prior, and Informed Consent (FPIC) is a fundamental right of Indigenous Peoples (IPs) recognized under international human rights instruments, including the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and ILO Convention 169. In Nepal, the Government of Nepal has officially recognized and enlisted 60 communities as Indigenous Nationalities (Indigenous Peoples) through the National Foundation for Development of Indigenous Nationalities (NFDIN) Act 2002[80]. Among them, Byasi, Bhote, Mugal (Karmarong), Tamang and Magar are the Indigenous Nationalities residing in the project areas proposed for the project – "Improving food system resilience of vulnerable communities in Nepal through community-based adaptation" submitted to the Adaptation Fund by the UN World Food Programme (WFP) and the Government of Nepal (GoN). These indigenous Peoples (IPs) have distinct cultural, social, and economic systems that must be respected in development interventions. WFP has conducted the

[80] https://nfdin.gov.np/nfdin/default/engjatiharu/

FPIC with these three indigenous communities for the proposed project. Hence, this report documents the FPIC process conducted with these communities by WFP for the proposed project aimed at enhancing food system resilience through community-based adaptation.

2. Overview of the IPs in the project area:
An estimated 12,100 households (with a total of 60,654 population/household members) from 20 Local Governments (LGs) across five districts of Karnali and Sudur-Paschim provinces will directly benefit from the project. Below is the list of 11 LGs and the presence of IPs:

District	Local Government	Total target HHs	Total target population	Major IPs present the LG	Population of IPs	Percentage of Ips out of the total population of LG
Kalikot	Tilagupha Municipality	1,500	7,703	-	-	-
	Shubhakalika Rural Municipality	1,300	6,483	Magar	693	5.03%
Mugu	Chhayanath Rara Municipality	1,400	6,937	-	-	-
	Mugum Karmarong Rural Municipality	700	3,174	Mugal (Karmarong) and Tamang	3,917	62.95%
	Soru Rural Municipality	1,000	4,950	-	-	-
Humla	Adanchuli Rural Municipality	800	4,468	Byasi (Sauka)	617	7.46
	Tajakot Rural Municipality	600	3,156	Byasi (Sauka)	372	6.10
Bajura	Himali Rural Municipality	1,000	5,160	Bhote	306	2.97
	Swamikartik Rural Municipality	1,200	6,389	-	-	-
Bajhang	Khapthad Chhanna Rural Municipality	1,500	6,489	-	-	-
	Talkot Rural Municipality	1,100	5,745	-	-	-
Total	11	12,100	60,654			

Source: National Census, 2021

3. Objectives of the FPIC process
- To ensure meaningful participation of Indigenous Peoples in project planning and implementation.
- To obtain their voluntary and informed consent before initiating project activities.
- To uphold their rights to self-determination, cultural integrity, and equitable benefits.

4. Methodology
The FPIC process followed these key steps:
1. Preliminary engagement with community leaders and Indigenous Peoples Organizations (IPOs)
2. Presence of IPs with the representation of IPOs, men, women, older people, youths and representatives of the Local Governments, including Chairperson, Ward chairpersons and local government employees during the consultation process.
3. Information sharing on the project objectives, components, risks, benefits, and potential environmental and social impacts.
4. Community consultations and feedback sessions, using culturally appropriate tools (visual aids, interpreters) to ensure comprehension.
5. Formal consent documentation and verification, with the process ensuring:
    - Free: No coercion or manipulation in decision-making.
    - Prior: Consultations held before project finalization.
    - Informed: Clear, accessible information provided.
    - Consent: Recorded through community resolutions and signatures of representatives.

The final consultation meetings and FPIC process were conducted as below in 5 LGs:

Date of FPIC	LG	No of wards/villages covered	IPs covered	Total representatives of IPs present		
				Total	Men	Women
10 May 2025	Tajakot	2	Byasi	63	51	12

11 May 2025	Adanchuli	3	Byasi	27	24	3
12 May 2025	Himali	2	Bhote	35	27	8
16 May 2025	Shubhakalika	2	Magar	64	40	24
19 May 2025	Mugum Karmarong	4	Mugal, Tamang	47	13	34

The checklist of the FPIC is provided in annex-1 and the FPIC documents, along with the signatures of the IPs representatives and verification/certification letters from the respective Local Governments, are provided in the annex-2 of this report.

5. Findings of the consultation and FPIC process:

5.1 Livelihood profile:
The primary sources of livelihood of the IPs include subsistence-based crop cultivation and livestock husbandry, predominantly involving cattle, goats, and sheep. Informal wage labour and seasonal outmigration for employment are widespread coping strategies, with remittance income serving as an important, though unreliable, source of household earnings. Youth expressed growing concern regarding the normalization of temporary livelihood measures, particularly migration, highlighting the absence of sustainable and locally available economic opportunities. Men in the community reported limited access to formal employment, often relying on public works programmes such as Food for Assets (FFA) as their only structured means of economic participation. Women indicated that while some men do remit income, these transfers are irregular and insufficient, offering limited financial resilience during periods of hardship. While land and livestock assets are generally registered in the names of male family members, women carry the primary responsibility for agricultural production and animal husbandry. However, decision-making authority over land use and water resources remains predominantly male-driven, restricting women's agency in natural resource governance. Agricultural productivity is further constrained by a combination of limited access to quality seeds, the absence of irrigation infrastructure, and the financial inability of households to procure improved or hybrid seed varieties. As a result, arable land is often left uncultivated. Agricultural mechanization is minimal, with most households relying on oxen for ploughing, a labour-intensive and time-consuming method. Overall profitability remains low due to challenging terrain, inadequate road connectivity, and high transportation costs.

Rangelands serve as critical resources for livestock grazing and the collection of medicinal plants, particularly for traditional healthcare practices. However, unsustainable practices such as open grazing and overstocking have led to land degradation, soil erosion, and a decline in biodiversity. Most forest resources, particularly for fuelwood, are communally managed, yet limited conservation practices and overexploitation have impeded natural regeneration, raising concerns over long-term ecosystem sustainability. Although the local agroecological conditions are suitable for cultivating paddy, maize, wheat, millet and vegetables, agricultural productivity is significantly constrained by the absence of irrigation systems, limited access to agricultural inputs, and financial constraints and changing weather patterns. Women are primarily responsible for food processing, which is predominantly manual and highly labour-intensive. Awareness and adoption of safe pesticide handling and application techniques remain low, raising health and environmental concerns.

The community also faces limited access to safe drinking water and poor transport infrastructure, further constraining access to food, healthcare, and essential services. The impacts of climate change, including prolonged droughts and seasonal water scarcity, have increased the physical burden on women, who must walk long distances to collect water and fuelwood.

5.2 Understanding of climate change, observed specific changes in weather patterns or natural resources and impact on livelihoods:
Frequent and unpredictable changes in weather patterns have become a persistent challenge for the IPs, profoundly affecting their agriculture, livestock, and forest-based livelihoods. Given their close relationship with natural ecosystems and high dependence on climate-sensitive resources, IPs respondents demonstrated a strong awareness of the ongoing climatic changes over recent years. Community members reported that rainfall patterns have become increasingly erratic, with the monsoon season experiencing delays, and unseasonal heavy rains occurring in October and December, leading to crop damage and reduced agricultural yields. Additionally, temperatures are steadily rising, with more frequent and prolonged episodes of extreme heat. The onset of winter is delayed, and the season has shortened significantly, now primarily occurring only during December and January. Participants also identified deforestation and pollution linked to unregulated construction activities as key anthropogenic drivers of climate change in their region. These environmental pressures further exacerbate the vulnerability of IPs/indigenous communities and hinder their ability to sustain traditional livelihoods. They mentioned the key observed climatic changes as below:

- Glacial retreat and reduced snowfall in winter.
- Unpredictable monsoon rains and droughts in summer.
- Drying up of traditional water sources and springs.

- Erratic rainfall has made farming less predictable.
- Forest depletion due to overuse and increasing fire frequency.
- More frequent landslides, floods during monsoon season.
- Increasing dry spells and delayed snowfall.
- Shorter growing seasons and crop failures.
- Fewer wild herbs and plants used for medicine and trade.
- Shrinking pasturelands and invasive plant species.

The IPs mentioned that the region is witnessing significant climate variability and environmental degradation, with direct impacts on agriculture, water resources, and livelihoods:

- Reduced snowfall and rainfall: Communities report a notable decline in seasonal snowfall and rainfall, resulting in changes to vegetation patterns and traditional farming calendars.
- Rising temperatures: There is a clear warming trend, particularly during the summer months, contributing to increased evapotranspiration and crop stress.
- Altered crop cycles: Farmers have observed shifts in planting and harvesting seasons, with several traditional crops no longer thriving under changing climatic conditions.
- Declining agricultural productivity and increased livestock mortality: There has been a significant decrease in yields from indigenous crops, largely due to pest outbreaks exacerbated by climatic shifts. Similarly, livestock mortality has increased due to infestations and emerging diseases, threatening food security and household incomes.
- Water scarcity: The drying of natural water sources has forced many households to rely on unprotected and potentially unsafe water sources, increasing health risks and daily labour burdens, especially for women and girls.
- Increased frequency of hazards/disasters: Changing precipitation patterns and unplanned road construction have escalated the risk of landslides, soil erosion, and flooding. These events further degrade the land and disrupt access to basic services.
- Land degradation and rangeland overuse: Unsustainable grazing practices are contributing to rangeland degradation, erosion, and loss of biodiversity, resulting in reduced pasture availability. This is also giving rise to local conflicts over grazing land and water sources.
- Emerging agricultural pests and diseases: The changing climate has led to the proliferation of new crop and livestock diseases, which are increasingly difficult to manage due to limited access to veterinary and agricultural extension services.

Impact of environmental changes on the life of IPs:

- Decline in agricultural yield, especially barley and potatoes.
- Pasture degradation affecting yak, sheep, and goat herding.
- Forced to migrate seasonally for alternative livelihoods or to access water.
- Food insecurity due to lower yields of millet, maize, and wheat.
- Increased reliance on wage labour or migration to cities/India.
- Disruption in ritual and agricultural calendars.
- Women and children bear a greater burden fetching water and firewood.
- Reduced income from herb and mushroom collection (e.g., yarsagumba).
- Difficulty in practicing traditional barter trade due to unreliable travel conditions.
- Strain on traditional knowledge systems and adaptive strategies.
- Youth migrating out, leaving elders behind.
- Challenges in maintaining livestock herding cycles.
- Cultural erosion, as younger generations move away, and herd sizes shrink.
- Pressure on traditional food systems, increasing dependence on external food aid.
- Disruption of ritual and spiritual relationships with the land and local deities.

5.3 Coping mechanisms and adaptation strategies adopted by the IPs:

In the absence of sustainable livelihood opportunities or formal social protection mechanisms, households predominantly rely on coping strategies such as borrowing, casual wage labour, and informal community-based support networks. The lean season has become increasingly prolonged, exacerbating periods of food insecurity and household vulnerability. With limited economic opportunities locally, male family members are increasingly seeking migration options, including high-risk, irregular migration routes to destinations such as France, despite the dangers involved. Others have relocated to urban centres for extended periods, often separated from their families, in pursuit of income-generating opportunities to support household survival.

Below are the key coping measures/mechanisms adopted by IPs to cope with the changing climate:

- Shifting cultivation cycles to match new weather patterns (e.g., planting barley earlier).
- Diversifying livelihoods—from trade and herding to collecting medicinal plants or doing wage labour.
- Constructing small water collection ponds and using traditional irrigation systems (kulos).
- Adopting climate-resilient crops like buckwheat and millet.
- Participating in community forestry to conserve local resources.
- Building terraces to prevent soil erosion; travelling for seasonal labour to send remittances home; assisting in irrigation channel repairs.
- Harvesting and selling non-timber forest products (like yarsagumba) more intensively.
- Altering seasonal migration routes for livestock herding to avoid degraded pastures.

5.4 Feedback on project:

Participants across all target locations expressed a **positive reception to the proposed project activities**, recognizing their potential to support **climate resilience and livelihood enhancement**. Key recommendations to strengthen project implementation include the following:

- Support for Participatory Local Adaptation Planning: Communities emphasized the need for inclusive, participatory processes to enable context-specific identification of vulnerabilities, prioritization of needs, and design of locally appropriate climate adaptation strategies.
- Timely access to climate information: Participants recommended the provision of regular, accurate, and accessible climate forecasts and advisories to better plan agricultural and livelihood activities.
- Climate-sensitive irrigation infrastructure: Communities requested the introduction of small-scale, sustainable irrigation systems that are adaptive to changing weather patterns, alongside access to appropriate agricultural technologies.
- Capacity building for climate-resilient practices: Stakeholders suggested organizing training and capacity strengthening workshops on climate-smart agriculture, sustainable natural resource management, and alternative livelihoods.
- Promotion of climate-resilient crop varieties: The introduction and promotion of climate-resilient and nutrition-sensitive crops was identified as a key measure to ensure long-term food security.
- Improved dissemination of government schemes: Respondents recommended streamlining communication around government schemes and entitlements, ensuring that information is delivered in an accessible, efficient, and culturally appropriate manner.
- Inclusive implementation of the project: Participants highlighted the need for inclusive approaches under the project, especially to support women and persons with disabilities. Many expressed willingness to engage in land development activities that contribute to climate adaptation goals.
- Strengthening Self-Help Groups (SHGs): Respondents advocated for greater support and incentivization of SHG activities to enhance household income, promote women's economic empowerment, and increase community resilience.
- Improved market linkages for agro-forestry enterprises: Communities emphasized the importance of strengthening the agroforestry value chain, including market access and fair pricing mechanisms, to reduce dependence on and exploitation by intermediaries.
- Promote homestead gardening: Scale up climate-resilient homestead gardening practices by providing training, extension services, and localized input support, aimed at improving household nutrition and income diversification.
- Enhance water resource management: Invest in rainwater harvesting, sustainable water management, and the rehabilitation and maintenance of water infrastructure to ensure year-round access to safe water for domestic and agricultural use.
- Sustainable Management of Non-Timber Forest Products (NTFPs): Promote the conservation, sustainable harvesting, and value-added utilization of high-value NTFPs such as *Atis*, *Chiraito*, *Yarshagumba*, *Satuwa*, *Panchaule*, *Khiraulo*, and *Sugandhawal*. Encourage the plantation of native and commercially viable species including *timru*, *chuli*, and *walnut* to restore forest cover and support biodiversity.
- Land and rangeland restoration: Invest in land restoration measures, including the use of vegetative barriers, soil conservation techniques, and sustainable rangeland management practices to combat land degradation and enhance pasture availability.
- Energy access and infrastructure: Support the maintenance of existing micro-hydropower systems and facilitate new electricity connections, particularly in remote areas such as Dolphu and Mugum, to promote equitable energy access and reduce reliance on fuelwood.
- Integrate traditional ecological knowledge (TEK): Document and mainstream Indigenous and local ecological knowledge into development planning and agricultural extension services to ensure culturally grounded and locally appropriate adaptation measures.

- Vocational training and microenterprise development: Expand access to skills development and income-generating activities, such as tailoring, weaving, carpentry, and eco-tourism, with a focus on youth and women's economic empowerment.
- Improve financial inclusion: Enhance access to affordable and reliable financial services through mobile banking platforms and the strengthening of community-based cooperatives, enabling households to save, invest, and manage risk more effectively.

6. Recommendation for future FPIC implementation/ plans for further FPIC process

The FPIC sessions were highly productive and positively received by community members. These consultations provided a platform for the expression of community challenges and priorities, while also fostering greater awareness and understanding of the project's objectives, scope, and implementation modalities. The FPIC dialogue initiated a continuous and inclusive consultation process, laying the foundation for participatory implementation throughout the project life cycle. Recommendations gathered during the FPIC sessions will be systematically integrated into annual work plans at various implementation levels. Additionally, the Community-Based Participatory Planning (CBPP) process at the village level will actively incorporate inputs from IPs/indigenous communities, ensuring that their priorities are mainstreamed across all project components and planning frameworks. Continued and expanded FPIC engagement will play a critical role in building the adaptive capacity of Indigenous communities and ensuring that the project remains responsive to the evolving needs and priorities of the population it serves.

Annex 1: Checklist for discussion with Indigenous Peoples for FPIC

Briefing about the purpose of the discussion

Namaste, my name is ……. And these are my colleagues……We are from the World Food Programme (explain about WFP). We are here to inform you and take your consent about a project to be funded by the Adaptation Fund, we will begin soon in this area, which might involve your community as well. Through this discussion, we will explain our project, respond to any questions that you may have and hear from you about your thoughts and suggestions.

1. General enquiry into key issues related to climate change in the community

First, we would like to understand about how climate change has affected your life and livelihood over the years.

i. What specific changes in weather patterns or natural resources have you observed in your community in recent years? How has it affected your way of life?
ii. What are the most pressing concerns or challenges that your community is currently facing? (Probe challenges for women and men)
iii. What kind of measures are you taking to cope with the changing climate? (Probe measures taken by women and men)
iv. What are the main barriers or challenges your community face in implementing climate change adaptation measures? Any specific challenges do women face?
v. How can government agencies or other organizations best support your community in addressing the impacts of climate change?

2. Discussion on the project and consent process

Thank you for sharing your insights on climate change with us. Now we shall talk about the project we intend to implement here, the project is about…….

- Explain objectives and key highlights of the project.
- Explain the participatory approaches and methods of engagement of indigenous peoples (IPs) during the implementation of the project.
- Ask for any queries and clarifications.
- Ask for any suggestions on the project
- Read out the consent letter and ask if people agree with it.
- Based on the agreement, have it signed by representatives, or modify the content as required and get the revised version signed.

Annex – 2: The FPIC received from the IPs and the respective local Governments:

Byasi community- Tajakot Rural Municipality and Adanchuli Rural Municipality of Humla district

परियोजनाको लागि स्वतन्त्र एवं पूर्व सूचित सहमति (Free Prior and Informed Consent- FPIC) सम्बन्धमा ।

मिति ..२०८२/०१/२६.. मा कर्णाली प्रदेश, ...हुम्ला... जिल्ला ......ताजाकोट....गाउँपालिकामा विश्व खाद्य कार्यक्रम (WFP) र ...ताजाकोट... गाउँपालिकाका प्रतिनिधिहरु र यस क्षेत्रका आदिवासी जनजाति (Indigenous Nationality) समुदाय ब्यासी...का स्थानीय प्रतिनिधिहरुको तपशिलको उपस्थितिमा नेपाल सरकार तथा विश्व खाद्य कार्यक्रम (WFP) द्वारा अनुकूलन कोष (Adaptation Fund) मा प्रस्तावित परियोजना " Improving food system resilience of vulnerable communities in Nepal through community-based adaptation" को सम्बन्धमा विस्तृत छलफल भई निम्नानुसारको सहमति भई हामी सबैको राजी खुशीले पुर्ण रुपमा सबै कुराहरु बुझी बुझाई हस्ताक्षर गरेका छौं ।

१. विश्व खाद्य कार्यक्रम (WFP) र .ताजाकोट गाउँपालिकाका प्रतिनिधिहरु द्वारा प्रस्तावित परियोजना यो भौगोलिक क्षेत्रमा पनि कार्यान्वयन हुने कुराको जानकारी गराउँदै उक्त परियोजनाले सम्वोधन गर्नुपर्ने स्थानीय समुदायले भोगेको जलवायु परिवर्तनसँग सम्बन्धित समस्या र जलवायु परिवर्तनको प्रभाव तथा असरहरु र सम्भावित कार्यक्रमिक गतिविधिहरु (Programmatic Intervention) के- के हुन सक्छन् भनि हामी आदिवासी जनजाति समुदाय (Indigenous People) सँग विभिन्न समयमा परामर्श र छलफल गरेको कुरा पुष्टि गर्दछौं ।

२. नेपालले अनुमोदन गरेका आदिवासी जनजातिका अधिकार सम्वद्ध अन्तराष्ट्रिय श्रम सम्बन्धि महासन्धि (ILO) नं. १६९, आदिवासी जनजातिको अधिकार सम्बन्धि संयुक्त राष्ट्रसंघीय घोषणा पत्र (UNDRIP) र जैविक विविधता सम्बन्धि महासन्धि साथै नेपालको संविधान र कानुनमा व्यवस्था भए बमोजिम हामी यस क्षेत्रका आदिवासी जनजाति समुदायसँग विश्व खाद्य कार्यक्रमले प्रस्तावित परियोजनाको लागि स्वतन्त्र पूर्व सूचित सहमति (FPIC) लिएको कुरा ठिक साँचो हो ।

३. विश्व खाद्य कार्यक्रमले प्रस्तावित परियोजना बारे विस्तृतमा पूर्व जानकारी गराएको, स्थानीय आदिवासी जनजाति समुदायको प्रश्नहरुलाई स्पष्ट पारेको र हाम्रो सल्लाह सुझाव समेतलाई मध्यनजर गरि परियोजना प्रस्तावना (Project Proposal) तयार गरेको कुरामा सहमत छौं ।

४. प्रस्तावित परियोजनाले हामी स्थानीय आदिवासी जनजाति समुदायको धार्मिक तथा जातिय आस्था, पहिचान, भाषा, सँस्कृति, परम्परा, थातथलो, प्राकृतिक श्रोत साधनमा कुनै किसिमको हस्तक्षेप र असर नगर्ने र परियोजनाले स्थानीय समुदायले भोगिरहेको जलवायु परिवर्तनको असरलाई अनुकूलन गर्न, दीगो जीविकोपार्जन सुधार गर्न र जलवायु उत्थानशिलता वृद्धि गर्न सहयोग गर्ने कुरामा सहमत भई हामी निम्न कुराहारु पुष्टि गर्दछौं;

   क. हामीले कुनै पनि पक्षको दबाव वा प्रभाव विना स्वतन्त्र (Free) रुपमा छलफल तथा परामर्शमा भाग लिएका हौं ।

   ख. प्रस्तावित परियोजना सम्बन्धि यथेष्ट जानकारी हामीलाई समयमै दिईएको थियो र छलफलको लागि पर्याप्त समय उपलब्ध गराईएको थियो ।

   ग. प्रस्तावित परियोजनाको प्रकृति, दायरा, अवधि, सम्भावित / अपेक्षित लाभ/ नतिजाहरु, प्रस्तावित क्रियाकलापहरु, परियोजना व्यवस्थापन प्रक्रिया तथा संयन्त्र र वातावरणीय तथा सामाजिक जोखिमहरुको सम्वन्धमा हामीले पर्याप्त, पूर्व र सहजै बुझ्न सकिने गरि जानकारी प्राप्त गर्‍यौं ।

   घ. हाम्रो स्वतन्त्र र पूर्व सूचित छलफल, परामर्श र सामुहिक निर्णयका आधारमा प्रस्तावित परियोजना हाम्रो क्षेत्रमा कार्यान्वयन गर्दा हामीलाई कुनै असर नगर्ने र उक्त परियोजना फाईदाजनक नै हुने निष्कर्श निकाली उक्त परियोजना कार्यान्वयनको लागि सहमति (Consent) प्रदान गर्दछौं ।

५. परियोजना कार्यान्वयनको चरणमा समेत हाम्रो सहभागिताको अपेक्षा सहित हाम्रो सर्वोपरी हितमा परियोजना कार्यन्वयन हुनेछ भन्ने विश्वास सहित हाम्रो समुदायलाई परियोजनाको आगामी चरणहरुमा समेत साझेदारको रुपमा व्यवहार हुनेछ भन्ने आशा गर्दछौं ।

६. हाम्रो आदिवासी अधिकार तथा पहिचानको सम्मान गर्नुभएकोमा हार्दिक आभार व्यक्त गर्दछौं र भविष्यमा पनि पारस्परिक सम्मान र समानतामा आधारित साझेदारिताको अपेक्षा गर्दछौं ।

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर
१	उपेन्द्र रावल	ताजाकोट गा.पा.-५	९८६९८६५४५०८	[illegible]
२	भजमल बुढा	" "		[illegible]
३	पन्था बुढा	" "		[illegible]
४	हंसवीर बुढा	" "		[illegible]
५	चन्द्रमनी बुढा	" " ५		[illegible]

आदिवासी जनजाति समुदायको जातिय सँस्था ..ब्यासी सेवा समाज, आदिवासी जनजाति महासंघ.. का प्रतिनिधिहरुको हस्ताक्षरः

१. सिंह बहादुर बुढा, संयोजक, आदिवासी जनजाति महासंघ तथा उत्थान समाज [illegible] ९८४८२३६६८३
२. कुशे बुढा, थपाले ब्यासी सेवा समाज, महासचिव [illegible] ९८६१०५५९४
३.

स्थानीय सरकारका प्रतिनिधि / रोहवरको हस्ताक्षरः

१. लालकेशर जैसी, अध्यक्ष, ताजाकोट गाउँपालिका [illegible]
२. मंगल नेपाली, वडाध्यक्ष, वडा नं. ५, ताजाकोट गाउँपालिका [illegible]
३. समीक्षा अधिकारी, प्रमुख प्रशासकिय अधिकृत, ताजाकोट गाउँपालिका [illegible]

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर
१	गगन ब० रोकाया	तांजाकोट ५ पांढ	९८४८३१८४५२	[signature]
२	जगत ब० रोकाया	〃 〃 〃	९८६८६५४०८१४	[signature]
३	माठो रोकाया	〃 〃		[signature]
४	फकिरे रोकाया	〃 〃		फकीरे
५	विरसिङे रोकाया	〃 〃		[signature]
६	लालसिंह रोकाया	〃 〃		[signature]
७	राजकला रोकाया	〃 〃		राजकला
८	मानकला रोकाया	〃 〃		मानकला
९	जैमल रोकाया	〃 〃		जैमल
१०	दिपेन्द्र रोकाया	〃 〃		[signature]
११	भरत रोकाया	〃 〃		[signature]
१२	शिव रोकाया	〃 〃		[signature]
१३	काला रोकाया	〃 〃		कालाट
१४	गोविन्द रोकाया	〃 〃		गोविन्द
१५	रतसुर रोकाया	〃 〃		रतपुर
१६	आइते रोकाया	〃 〃		आइते
१७	आसकली रोकाया	〃 〃		आसकली
१८	नर रोकाया	〃 〃		नर रोकाया
१९	सुकिलो रोकाया	〃 〃		सुकीलो
२०	मनविर रोकाया	〃 〃		मनविर
२१	देवी रोकाया	〃 〃		देवी
२२	रतन रोकाया	〃 〃		रतन

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर
		तांजाकोट-५		
	हरी बुढा	चिउँडी		[signature]
	लाले बुढा	〃		[signature]
	नरिन्द्र बुढा	〃		[signature]
	सौमाति बुढा	〃		[signature]
	अर्जुन बुढा	〃		[signature]
	अजमल बुढा	〃		[signature]
	धिन बुढा	〃		[signature]
	देविलाल बुढा	~~९८६९९८०९८५५~~	९८६९८०९८५	[signature]
	दलजित बुढा	〃		Dalji
	जितु बुढा	〃		Jitu
	धन ब० बुढा	〃		Dhan
	बाँचे बुढा	〃		[signature]
	दाने बुढा	〃		[signature]
	धनसिंह बुढा	〃		
	धनलाल बुढा	〃		[signature]
	बर्खे बुढा	〃		[signature]
	देवि बुढा	〃		देवी
	राजकला बुढा	〃		[signature]
	प्रजड बुढा	〃		[signature]
	जर्मा बुढा	〃		[signature]
	दाते बुढा	〃		[signature]
	गोखें बुढा	〃		[signature]

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर
	देवि ब० बौजि	नाहणदा		[signature]
	अमर लाल बौजि	〃	9864975354	[signature]
	जर्गे रुपाइ	〃		[signature]
	हर्के बुढा	〃		हर्के
	औंसे बुढा	〃		औंसे
	हरि मन्न बौजि	〃		[signature]
	नागेन्द्र रुपाइ	〃		[signature]
	हरि बोहरा	〃		[signature]
	रणविर बोहरा	〃		[signature]
	प्रदिप बौजि	〃		प्रदिप
	हरि बुढा	〃		हरीबुढा
	सुकविर बुढा	〃		सुकविर
	सगन बोहरा	〃		[signature]
	जगत्या रुपाइ	〃		[signature]
	मागि बौजि	〃		मागी
	धन सिंह बोहरा	〃		[signature]
	खड्कन्या बोहरा	〃		[signature]
	मेगराज बोहरा	〃		मेगराज
	मनसुर रुपाइ	〃		मनसुर
	संगिता बोहरा	〃		संगीता
	सम्झना बौजि	〃		[signature]
	पम्फा बौजि	〃		पम्फा
	रुपसिंह बौजि	〃		

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर
	हरि बुढा	तौंजाकोट ५	९८६८०६९०६४	हरीबुढा
	धनसिंह बुढा	〃 〃		[signature]
	परे बुढा	〃 〃		परे
	सकिला बोहरा			[signature]
	बेलु बुढा			[signature]
	सौरी रोकाया			सौरी
	दुधकला रोकाया			[signature]
	राजकला रोकाया			
	जर्मा रोकि			[signature]
	रत्नकला बुढा			[signature]
	नन्दे बुढा			[signature]
	लालसरी बुढा			
	अस्मिता बुढा	〃		

ताँजाकोट गाउँपालिका
गाउँ कार्यापालिकाको कार्यालय

धार्चुला
प्रदेश नं. २

पत्र संङ्ख्या : ०८१।०८२ चलानी नं: २०१३ मिति :२०८२।०१।२६

श्री जो जस सँग सम्बन्धित छ।

विषय: परियोजनाका लागि परामर्श तथा सहमति सम्बन्धमा।

प्रस्तुत विषयमा नेपाल सरकार विश्व खाद्य कार्यक्रम (WFP) द्वारा अनुकूलन कोष (Adaptation Fund) मा प्रस्तावित परियोजना "Improving food system resilience of vulnerable communities in Nepal community based adaptation" मा समावेश भएका क्रियाकलापहरु तथा अन्य विषयवस्तुहरु यस स्थानिय तहको नितिगत र कार्यक्रमिक प्राथमिकताहरु मुताविक रहेको र यस स्थानिय तहमा २५ प्रतिशत जनसख्या आदिवासी जनजाति (Indigenous Nationalities) १७५० संख्यामा रहेको विश्व खाद्य कार्यक्रमका प्रतिनिधिहरु द्वारा उक्त आदीवासी जनजातिहरुकसँग स्थलगत रुपमै परामर्श तथा छलफल यस स्थानिय तहको आधिकारीक रोहबरमा गरि जनजाति प्रतिनिधिहरुको उक्त परियोजनाको लागि स्वतन्त्र एव पूर्व सूचित सहमति(Free Prior and Informed Consent) प्राप्त भएको र प्रस्तावित परियोजनाको स्थानिय आदिवासी जनजातिहरुको भाषा सँस्कृति धर्म परम्परा थातथलो प्राकृतिक स्रोत साधन तथा पहिचानमा कुनै असर नपार्ने बरु उनीहरुको जिविकोपार्जन सुधार र जलवायु उत्थानशिलता अभिवृद्धिमा सहयोग पुर्याउने व्यहोरा स्थानिय सरकारको हैसियतले प्रमाणित गरिन्छ।

अध्यक्ष
अध्यक्ष

परियोजनाको लागि स्वतन्त्र एवं पूर्व सूचित सहमति (Free Prior and Informed Consent- FPIC) सम्बन्धमा ।

मिति ..२०८२/०१/२८...मा कर्णाली प्रदेश, ...हुम्ला... जिल्ला ...अदानचुली...गाउँपालिकामा विश्व खाद्य कार्यक्रम (WFP), र ..अदानचुली.. गाउँपालिकाका प्रतिनिधिहरु र यस क्षेत्रका आदिवासी जनजाति (Indigenous Nationality) समुदाय ..ब्याँसी...का स्थानीय प्रतिनिधिहरुको तपशिलको उपस्थितिमा नेपाल सरकार तथा विश्व खाद्य कार्यक्रम (WFP) द्वारा अनुकूलन कोष (Adaptation Fund) मा प्रस्तावित परियोजना " Improving food system resilience of vulnerable communities in Nepal through community-based adaptation" को सम्बन्धमा विस्तृत छलफल भई निम्नानुसारको सहमति भई हामी सबैको राजी खुशीले पुर्ण रुपमा सबै कुराहरु बुझी बुझाई हस्ताक्षर गरेका छौं ।

१. विश्व खाद्य कार्यक्रम (WFP) र अदानचुली गाउँपालिकाका प्रतिनिधिहरु द्वारा प्रस्तावित परियोजना यो भौगोलिक क्षेत्रमा पनि कार्यान्वयन हुने कुराको जानकारी गराउँदै उक्त परियोजनाले सम्बोधन गर्नुपर्ने स्थानीय समुदायले भोगेको जलवायु परिवर्तनसँग सम्बन्धित समस्या र जलवायु परिवर्तनको प्रभाव तथा असरहरु र सम्भावित कार्यक्रमिक गतिविधिहरु (Programmatic Intervention) के- के हुन सक्छन् भनि हामी आदिवासी जनजाति समुदाय (Indigenous People) सँग विभिन्न समयमा परामर्श र छलफल गरेको कुरा पुष्टि गर्दछौं ।
२. नेपालले अनुमोदन गरेका आदिवासी जनजातिका अधिकार सम्बद्ध अन्तराष्ट्रिय श्रम सम्बन्धि महासन्धि (ILO) नं. १६९, आदिवासी जनजातिको अधिकार सम्बन्धि संयुक्त राष्ट्रसंघीय घोषणा पत्र (UNDRIP) र जैविक विविधता सम्बन्धि महासन्धि साथै नेपालको संविधान र कानुनमा व्यवस्था भए बमोजिम हामी यस क्षेत्रका आदिवासी जनजाति समुदायसँग विश्व खाद्य कार्यक्रमले प्रस्तावित परियोजनाको लागि स्वतन्त्र पूर्व सूचित सहमति (FPIC) लिएको कुरा ठिक साँचो हो ।
३. विश्व खाद्य कार्यक्रमले प्रस्तावित परियोजना बारे विस्तृतमा पूर्व जानकारी गराएको, स्थानीय आदिवासी जनजाति समुदायको प्रश्नहरुलाई स्पष्ट पारेको र हाम्रो सल्लाह सुझाव समेतलाई मध्यनजर गरि परियोजना प्रस्तावना (Project Proposal) तयार गरेको कुरामा सहमत छौं ।
४. प्रस्तावित परियोजनाले हामी स्थानीय आदिवासी जनजाति समुदायको धार्मिक तथा जातिय आस्था, पहिचान, भाषा, सँस्कृति, परम्परा, थातथलो, प्राकृतिक श्रोत साधनमा कुनै किसिमको हस्तक्षेप र असर नगर्ने र परियोजनाले स्थानीय समुदायले भोगिरहेको जलवायु परिवर्तनको असरलाई अनुकूलन गर्न, दीगो जीविकोपार्जन सुधार गर्न र जलवायु उत्थानशिलता वृद्धि गर्न सहयोग गर्ने कुरामा सहमत भई हामी निम्न कुराहरु पुष्टि गर्दछौं;
    - क. हामीले कुनै पनि पक्षको दवाव वा प्रभाव विना स्वतन्त्र (Free) रुपमा छलफल तथा परामर्शमा भाग लिएका हौं ।
    - ख. प्रस्तावित परियोजना सम्बन्धि यथेष्ट जानकारी हामीलाई समयमै दिईएको थियो र छलफलको लागि पर्याप्त समय उपलब्ध गराईएको थियो ।
    - ग. प्रस्तावित परियोजनाको प्रकृति, दायरा, अवधि, सम्भावित / अपेक्षित लाभ/ नतिजाहरु, प्रस्तावित क्रियाकलापहरु, परियोजना व्यवस्थापन प्रक्रिया तथा संयन्त्र र वातावरणीय तथा सामाजिक जोखिमहरुको सम्बन्धमा हामीले पर्याप्त, पूर्व र सहजै बुझ्न सकिने गरि जानकारी प्राप्त गर्‍यौं ।
    - घ. हाम्रो स्वतन्त्र र पूर्व सूचित छलफल, परामर्श र सामुहिक निर्णयका आधारमा प्रस्तावित परियोजना हाम्रो क्षेत्रमा कार्यान्वयन गर्दा हामीलाई कुनै असर नगर्ने र उक्त परियोजना फाईदाजनक नै हुने निष्कर्श निकाली उक्त परियोजना कार्यान्वयनको लागि सहमति (Consent) प्रदान गर्दछौं ।
५. परियोजना कार्यान्वयनको चरणमा समेत हाम्रो सहभागिताको अपेक्षा सहित हाम्रो सर्वोपरी हितमा परियोजना कार्यन्वयन हुनेछ भन्ने विश्वास सहित हाम्रो समुदायलाई परियोजनाको आगामी चरणहरुमा समेत साझेदारको रुपमा व्यवहार हुनेछ भन्ने आशा गर्दछौं ।
६. हाम्रो आदिवासी अधिकार तथा पहिचानको सम्मान गर्नुभएकोमा हार्दिक आभार व्यक्त गर्दछौं र भविष्यमा पनि पारस्परिक सम्मान र समानतामा आधारित साझेदारिताको अपेक्षा गर्दछौं ।

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर

आदिवासी जनजाति समुदायको जातिय सँस्था ....ब्यासी समाज.......... का प्रतिनिधिहरुको हस्ताक्षरः

१. ध्याउक्ला रोकाया, वडा सदस्य तथा ब्यासी समाज प्रतिनिधि [signature]

२.

३.

स्थानीय सरकारका प्रतिनिधि / रोहवरको हस्ताक्षरः

१. मोहन विक्रम सिंह, अध्यक्ष, अदानचुली गाउँपालिका [signature]
२. कुमन बहादुर हत्याल, वडाध्यक्ष, वडा नं. ५, अदानचुली गाउँपालिका [signature]
३. विर्खे बहादुर बुढा, वडाध्यक्ष, वडा नं. ६, अदानचुली गाउँपालिका [signature]
४. दुर्ज रोकाया, उपाध्यक्ष, अदानचुली गाउँपालिका [signature]

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर
१.	रमेश रोकी	अदानचुली-८	9848317255	[signature]
२.	सगुने बुढा	अदानचुली	9865512997	[signature]
३.	सुरेन्द्र पुन मगर	अदानचुली-४	9864421523	[signature]
४.	सन्देश पुन मगर	अदानचुली ४	98443369041	[signature]
५.	मंगल रावल	अदानचुली ६	[illegible]	[signature]
६	मयकल बोहरा	अदानचुलि ५	9766664898	मयक्ला
७.	दिपा रावल	,, ,,	9769391539	दिपा रावल
८.	कलसरि रावल	,,	9767868728	कलसरि
९.	तारादेवीरावल	,,	9848309047	[signature]
१०.	पुल्या रावल	,,	9868391086	[signature]
११.	रवीन्द्र रावल	,,	9848316061	[signature]
१२.	खेमराज बोहरा	,,	9848391086	[signature]
१३.	लाल बहादुर रोकि	,,	9868778731	[signature]
१४.	चन्द्र रावल	,,		[signature]
१५.	सिडुंग बोहरा	,,	9868454586	[signature]
१६.	खड्क रोकि	,,	9848333583	[signature]
१७.	कर्ण पुन	,, ४	9849418319	[signature]
१८.	जुहे पुन	,, ४	9868802713	[signature]
१९.	धन ब. पुन	,, ४	9868342241	[signature]
२०.	बम बहादुर बुढा	,, ६	9767225958	[signature]
२१.	एन रोकि	अदानचुलि ५	9865717414	[signature]
२२	ध्याउक्ला रोकाया	,, ६	9865699356	[signature]

अदानचुली गाउँपालिका

गाउँ कार्यपालिकाको कार्यालय

श्रीनगर, हुम्ला
कर्णाली प्रदेश, नेपाल
२०७३

आ.व. २०८१/०८२ मितिः २०८१/०१/२८

च.नं. १९२५

श्री जो जस सँग सम्बन्ध राख्दछ ।

विषयः परियोजनाको लागि परामर्श तथा सहमति सम्बन्धमा ।

प्रस्तुत विषयमा, नेपाल सरकार तथा विश्व खाद्य कार्यक्रम (WFP) द्वारा अनुकूलन कोष (Adaptation Fund) मा प्रस्तावित परियोजना "Improving food system resilience of vulnerable communities in Nepal through community based adaptation" मा समावेस भएका क्रियाकलापहरु तथा अन्य विषयवस्तुहरु यस स्थानीय तहको नीतिगत र कार्यक्रमिक प्राथमिकताहरु मुताविक रहेको र यस स्थानीय तहमा २० प्रतिशत जनसंख्या आदिवासी जनजाती (indigenous Nationalities) व्यासी र पुन मगर रहेकोमा विश्व खाद्य कार्यक्रमका प्रतिनिधिहरु द्धारा उक्त आदिवासी जनजातीहरु सँग स्थलगत रुपमै परामर्श तथा छलफल यस स्थानीय तहको आधिकारिक रोहवरमा गरी आदिवासी जनजाती प्रतिनिधिहरुको उक्त परियोजनाको लागि स्वतन्त्र एवं पूर्व सूचित सहमती (Free Prior and Informed consent) प्राप्त भएको र प्रस्तावित परियोजनाको स्थानीय आदिवासी जनजातीहरुको भाषा, सँस्कृतिक, धर्म, परम्परा, थातथलो, प्राकृतिक स्रोत, साधन तथा पहिचानमा कुनै असर नपार्ने बरु उनिहरुको जीविकोपार्जन सुधार र जलवायु उत्थानशिलता अभिवृद्धिमा सहयोग पुऱ्याउने व्यहोरा स्थानीय सरकारको हैसियतले प्रमाणित गरिन्छ ।

नरेन्द्र विक्रम सिंह
अध्यक्ष
अध्यक्ष

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प्र.प्र.अः९८५८३२१०८४ उपाध्यक्षः९८४८१५७२१८ अध्यक्षः९८५१०७९४२०

FPIC from IPs – Bhote and Local Government from Himali Rural Municipality of Bajura district:

परियोजनाको लागि स्वतन्त्र एवं पूर्व सूचित सहमति (Free Prior and Informed Consent- FPIC) सम्बन्धमा ।

मिति ..२०८१/०१/२९........मा ~~कर्णाली~~ सुदूरपश्चिम प्रदेश, ..बाजुरा... जिल्ला ....हिमाली........गाउँपालिकामा विश्व खाद्य कार्यक्रम (WFP), र ...हिमाली...... गाउँपालिकाका प्रतिनिधिहरु र यस क्षेत्रका आदिवासी जनजाति (Indigenous Nationality) समुदाय:..भोटे...का स्थानीय प्रतिनिधिहरुको तपशिलको उपस्थितिमा नेपाल सरकार तथा विश्व खाद्य कार्यक्रम (WFP) द्वारा अनुकूलन कोष (Adaptation Fund) मा प्रस्तावित परियोजना " Improving food system resilience of vulnerable communities in Nepal through community-based adaptation" को सम्बन्धमा विस्तृत छलफल भई निम्नानुसारको सहमति भई हामी सबैको राजी खुशीले पुर्ण रुपमा सबै कुराहरु बुझी बुझाई हस्ताक्षर गरेका छौं ।

१. विश्व खाद्य कार्यक्रम (WFP) र ..हिमाली.. गाउँपालिकाका प्रतिनिधिहरु द्वारा प्रस्तावित परियोजना यो भौगोलिक क्षेत्रमा पनि कार्यान्वयन हुने कुराको जानकारी गराउँदै उक्त परियोजनाले सम्वोधन गर्नुपर्ने स्थानीय समुदायले भोगेको जलवायु परिवर्तनसँग सम्बन्धित समस्या र जलवायु परिवर्तनको प्रभाव तथा असरहरु र सम्भावित कार्यक्रमिक गतिविधिहरु (Programmatic Intervention) के- के हुन सक्छन् भनि हामी आदिवासी जनजाति समुदाय (Indigenous People) सँग विभिन्न समयमा परामर्श र छलफल गरेको कुरा पुष्टि गर्दछौं ।

२. नेपालले अनुमोदन गरेका आदिवासी जनजातिका अधिकार सम्वद्ध अन्तराष्ट्रिय श्रम सम्बन्धि महासन्धि (ILO) नं. १६९, आदिवासी जनजातिको अधिकार सम्बन्धि संयुक्त राष्ट्रसंघीय घोषणा पत्र (UNDRIP) र जैविक विविधता सम्बन्धि महासन्धि साथै नेपालको संविधान र कानुनमा व्यवस्था भए बमोजिम हामी यस क्षेत्रका आदिवासी जनजाति समुदायसँग विश्व खाद्य कार्यक्रमले प्रस्तावित परियोजनाको लागि स्वतन्त्र पूर्व सूचित सहमति (FPIC) लिएको कुरा ठिक साँचो हो ।

३. विश्व खाद्य कार्यक्रमले प्रस्तावित परियोजना बारे विस्तृतमा पूर्व जानकारी गराएको, स्थानीय आदिवासी जनजाति समुदायको प्रश्नहरुलाई स्पष्ट पारेको र हाम्रो सल्लाह सुझाव समेतलाई मध्यनजर गरि परियोजना प्रस्तावना (Project Proposal) तयार गरेको कुरामा सहमत छौं ।

४. प्रस्तावित परियोजनाले हामी स्थानीय आदिवासी जनजाति समुदायको धार्मिक तथा जातिय आस्था, पहिचान, भाषा, सँस्कृति, परम्परा, थातथलो, प्राकृतिक श्रोत साधनमा कुनै किसिमको हस्तक्षेप र असर नगर्ने र परियोजनाले स्थानीय समुदायले भोगिरहेको जलवायु परिवर्तनको असरलाई अनुकूलन गर्न, दीगो जीविकोपार्जन सुधार गर्न र जलवायु उत्थानशिलता वृद्धि गर्न सहयोग गर्ने कुरामा सहमत भई हामी निम्न कुराहारु पुष्टि गर्दछौं;

   क. हामीले कुनै पनि पक्षको दबाव वा प्रभाव विना स्वतन्त्र (Free) रुपमा छलफल तथा परामर्शमा भाग लिएका हौं ।

   ख. प्रस्तावित परियोजना सम्बन्धि यथेष्ट जानकारी हामीलाई समयमै दिईएको थियो र छलफलको लागि पर्याप्त समय उपलब्ध गराईएको थियो ।

   ग. प्रस्तावित परियोजनाको प्रकृति, दायरा, अवधि, सम्भावित / अपेक्षित लाभ/ नतिजाहरु, प्रस्तावित क्रियाकलापहरु, परियोजना व्यवस्थापन प्रक्रिया तथा संयन्त्र र वातावरणीय तथा सामाजिक जोखिमहरुको सम्वन्धमा हामीले पर्याप्त, पूर्व र सहजै बुझ्न सकिने गरि जानकारी प्राप्त गर्‍यौं ।

   घ. हाम्रो स्वतन्त्र र पूर्व सूचित छलफल, परामर्श र सामुहिक निर्णयका आधारमा प्रस्तावित परियोजना हाम्रो क्षेत्रमा कार्यान्वयन गर्दा हामीलाई कुनै असर नगर्ने र उक्त परियोजना फाईदाजनक नै हुने निष्कर्श निकाली उक्त परियोजना कार्यान्वयनको लागि सहमति (Consent) प्रदान गर्दछौं ।

५. परियोजना कार्यान्वयनको चरणमा समेत हाम्रो सहभागिताको अपेक्षा सहित हाम्रो सर्वोपरी हितमा परियोजना कार्यन्वयन हुनेछ भन्ने विश्वास सहित हाम्रो समुदायलाई परियोजनाको आगामी चरणहरुमा समेत साझेदारको रुपमा व्यवहार हुनेछ भन्ने आशा गर्दछौं ।

६. हाम्रो आदिवासी अधिकार तथा पहिचानको सम्मान गर्नुभएकोमा हार्दिक आभार व्यक्त गर्दछौं र भविष्यमा पनि पारस्परिक सम्मान र समानतामा आधारित साझेदारिताको अपेक्षा गर्दछौं ।

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर
१-	शुस्मिता गुरुङ	हिमाली गाउँपा-६	९८६५५०२६४८	शुस्मिता
२-	कौशिला बुढा	हिमाली गाउँपा-६	९८४८७८२६९०	कौशिला
३.	मानी बुढा	हिमाली गाउँपा-६	९८६३७८३२६२	[signature]
४-	टेकराज गुरुङ	हिमाली गाउँपा-६	९८४२२५५१३६	[signature]
५	शेरे लामा	हिमाली गाउँपा-६	९८४८७९२३०३	[signature]
६-	निरुल गुरुङ	हिमाली गाउँपा-६	९८४२२९१२१८०	[signature]

आदिवासी जनजाति समुदायको जातिय सँस्था .... का प्रतिनिधिहरुको हस्ताक्षर:

१.

२.

३.

स्थानीय सरकारका प्रतिनिधि / रोहवरको हस्ताक्षर:

१. गोविन्द बहादुर मल्ल, अध्यक्ष, हिमाली गाउँपालिका [signature]
२. राजकला सार्की, उपाध्यक्ष, हिमाली गाउँपालिका [signature]
३. भिमानन्द पाण्डे, वडाध्यक्ष, वडा नं. ४, हिमाली गाउँपालिका [signature]
४. प्रेमलाल भण्डारी, वडाध्यक्ष, वडा नं. ६, हिमाली गाउँपालिका [signature]
५. रन बहादुर बुढा, वडा नं. २, हिमाली गाउँपालिका [signature]

हिमाली गाउँपालिका
Himali Rural Municipality
गाउँ कार्यपालिकाको कार्यालय
(Office Of Rural Municipal Executive)
धूलाचौर, बाजुरा (Dhulachaur , Bajura)
सुदूरपश्चिम प्रदेश, नेपाल (Sudurpaschim ,Nepal)

प.सं./Letter No.:०८१।०८२ च.नं./Ref.No.:839 मिति/Date:२०८२।०२।०९ गते

श्री जो जस संग सम्बन्ध राख्दछ।

विषय: परियोजनाकको लागि परामर्श तथा सहमति सम्बन्धमा।

उपर्युक्त विषयमा, नेपाल सरकार तथा विश्व खाद्य कार्यक्रम(WFP) द्धारा अनुकूलन कोष (Adaptation Fund) मा प्रस्तावित परियोजना "Improving food system resilience of vulnerable communities in Nepal through community based adaptation" मा समावेश भएका क्रियाकलापहरु तथा अन्य विषयवस्तुहरु यस स्थानीय तहको नीतिगत र कार्यक्रमिक प्राथमिकताहरु मुताविक रहेको र यस स्थानीय तहमा ३% प्रतिशत जनसंख्या आदिवासी जनजाती (indigenous Nationalities) गुरुङ ,थापा भोटे, लामा, आदि रहेकोमा विश्व खाद्य कार्यक्रमका प्रतिनिधिहरु द्धारा उक्त आदिवासी जनजातीहरु सँग स्थलगत रुपमै परामर्श तथा छलफल यस स्थानीय तहको आधिकारिक रोहवरमा गरी आदिवासी जनजाती प्रतिनिधिहरुको उक्त परियोजनाको लागि स्वतन्त्र एवं पूर्व सूचित सहमती (Free Prior and Informed consent) प्राप्त भएको र प्रस्तावित परियोजनाको स्थानीय आदिवासी जनजातीहरुको भाषा, सँस्कृति, धर्म, परम्परा, थातथलो, प्राकृतिक स्रोत, साधन तथा पहिचानमा कुनै असर नपार्ने बरु उनिहरुको जीविकोपार्जन सुधार र जलवायु उत्थानशिलता अभिवृद्धिमा सहयोग पुन्याउने व्यहोरा स्थानीय सरकारको हैसियतले प्रमाणित गरिन्छ।

गोविन्द वहादुर मल्ल
अध्यक्ष
गोविन्द बहादुर मल्ल
अध्यक्ष

FPIC from IPs - Magar and Local Government from Shuvakalika Rural Municipality of Kalikot district:

परियोजनाको लागि स्वतन्त्र एवं पूर्व सूचित सहमति (Free Prior and Informed Consent- FPIC) सम्बन्धमा ।

मिति २०८२।१२।२ ..... मा कर्णाली प्रदेश, कालिकोट जिल्ला शुभकालिका गाउँपालिकामा विश्व खाद्य कार्यक्रम (WFP), र शुभकालिका गाउँपालिकाका प्रतिनिधिहरु र यस क्षेत्रका आदिवासी जनजाति (Indigenous Nationality) समुदाय मगर का स्थानीय प्रतिनिधिहरुको तपशिलको उपस्थितिमा नेपाल सरकार तथा विश्व खाद्य कार्यक्रम (WFP) द्वारा अनुकूलन कोष (Adaptation Fund) मा प्रस्तावित परियोजना " Improving food system resilience of vulnerable communities in Nepal through community-based adaptation" को सम्बन्धमा विस्तृत छलफल भई निम्नानुसारको सहमति भई हामी सबैको राजी खुशीले पुर्ण रुपमा सबै कुराहरु बुझी बुझाई हस्ताक्षर गरेका छौं ।

१. विश्व खाद्य कार्यक्रम (WFP) र शु.गा. गाउँपालिकाका प्रतिनिधिहरु द्वारा प्रस्तावित परियोजना यो भौगोलिक क्षेत्रमा पनि कार्यान्वयन हुने कुराको जानकारी गराउँदै उक्त परियोजनाले सम्बोधन गर्नुपर्ने स्थानीय समुदायले भोगेको जलवायु परिवर्तनसँग सम्बन्धित समस्या र जलवायु परिवर्तनको प्रभाव तथा असरहरु र सम्भावित कार्यक्रमिक गतिविधिहरु (Programmatic Intervention) के- के हुन सक्छन् भनि हामी आदिवासी जनजाति समुदाय (Indigenous People) सँग विभिन्न समयमा परामर्श र छलफल गरेको कुरा पुष्टि गर्दछौं ।

२. नेपालले अनुमोदन गरेका आदिवासी जनजातिका अधिकार सम्बद्ध अन्तर्राष्ट्रिय श्रम सम्बन्धि महासन्धि (ILO) नं. १६९, आदिवासी जनजातिको अधिकार सम्बन्धि संयुक्त राष्ट्रसंघीय घोषणा पत्र (UNDRIP) र जैविक विविधता सम्बन्धि महासन्धि साथै नेपालको संविधान र कानुनमा व्यवस्था भए बमोजिम हामी यस क्षेत्रका आदिवासी जनजाति समुदायसँग विश्व खाद्य कार्यक्रमले प्रस्तावित परियोजनाको लागि स्वतन्त्र पूर्व सूचित सहमति (FPIC) लिएको कुरा ठिक साँचो हो ।

३. विश्व खाद्य कार्यक्रमले प्रस्तावित परियोजना बारे विस्तृतमा पूर्व जानकारी गराएको, स्थानीय आदिवासी जनजाति समुदायको प्रश्नहरुलाई स्पष्ट पारेको र हाम्रो सल्लाह सुझाव समेतलाई मध्यनजर गरि परियोजना प्रस्तावना (Project Proposal) तयार गरेको कुरामा सहमत छौं ।

४. प्रस्तावित परियोजनाले हामी स्थानीय आदिवासी जनजाति समुदायको धार्मिक तथा जातिय आस्था, पहिचान, भाषा, सँस्कृति, परम्परा, थातथलो, प्राकृतिक श्रोत साधनमा कुनै किसिमको हस्तक्षेप र असर नगर्ने र परियोजनाले स्थानीय समुदायले भोगिरहेको जलवायु परिवर्तनको असरलाई अनुकूलन गर्न, दीगो जीविकोपार्जन सुधार गर्न र जलवायु उत्थानशिलता वृद्धि गर्न सहयोग गर्ने कुरामा सहमत भई हामी निम्न कुराहारु पुष्टि गर्दछौं;

   क. हामीले कुनै पनि पक्षको दबाव वा प्रभाव विना स्वतन्त्र (Free) रुपमा छलफल तथा परामर्शमा भाग लिएका हौं ।

   ख. प्रस्तावित परियोजना सम्बन्धि यथेष्ट जानकारी हामीलाई समयमै दिईएको थियो र छलफलको लागि पर्याप्त समय उपलब्ध गराईएको थियो ।

   ग. प्रस्तावित परियोजनाको प्रकृति, दायरा, अवधि, सम्भावित / अपेक्षित लाभ/ नतिजाहरु, प्रस्तावित क्रियाकलापहरु, परियोजना व्यवस्थापन प्रक्रिया तथा संयन्त्र र वातावरणीय तथा सामाजिक जोखिमहरुको सम्बन्धमा हामीले पर्याप्त. पर्व र सहजै बझन सकिने गरि जानकारी प्राप्त गरयौं ।

   घ. हाम्रो स्वतन्त्र र पूर्व सूचित छलफल, परामर्श र सामुहिक निर्णयका आधारमा प्रस्तावित परियोजना हाम्रो क्षेत्रमा कार्यान्वयन गर्दा हामीलाई कुनै असर नगर्ने र उक्त परियोजना फाईदाजनक नै हुने निष्कर्श निकाली उक्त परियोजना कार्यान्वयनको लागि सहमति (Consent) प्रदान गर्दछौं ।

५. परियोजना कार्यान्वयनको चरणमा समेत हाम्रो सहभागिताको अपेक्षा सहित हाम्रो सर्वोपरी हितमा परियोजना कार्यन्वयन हुनेछ भन्ने विश्वास सहित हाम्रो समुदायलाई परियोजनाको आगामी चरणहरुमा समेत साझेदारको रुपमा व्यवहार हुनेछ भन्ने आशा गर्दछौं ।

६. हाम्रो आदिवासी अधिकार तथा पहिचानको सम्मान गर्नुभएकोमा हार्दिक आभार व्यक्त गर्दछौं र भविष्यमा पनि पारस्परिक सम्मान र समानतामा आधारित साझेदारिताको अपेक्षा गर्दछौं ।

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर
१	रण बहादुर रामजाली	शुभकालिका-१	९८४९३५१२३५	
२	सेवर रामजाली	,, — ,,		
३	राम बहादुर बुढा	,, — ,,	९८४९२४२४६६	
४	इन्दु रामजाली	,, — ,,	९८४९३८०३४	
५	गोविन्द बुढा मगर	,, — ,,	९८४९३१८४८१	

आदिवासी जनजाति समुदायको जातिय सँस्था आदिवासी जनजाति मगर संघ का प्रतिनिधिहरुको हस्ताक्षरः

१. नरबहादुर बुढा मगर — अध्यक्ष
२. सुमन रामजाली — सचिव
३. सवेर रामजाली — सदस्य

स्थानीय सरकारका प्रतिनिधि / रोहवरको हस्ताक्षरः

१. विर बहादुर रामजाली — वडा अध्यक्ष — वडा नं १ विशेष
२. दिपेन्द्र अधिकारी — अ.इ. इन्जिनियर
३.

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर
	राज बहादुर बुढा	शुभकालिका-१	९८४८८८५५४६	
	प्रेम बहादुर रामजाली	,, — ,,	९८४८३१७३८	
	राजकुमार रामजाली	,, — ,,	९८४८३१५८५५	
	निर्मला रामजाली	,, — ,,		
	नरी रामजाली	,, — ,,		
	भवना रामजाली	,, — ,,	९८४२३७७३	
	बबिता रामजाली बुढा	,, — ,,		बबिता
	धनसरा बुढा	,, — ,,		
	रक्की रामजाली	,, — ,,	९८६३७०५५५६	
	गणेश बुढा मगर	,, — ,,	९८४८३१८५८	
	राम बहादुर बुढा मगर	,, — ,,	९८४८५५५०७	

शुभकालिका गाउँपालिका

गाउँ कार्यपालिकाको कार्यालय

सुकाटिया, कालीकोट
कर्णाली प्रदेश, नेपाल
Email:ito.kalikamunkalikot@gmail.com

पत्र संख्या :२०८१/०८२
चलानी नं : ९३०३

मिति :२०८२/२/२

श्री जो सँग सम्बन्धित छ।

विषयः परियोजनाको लागि परामर्श तथा सहमति सम्बन्धमा ।

प्रस्तुत विषयमा, नेपाल सरकार तथा विश्व खाद्य कार्यक्रम (WFP) द्वारा अनुकूलन कोष (Adaptation Fund) मा प्रस्तावित परियोजना " Improving food system resilience of vulnerable communities in Nepal through community-based adaptation" मा समावेश भएका क्रियाकलापहरु तथा अन्य विषयवस्तुहरु यस स्थानीय तहको नीतिगत र कार्यक्रमका प्राथमिकताहरु मुताविक रहेको र यस स्थानीय तहमा ५.०३२ प्रतिशत जनसंख्या आदिवासी जनजाति (Indigenous Nationalities) मगर, कुमाल तथा घर्ति/भुजेलको रहेकोमा विश्व खाद्य कार्यक्रमका प्रतिनिधिहरु द्वारा उक्त आदिवासी जनजातिहरुसँग स्थलगत रुपमै परामर्श तथा छलफल यस स्थानीय तहको आधिकारिक रोहवरमा गरि आदिवासी जनजाति प्रतिनिधिहरुको उक्त परियोजनाको लागि स्वतन्त्र एवं पूर्व सूचित सहमति (Free Prior and Informed Consent) प्राप्त भएको र प्रस्तावित परियोजनाको स्थानीय आदिवासी जनजातिहरुको भाषा, सँस्कृति, धर्म, परम्परा, थातथलो, प्राकृतिक श्रोत, साधन तथा पहिचानमा कुनै असर नपार्ने बरु उनीहरुको जीविकोपार्जन सुधार र जलवायु उत्थानशिलता अभिवृद्धिमा सहयोग पुर्याउने व्यहोरा स्थानीय सरकारको हैसियतले प्रमाणित गरिन्छ ।

गा.पा.अध्यक्ष

FPIC from IPs – Tamang, Karmaronmg/Mugal and Local Government from Mugumkarmarong Rural Municipality in Mugu:

परियोजनाको लागि स्वतन्त्र एवं पूर्व सुचित सहमति (Free Prior and Informed Consent- FPIC) सम्बन्धमा ।

मिति २०८१।२।१५.........मा कर्णाली प्रदेश, ..मुगु.... जिल्ला मुगुम कार्मारोङ गाउँपालिकामा विश्व खाद्य कार्यक्रम (WFP), र मुगुम कार्मारोङ गाउँपालिकाका प्रतिनिधिहरु र यस क्षेत्रका आदिवासी जनजाति (Indigenous Nationality) समुदाय तामाङ कार्मारोङ मुगाल का स्थानीय प्रतिनिधिहरुको तपशिलको उपस्थितिमा नेपाल सरकार तथा विश्व खाद्य कार्यक्रम (WFP) द्वारा अनुकूलन कोष (Adaptation Fund) मा प्रस्तावित परियोजना " Improving food system resilience of vulnerable communities in Nepal through community-based adaptation" को सम्बन्धमा विस्तृत छलफल भई निम्नानुसारको सहमति भई हामी सबैको राजी खुशीले पुर्ण रुपमा सबै कुराहरु बुझी बुझाई हस्ताक्षर गरेका छौं ।

१. विश्व खाद्य कार्यक्रम (WFP) र .मु..का... गाउँपालिकाका प्रतिनिधिहरु द्वारा प्रस्तावित परियोजना यो भौगोलिक क्षेत्रमा पनि कार्यान्वयन हुने कुराको जानकारी गराउँदै उक्त परियोजनाले सम्वोधन गर्नुपर्ने स्थानीय समुदायले भोगेको जलवायु परिवर्तनसँग सम्बन्धित समस्या र जलवायु परिवर्तनको प्रभाव तथा असरहरु र सम्भावित कार्यक्रमिक गतिविधिहरु (Programmatic Intervention) के- के हुन सक्छन् भनि हामी आदिवासी जनजाति समुदाय (Indigenous People) सँग विभिन्न समयमा परामर्श र छलफल गरेको कुरा पुष्टि गर्दछौं ।

२. नेपालले अनुमोदन गरेका आदिवासी जनजातिका अधिकार सम्वद्ध अन्तराष्ट्रिय श्रम सम्बन्धि महासन्धि (ILO) नं. १६९, आदिवासी जनजातिको अधिकार सम्बन्धि संयुक्त राष्ट्रसंघीय घोषणा पत्र (UNDRIP) र जैविक विविधता सम्बन्धि महासन्धि साथै नेपालको संविधान र कानुनमा व्यवस्था भए बमोजिम हामी यस क्षेत्रका आदिवासी जनजाति समुदायसँग विश्व खाद्य कार्यक्रमले प्रस्तावित परियोजनाको लागि स्वतन्त्र पूर्व सूचित सहमति (FPIC) लिएको कुरा ठिक साँचो हो ।

३. विश्व खाद्य कार्यक्रमले प्रस्तावित परियोजना बारे विस्तृतमा पूर्व जानकारी गराएको, स्थानीय आदिवासी जनजाति समुदायको प्रश्नहरुलाई स्पष्ट पारेको र हाम्रो सल्लाह सुझाव समेतलाई मध्यनजर गरि परियोजना प्रस्तावना (Project Proposal) तयार गरेको कुरामा सहमत छौं ।

४. प्रस्तावित परियोजनाले हामी स्थानीय आदिवासी जनजाति समुदायको धार्मिक तथा जातिय आस्था, पहिचान, भाषा, सँस्कृति, परम्परा, थातथलो, प्राकृतिक श्रोत साधनमा कुनै किसिमको हस्तक्षेप र असर नगर्ने र परियोजनाले स्थानीय समुदायले भोगिरहेको जलवायु परिवर्तनको असरलाई अनुकूलन गर्न, दीगो जीविकोपार्जन सुधार गर्न र जलवायु उत्थानशिलता वृद्धि गर्न सहयोग गर्ने कुरामा सहमत भई हामी निम्न कुराहारु पुष्टि गर्दछौं;

क. हामीले कुनै पनि पक्षको दबाव वा प्रभाव विना स्वतन्त्र (Free) रुपमा छलफल तथा परामर्शमा भाग लिएका हौं ।

ख. प्रस्तावित परियोजना सम्बन्धि यथेष्ट जानकारी हामीलाई समयमै दिईएको थियो र छलफलको लागि पर्याप्त समय उपलब्ध गराईएको थियो ।

ग. प्रस्तावित परियोजनाको प्रकृति, दायरा, अवधि, सम्भावित / अपेक्षित लाभ/ नतिजाहरु, प्रस्तावित क्रियाकलापहरु, परियोजना व्यवस्थापन प्रक्रिया तथा संयन्त्र र वातावरणीय तथा सामाजिक जोखिमहरुको सम्बन्धमा हामीले पर्याप्त, पूर्व र सहजै बुझ्न सकिने गरि जानकारी प्राप्त गर्यौं ।

घ. हाम्रो स्वतन्त्र र पूर्व सूचित छलफल, परामर्श र सामुहिक निर्णयका आधारमा प्रस्तावित परियोजना हाम्रो क्षेत्रमा कार्यान्वयन गर्दा हामीलाई कुनै असर नगर्ने र उक्त परियोजना फाईदाजनक नै हुने निष्कर्श निकाली उक्त परियोजना कार्यान्वयनको लागि सहमति (Consent) प्रदान गर्दछौं ।

५. परियोजना कार्यान्वयनको चरणमा समेत हाम्रो सहभागिताको अपेक्षा सहित हाम्रो सर्वोपरी हितमा परियोजना कार्यन्वयन हुनेछ भन्ने विश्वास सहित हाम्रो समुदायलाई परियोजनाको आगामी चरणहरुमा समेत साझेदारको रुपमा व्यवहार हुनेछ भन्ने आशा गर्दछौं ।

६. हाम्रो आदिवासी अधिकार तथा पहिचानको सम्मान गर्नुभएकोमा हार्दिक आभार व्यक्त गर्दछौं र भविष्यमा पनि पारस्परिक सम्मान र समानतामा आधारित साझेदारिताको अपेक्षा गर्दछौं ।

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर
१.	तोन्मा लामा	माङ ग्री-८	९८६९६३५०२४	[signature]
२.	छिरिङ सेडी पेमा साङ्मो	~~५-१-९~~ दाउरा-५	९८६३०२०६६६	[signature]
३.	इन्जम लामा	कार्ति-४.	९८४८३२२०४६	[signature]
४	सोनाम लामा	मुगु -२	९८४३००४०६३	[signature]
५	पाल्दोन लामा	रिउस -६		[signature]

आदिवासी जनजाति समुदायको जातिय सँस्था आदिवासी जे. मुगाली संघ, आ.ज. कार्मारोङ संघ का प्रतिनिधिहरुको हस्ताक्षरः

१. छिरिङ क्याल्ने लामा अध्यक्ष [signature]

२. ~~छिरिङ पुरिक लामा उपाध्यक्ष~~

३.

स्थानीय सरकारका प्रतिनिधि / रोहवरको हस्ताक्षरः

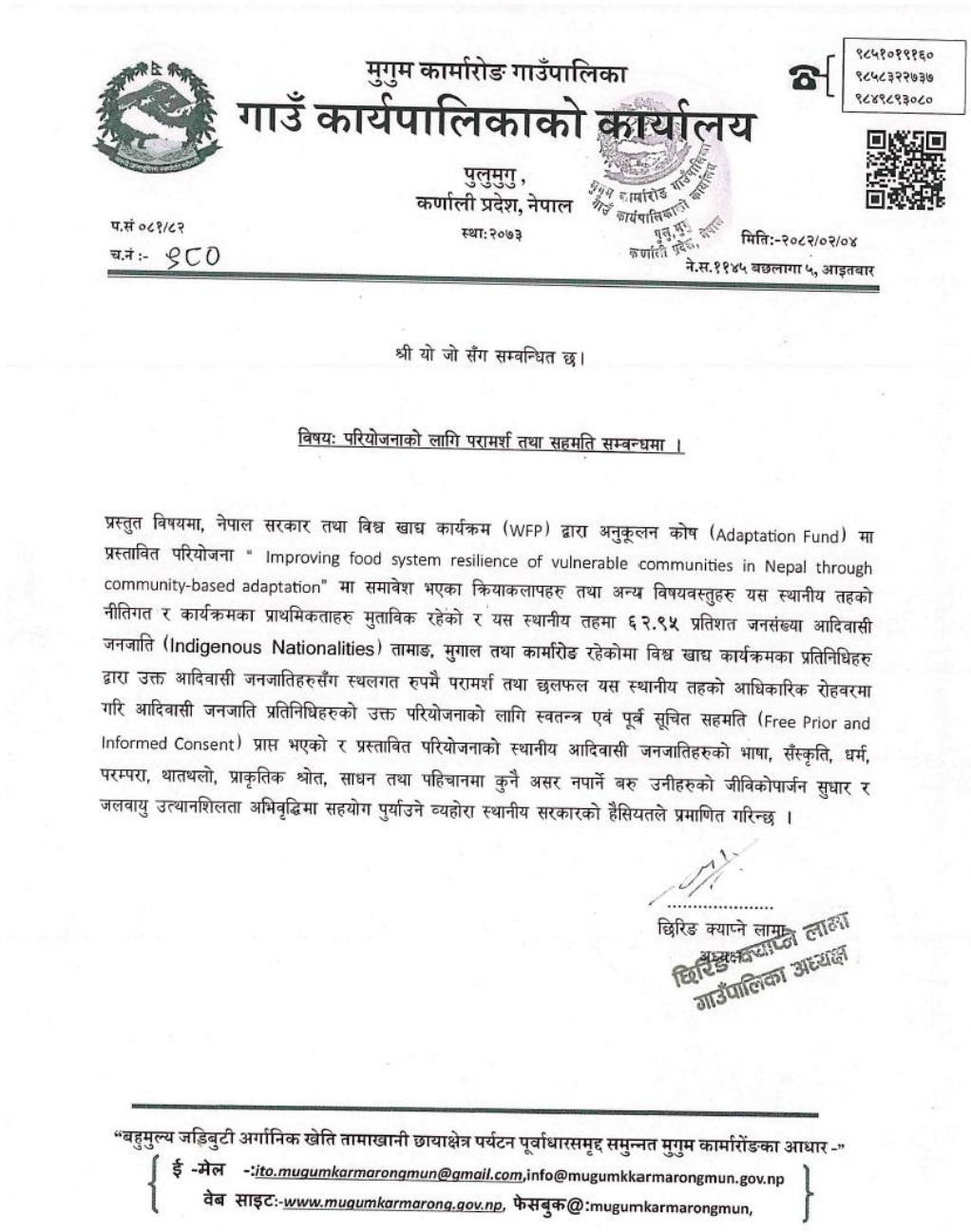
१. छिरिङ क्याल्ने लामा अध्यक्ष [signature]

२. छिरिङ पुरिक लामा [signature]

३. च्यपवा तामाङ. [signature] अध्यक्ष वडा २

समुदायका प्रतिनिधिहरुको हस्ताक्षर

क.सं.	नाम	ठेगाना	सम्पर्क नं.	हस्ताक्षर
६	कोन्जोक बुटीक तामाङ	पुवा - ६		कोन्जोक
७	उर्गेन लामा	रिउस - ६		उर्गेन
८	सोनाम तोर्छे	रिउस - ६		सोनाम
९	दावा छिरिङ	कार्मारोङ - ६		[signature]
१०.	कार्मा छोम्फेल	रिउस - ६		[signature]
११.	तेसाङ तोमा तामाङ	पुल - ५		[signature]
१२.	छिरिङ पाल्मु लामा	रिउस - ६		[signature]
१३.	पाल्मु लामा	रिउस - ६.		पाल्मु
१४.	साङमु लामा	रिउस - ६.		[signature]
१५.	कार्मा थाङजीङ	रिउस - ६		[thumbprint]
१६	च्यपवा तामाङ.	वडा नं: २ अध्यक्ष		[signature]
१७	लावा साङ्वा तामाङ	वडा नं: ५ अध्यक्ष		[signature]
१८	ग्यालजेन लामा	वाड नं. ६ अध्यक्ष	९८४४३७७२७७	[signature]
१९	रतन बहादुर बुढा	९ नं वडा कार्यालय	९८५८८९५४०६	[signature]
२०	पेमा घण्डुप तामाङ	४ अध्यक्ष	९८६८३४७३४५	[signature]
२१	पासाङ लामा	३ "	९८६९५९१५१४	[signature]



मुगुम कार्मारोङ गाउँपालिका
गाउँ कार्यपालिकाको कार्यालय
पुलुमुगु,
कर्णाली प्रदेश, नेपाल
स्था:२०७३

९८५१०१९१६०
९८५८३२२७३७
९८४९८९३०८०

प.सं ०८१/८२
च.नं :- ९८०
मिति:-२०८२/०२/०४
ने.स.११४५ बछलागा ५, आइतबार

श्री यो जो सँग सम्बन्धित छ।

विषयः परियोजनाको लागि परामर्श तथा सहमति सम्बन्धमा ।

प्रस्तुत विषयमा, नेपाल सरकार तथा विश्व खाद्य कार्यक्रम (WFP) द्वारा अनुकूलन कोष (Adaptation Fund) मा प्रस्तावित परियोजना " Improving food system resilience of vulnerable communities in Nepal through community-based adaptation" मा समावेश भएका कियाकलापहरु तथा अन्य विषयवस्तुहरु यस स्थानीय तहको नीतिगत र कार्यक्रमका प्राथमिकताहरु मुताविक रहेको र यस स्थानीय तहमा ६२.९५ प्रतिशत जनसंख्या आदिवासी जनजाति (Indigenous Nationalities) तामाङ, मुगाल तथा कार्मारोङ रहेकोमा विश्व खाद्य कार्यक्रमका प्रतिनिधिहरु द्वारा उक्त आदिवासी जनजातिहरुसँग स्थलगत रुपमै परामर्श तथा छलफल यस स्थानीय तहको आधिकारिक रोहवरमा गरि आदिवासी जनजाति प्रतिनिधिहरुको उक्त परियोजनाको लागि स्वतन्त्र एवं पूर्व सूचित सहमति (Free Prior and Informed Consent) प्राप्त भएको र प्रस्तावित परियोजनाको स्थानीय आदिवासी जनजातिहरुको भाषा, सँस्कृति, धर्म, परम्परा, थातथलो, प्राकृतिक श्रोत, साधन तथा पहिचानमा कुनै असर नपार्ने बरु उनीहरुको जीविकोपार्जन सुधार र जलवायु उत्थानशिलता अभिवृद्धिमा सहयोग पुर्याउने व्यहोरा स्थानीय सरकारको हैसियतले प्रमाणित गरिन्छ ।

.....
छिरिङ क्याप्ने लामा
अध्यक्षज्यूको लागी
गाउँपालिका अध्यक्ष

"बहुमुल्य जडिबुटी अर्गानिक खेति तामाखानी छायाक्षेत्र पर्यटन पूर्वाधारसमृद्द समुन्नत मुगुम कार्मारोङका आधार -"
ई -मेल -:ito.mugumkarmarongmun@gmail.com,info@mugumkkarmarongmun.gov.np
वेब साइट:-www.mugumkarmarong.gov.np, फेसबुक@:mugumkarmarongmun,

English translation of the FPIC document signed by the IPs:

Free Prior and Informed Consent (FPIC) for the programme from IPs

We are pleased to have officially documented and signed this agreement on …… following a thorough discussion and mutual understanding of the proposed project titled "Improving Food System Resilience of Vulnerable Communities in Nepal through Community-Based Adaptation," jointly developed by the Government of Nepal and the World Food Programme (WFP) for submission to the Adaptation Fund. This took place in the presence of representatives from …….. Rural Municipality, WFP staff, and members of the Indigenous Nationality Group from …….. of ……. District in Karnali Province.

1.2.11. We acknowledge that we have been informed about the project proposed by the World Food Programme (WFP), in collaboration with representatives of …… Rural Municipality, and it will also be implemented in this geographical area. We confirm that consultations and discussions have been held with Indigenous Peoples on multiple occasions to identify climate change-related challenges faced by the local community,

assess the impacts and effects of climate change, and explore potential programmatic interventions that the project should address.

1.2.12. It is confirmed that the World Food Programme has obtained Free Prior and Informed Consent (FPIC) from the Indigenous Peoples of the region for the proposed project. The rights of these communities are recognized under International Labour Organization (ILO) Convention No. 169, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and the Convention on Biological Diversity— all of which have been ratified by Nepal—as well as under the Constitution and laws of Nepal.

1.2.13. We agree that the World Food Programme provided detailed prior information about the proposed project, addressed the questions raised by the local Indigenous Peoples, and incorporated our feedback and suggestions in the preparation of the Project Proposal.

1.2.14. We agree that the proposed project will not interfere with or impact the religious and ethnic beliefs, identity, language, culture, traditions, land, natural resources of the local indigenous peoples and communities and that the project will help the local community in adapting to the impacts of climate change, improve sustainable livelihoods, and increase climate resilience affirming the following:

a. We have participated in the discussions and consultations freely without any pressure or external influence.
b. We were provided with timely and adequate information about the proposed project, along with sufficient time for meaningful discussion.

1.2.15. We have received sufficient, prior and comprehensive information regarding the nature, scope, duration, expected outcomes and benefits, proposed activities, project management processes and mechanisms, as well as the potential environmental and social risks associated with the project.

1.2.16. Based on our free and prior informed discussions, consultations and collective decision-making, we conclude that the implementation of the proposed project in our area will not affect us and that the project will be beneficial, and we hereby give our consent to the implementation of the project.

1. We expect our community to be recognized as a partner in the future phases of the project and anticipate active participation during the implementation phase, with the understanding that the project will be carried out in our best interest.
2. We sincerely express our gratitude for the respect shown toward our indigenous rights and identity and look forward to a partnership based on mutual respect and equality in the future as well.

Signature of the community representatives

S.N.	Name	Address	Contact no.	Signature

Signature of the representatives from the …….. Indigenous Peoples' community:

Signature of the local government representative:

Letter from Local Government

Date:

To whom it may concern
Subject: Regarding Consultation and Agreement for the project

The activities and thematic areas included in the project "Improving food system resilience of vulnerable communities in Nepal through community-based adaptation" jointly proposed by the Government of Nepal and the World Food Programme (WFP) under the Adaptation Fund, align with the policy and programmatic priorities. Given that …… percent of the population in this rural municipality consists of ……..Indigenous Nationalities, WFP representatives conducted on-site consultations and discussions with the indigenous nationalities in presence of the authorities of the local level. The Local Government confirms that the Free Prior and Informed Consent (FPIC) of the indigenous peoples' representatives for the project was obtained. It also affirms that the proposed project will not harm their language, culture, religion, traditions, heritage, natural resources, means, and identity- instead it will contribute to enhancing their livelihoods and strengthening their climate resilience.

……..
Chairperson

Annex 8: Project Grievance Redress Mechanism

The Grievance Redress Mechanism (GRM) will be instituted to systematically receive address and resolve any queries, feedback or concerns raised by stakeholders, including communities residing in areas where the Adaptation Fund-supported project is implemented. The mechanism is designed to ensure the timely, fair and transparent resolution of grievances, thereby promoting the alignment of project activities with established environmental, social, and ethical standards and mitigating potential adverse impacts. The GRM affirms the rights of individuals, households, groups, and partners to participate in and influence the effective implementation of the programme and its adaptations. The Project Management Unit (PMU), relevant government executing entities - including local governments - and WFP will collaborate to create an enabling environment that upholds this right. Multiple feedback channels will be established to ensure a human-centred and inclusive approach. The mechanism builds upon lessons learned from the Adaptation Fund-financed Climate Adaptation for Food Security (CAFS-Karnali) project, the Local Infrastructure Support Programme (LISP) – Technical Assistance project, and other relevant initiatives implemented by WFP Nepal. The LGs will use their existing GRM for the project as well, for which the project TA team will support the LGs to strengthen their existing system, expand their scope to the project activities and institutionalize it through a formal GRM operation and management directive/SoP.

Scope of Application
This mechanism applies to all stakeholders affected by the project, including community members, local authorities, project personnel, implementing partners (including financial service providers), and other relevant actors.

Guiding Principles
The GRM shall operate in accordance with the following core principles to ensure its effectiveness, integrity, and the maintenance of trust between project implementers and affected communities:

- **Accessibility**: The mechanism shall be readily accessible to all stakeholders irrespective of gender, age, caste and ethnicity, with particular attention to vulnerable groups, including women, persons with disabilities, the elderly, at-risk groups and children. It shall be free of charge, available in local languages, utilize multiple channels (including face-to-face) and accommodate varying literacy levels and disabilities.
- **Transparency**: The grievance process shall be impartial and transparent. Stakeholders shall be informed about the mechanism through various media and outreach approaches, including procedures for submitting grievances, including sensitive cases and an option for anonymous submission, and steps for receiving, processing and resolving feedback/ complaints. The feedback shall be systematically documented, digitized and used to enhance project activities.
- **Fairness**: The mechanism shall ensure impartial and equitable treatment for all parties involved, providing equal opportunity for grievances to be heard and resolved fairly, without discrimination.
- **Timeliness**: Grievances shall be acknowledged, addressed or resolved and escalated promptly, where necessary in accordance with predefined timelines. Resolutions or feedback shall be communicated to complainants and relevant parties in a timely and appropriate manner.
- **Confidentiality**: The confidentiality of complainants and the details of grievances shall be protected at all times. Disclosure of information shall occur only when necessary for resolution, with the informed consent of the complainant.
- **Responsiveness:** The mechanism shall be responsive to the needs and concerns of stakeholders, ensuring that grievances are addressed effectively. Lessons learned from grievances and feedback shall be documented, systematically reviewed and analyzed to inform decision-making, improve project implementation, and strengthen the overall grievance mechanism over time.

Roles and Responsibilities
To uphold the above principles, the following roles and responsibilities shall be established within the GRM framework:

Grievance Focal Person / Nodal Officer
A Nodal Officer, appointed by the local government, shall serve as the designated authority for receiving, recording, processing, and responding to grievances. This officer shall ensure that complaints are centralized in a digital system, addressed efficiently and transparently. Grievances submitted through various channels - such as online platforms, physical forms, suggestion boxes or helplines - shall be formally registered and acknowledged. The Nodal Officer shall maintain a grievance register or digital system to track the status and resolution timelines of each case, ensuring quality and timely analysis of the feedback or grievances. Coordination with relevant departments shall be undertaken to ensure timely resolution, with unresolved or complex cases escalated to higher authorities. Outcomes shall be communicated clearly to complainants. A clear referral pathway shall be established to ensure referral of grievances to relevant entities. Public awareness initiatives shall be undertaken to ensure the mechanism is visible, accessible, and user-friendly. The Nodal Officer shall uphold objectivity, impartiality, and confidentiality throughout the process, thereby reinforcing public trust. This role shall be fulfilled by the government.

Grievance Committees
Grievance Committees shall be established at both ward and municipal levels, where not already constituted by local governments, to respond to any queries and address public concerns. At the ward level, the committee shall be chaired by the Ward Chairperson and include government officials, elected representatives, and the Ward Secretary. At the municipal level, the committee shall be chaired by the Municipal Chairperson, with membership comprising the Deputy or Vice Chairperson, section heads, ward chairpersons, and the Chief Administrative Officer. Grievances shall first be addressed at the ward level. If unresolved, they shall be escalated to the municipal-level committee. This tiered structure ensures that grievances are addressed at the appropriate level based on their complexity. Should the municipal committee be unable to resolve the issue, the grievance shall be referred as below:

- Grievances pertaining to project planning, beneficiary selection, targeting, or implementation shall be referred to the Project Technical Committee for review and resolution, in accordance with established procedures and technical standards.
- Grievances involving allegations of fraud, sexual exploitation, or abuse (SEA) shall be referred to the relevant government legal institutions and the WFP Nepal Country Office's Accountability to Affected Populations (AAP) and Protection from Sexual Exploitation and Abuse (PSEA) focal points. These cases may be submitted through the WFP Community Feedback Mechanism or other appropriate channels, ensuring that such sensitive matters are addressed with the utmost confidentiality, urgency, and in line with applicable legal and ethical frameworks.

Communication and Awareness-Raising on the Grievance Redress Mechanism
The project will ensure that all stakeholders and beneficiaries are adequately informed about the Grievance Redress Mechanism (GRM). Clear, accessible, and comprehensive information will be disseminated through diverse communication channels to maximize outreach, accessibility and understanding. These channels include community meetings, distribution of brochures and flyers in local languages, and the use of media platforms such as radio, SMS, and audio messages to raise awareness and encourage the use of the GRM. Information and communication materials - such as posters, banners, information boards, brochures, and/ or flyers – will be displayed in public and community centres, including the offices of community leaders. Recognizing the critical role of local as well as religious leaders and committees in grievance resolution, targeted training and sensitization sessions will be conducted to strengthen their capacity. These sessions will also be extended to project staff and other relevant stakeholders to ensure a harmonized and effective response. Contact details of key grievance-handling entities - including the Local Government's designated Nodal Officer's phone number and the local government's toll-free helpline - shall be widely disseminated to ensure that individuals are aware of where and how to seek assistance and lodge complaints.

Grievance Handling Process
The grievance handling process shall follow a structured and transparent approach, comprising the following steps:

Step 1: Submission of Grievances
Grievances may be submitted through the following channels:

- **Suggestion Boxes**: Installed in safe and public locations along with a feedback form/pen to allow anonymous submissions. The Local Government's designated Nodal Officer shall monitor the suggestion box on a monthly basis and document these submissions, which will be logged and forwarded to the relevant departments for resolution.
- **Toll-Free Numbers**: Established by the local government to facilitate easy reporting. Each query/complaint received from the call will be logged and directed to the appropriate officials, as needed and as guided by the SoP (GRM working procedure). Toll-free numbers of provincial and federal authorities, as well as the WFP Nepal office, will be disseminated to ensure broad access and reach.
- **Email Submissions**: Official email addresses of local government will serve as alternative channels, particularly during disruptions such as adverse weather. These addresses will be widely publicized.
- **Social Media Platforms**: Official social media pages of local governments will be used to share information and updates on the project, as well as to receive grievances. Internet messaging platforms such as Viber and WhatsApp will also be utilized, with contact details of the Nodal Officer or local government shared for ease of access. These messaging platforms will also be used to disseminate group information on project activities.
- **Local Judicial Committees**: As mandated by the Constitution of Nepal (2015) and the Local Government Operation Act (2017), Judicial Committees at the municipal and rural municipal levels will also receive and address grievances. These committees, chaired by the Deputy Mayor or Vice Chairperson, will be promoted as accessible avenues for justice.

Step 2: Resolution and Feedback (Loop Closure)

- A case is considered closed when the outcome is communicated back to the person who reported the issue. The outcome and communication should be documented and traceable.

- Feedback or an update on the action shall be provided to the complainant within three working days of grievance registration. If the complainant is satisfied, the case shall be closed. If not, the grievance shall be escalated to higher authorities such as the municipal-level grievance committee, Judicial Committee, or relevant provincial mechanisms.
- Unresolved grievances may also be submitted via the Ministry of Forests and Environment's online platform (https://mofe.gov.np/get-in-touch) or through WFP's Community Feedback Mechanism (CFM) toll-free number.
- Loop closure can be done at the individual level through phone, email, in-person or at the community level through public audit, community committees, depending on the type of cases received.

Step 3: Appeal Process

- Complainants dissatisfied with the resolution may appeal to a higher-level committee.
- The appeal process shall adhere to the principles of fairness, transparency, and timeliness.

Step 4: Referral mechanism

- Any feedback/ complaints that are beyond the scope of the ward/ municipal office/local judicial committee will be referred to relevant and competent service providers/ entities as appropriate. The referrals are done in two ways: Direct referral: Share essential information about feedback with a relevant service provider for their action on behalf of the complainant, with the consent obtained and Indirect referral: Share relevant contact information, details, and location of specific support services, or actor to the complainant.

Step 5: Monitoring and Reporting

- All grievances and their resolutions shall be systematically documented and monitored.
- Public reports, including grievance-related data, shall be published quarterly to ensure transparency and accountability.
- The report shall detail No. Of feedback and complaints received, demographic data of the user (anonymised and summarized), type of feedback and complaints, resolved no. Of cases and open cases. It should also highlight the cases received as per the priority.

Resources for Grievance Handling

The project shall ensure the continuous operation of the GRM and provide technical assistance to local governments as required. This includes support in drafting operational guidelines, standard operating procedures, and frameworks for reporting, recording, and addressing grievances, complaints, queries, and feedback. Hands-on technical assistance shall be provided to ensure the mechanism functions effectively and efficiently.

Continuous Improvement

The project's technical team shall work closely with the grievance focal point to provide technical assistance to government counterparts. This collaboration will support the periodic review and revision of existing procedures and guidelines, informed by lessons learned during implementation.

Note: Allegations or suspicions related to fraud, corruption, or abuse in service delivery are typically reported directly to the Chief District Officer (CDO) or the Commission for the Investigation of Abuse of Authority (CIAA). Similarly, criminal and civil cases are generally handled by the Local Judicial Committee, the CDO office, or the police, based on their respective judicial mandates.