THGEF-7 REQUEST FOR PROJECT ENDORSEMENT/APPROVAI

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:Least Developed Countries Fund

PART I: PROJECT INFORMATION

Project Title: Managing Watersheds for Enhanced Resilience of Communities to Climate Change in Nepal (MaWRiN)			
Country(ies):	Nepal	GEF Project ID:	10727
GEF Agency(ies):	WWF-US (select) (select)	GEF Agency Project ID:	G0033
Project Executing Entity(s):	Provincial Ministry of Forests and Environment (Bagmati Province), Government of Nepal	Submission Date:	2022-03-04
GEF Focal Area (s):	Climate Change	Expected Implementation Start	2022-08-01
		Expected Completion Date	2028-07-30
Name of Parent Program	Not applicable	Parent Program ID:	Not applicable

A. FOCAL/NON-FOCAL AREA ELEMENTS

PROGRAMMING DIRECTIONS	Focal Area Outcomes	Trust Fund	(in $)	
			GEF Project Financing	Confirmed Co-financing
(select) CCA-1	Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation	LDCF	8,339,852	24,272,930
CCA-2	Mainstream climate change adaptation and resilience for systemic impact	LDCF	684,460	2,547,987
	Total project costs		9,024,312	26,820,917

B. PROJECT DESCRIPTION SUMMARY

Project Objective: *to enhance climate resilience of Indigenous people and local communities in the Marin watershed through nature-based solutions and livelihood diversification*

Project Components/ Programs	Component Type	Project Outcomes	Project Outputs	Trust Fund	(in $)	
					GEF Project Financing	Confirmed Co-financing
Component 1: Enabling environment for climate change mainstreaming	TA	Outcome 1.1: Improved understanding, knowledge and capacity to mainstream climate change adaptation in local plans and policies.	Output 1.1.1: Training and exchange visits for community-based organizations (CBOs), soil and watershed management office, division and sub-division offices, municipalities and relevant provincial officials on climate	LDCF	354,893	1,072,837

			change impacts and risks assessment tools and methods for mainstreaming CCA in all sectors and municipal plans in an integrated approach.			
Component 2: Enhanced Resilience of Local Communities to Climate Change through a) community-based natural resource management such as community identification of adaptation interventions, support and demonstration of sustainable and climate-resilient agriculture and livestock practices, improved water management, strengthened management of community and leasehold forests, and b) Nature-based Solutions that reduce climate impacts and risks.	INV	**Outcome 2.1:** Increased adaptive capacity of vulnerable households in the Marin Watershed to climate-induced disasters such as landslides, floods, droughts, and forest fire. **Outcome 2.2:** Nature-based Solutions (NbS) reduce climate-induced vulnerabilities of community livelihood resources and assets.	**Output 2.1.1:** Climate-adaptive technologies and practices for agriculture, livestock management and water management introduced and demonstrated. **Output 2.2.1:** Management of community and leasehold forests strengthened, and vulnerable catchment areas rehabilitated and protected for reduced vulnerability to climate-induced disaster risks such as landslides, sedimentation, flooding and forest fires.	LDCF	7,945, 559	23,602,407
Component 3: Monitoring, evaluation and knowledge management, through tracking of project progress on a regular basis, garnering and analysis of lessons and good practices, and development and dissemination of	TA	**Outcome 3.1:** Project monitoring, evaluation, and learning to enable adaptive management, replication and sustainability.	**Output 3.1.1:** Knowledge products are developed and disseminated to enable upscaling of the project activities. **Output 3.1.2:** Project progress	LDCF	294,131	804,628

knowledge that reinforces project results from components 1 and 2, providing sound basis for their replication, adaptation and sustainability.			tracked effectively through project Monitoring and Evaluation (M&E).			
				Subtotal		8,594,583	25,479,872
				Project Management Cost (PMC)	(select)	429,729	1,341,045
				Total project costs		9,024,312	26,820,917

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ( )

C. CONFIRMED SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

Please include evidence for co-financing for the project with this form.

Sources of Co-Financing	Name of Co-financier	Type of Co-financing	Amount
GEF Agency	In-Kind	Recurrent Expenditures	1,820,917
Recipient Country Government	Grant	Investment Mobilized	20,000,000
Recipient Country Government	In-kind	Recurrent Expenditures	5,000,000
		Total Co-Financing	26,820,917

Describe how any "Investment Mobilized" was identified.

Co-financing commitments from the Ministry of Forests and Environment, Bagamati Province are stated in the co-financing commitment table C. Multiple discussions with the Ministry led to an agreement on the overall objective of the project, aligning with the Government's existing portfolio of projects. . The GoN has embarked on a twenty-year President Churia-Terai Madhes Conservation and Management Master Plan since 2017 to provide strategic direction for conservation activities in the Churia which includes financial support to the integrated management of upstream and downstream land use activities, promoting an integrated landscape approach, and poverty reduction through conservation and sustainable management of the natural resources and improvement of ecosystem services. Therefor, the identified Investment Mobilized co-financing of US $20 million from the portfolio of Government initiatives, will support the project implementation and achievement of its objective of building resilience of communities to climate change for the 6 year project.

TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country Name/Global	Focal Area	Programming of Funds	(in $)		
					GEF Project Financing (a)	Agency Fee (b)	Total (c)=a+b
WWF-US	LDCF	Nepal	Climate Change	(select as applicable)	$ 9,024,312	$ 812,188	$ 9,836,500
Total GEF Resources					$ 9,024,312	$ 812,188	$ 9,836,500

D. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? No

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF Trust Fund).

E. PROJECT'S TARGET CONTRIBUTIONS TO GEF 7 CORE INDICATORS

Update the relevant sub-indicator values for this project using the methodologies indicated in the Core Indicator Worksheet provided in Annex F and aggregating them in the table below. Progress in programming against these targets is updated at mid-term evaluation and at terminal evaluation. Achieved targets will be aggregated and reported any time during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCCF.

CCA Core Indicators:

Core Indicators - LDCF

CORE INDICATOR 1	Total	Male	Female	% for Women
Total number of direct beneficiaries	60,000	29,000	31,000	51.67%
CORE INDICATOR 2				
Area of land managed for climate resilience (ha)	35,140.00			
CORE INDICATOR 3				
Total no. of policies/plans that will mainstream climate resilience	6			
CORE INDICATOR 4		Male	Female	% for Women
Total number of people trained	8,000	4,000	4,000	50.00%

Indicator/ Unit	Definition (note if cumulative)	Method/Source	Disaggregation	Baseline	CEO Endorsement /Approval : Target
GEF-7 CCA Core Indicator 1: Total number of direct beneficiaries	Number of people benefitting from targeted projectinterventions.	Project documentation related to implementation and progress, including field reports.	Number of direct female beneficiaries	-	Total Beneficiaries: 60,000 Cumulative total by project end: 31,000
			Number of direct male beneficiaries	-	Cumulative total by project end: 29,000
GEF-7 CCA Core Indicator 2: Area of land managed for climate resilience (hectares)	This will include agricultural land, community and leasehold forests, and catchment areas restored and/or brought under improved management for climate resilience through direct project support.	GIS mapping and analysis	Hectares of agricultural land under climate-adaptive practices		Cumulative total by project end: 540
		Pre- and post-intervention field assessments and reports.	Hectares of community and leasehold forests brought under improved management		Cumulative total by project end: 29,000
			Hectares of degraded/ vulnerable catchment areas rehabilitated/ protected for resilience against climate disasters		Cumulative total by project end: 5,600
GEF-7 CCA Core Indicator 3: Total no. of policies	CCA-integration in municipal/ sector plans is to be achieved in accordance with CCA-integration guidelines developed and disseminated by the project. This indicator will relate to GEF-7 CCA Results Framework Core Indicator 3 and Output 2.1.1.	Project implementation and progress reports; Review of the CCA integration plans.		0	6
GEF-7 CCA Core Indicator 4: Total number of people trained.	Target participants will be government and CBO staff with responsibility for planning, monitoring and backstopping local and sector plans and policies.	Training reports; Project implementation and progress reports.		0	Total: 8,000 Female: 4,000 Male: 4,000

Indicator/ Unit	Definition (note if cumulative)	Method/Source	Disaggregation	Baseline	CEO Endorsement /Approval : Target
	This indicator will directly relate to GEF-7 CCA Results Framework Core Indicator 4				
GEF-capacity development tracking tool scores	GEF capacity development indicators are measured against five key capacity results. This project will contribute to three of the GEF capacity results as below: CR1- capacity for engagement; CR2- capacity to generate, access and use information and knowledge; and CR3- capacity for strategy, policy and legislation development.	Capacity assessment and score in accordance with GEF-capacity development scorecard.	GEF-CD score for engagement in CCA and CCA mainstreaming (Capacity Result 1). Maximum attainable score for this capacity result is 9.	Municipality: **2 out of 9** Rural Municipality: **0 out of 9**	Municipality: **7 out of 9** Rural Municipality: **7 out of 9**
			GEF-CD score to generate, access and use information and knowledge for CCA and CCA mainstreaming (Capacity Result 2) Maximum attainable score for this capacity result is 15.	Municipality: **3 out of 15** Rural Municipality: **3 out of 15**	Municipality: **7 out of 15** Rural Municipality: **7 out of 15**
			GEF CD score for CCA-integrated strategy, policy and legislation development (Capacity Result 3) Maximum attainable score for this capacity result is 9.	Municipality: **2 out of 9** Rural Municipality: **0 out of 9**	Municipality: **6 out of 9** Rural Municipality: **6 out of 9**

Note: with the major amendment (increasing from 3 to 6 catchments in Marin Watershed) the project will increase impact. The original project had a target of 57,900 direct beneficiaries, which has now increased to 60,000 and 12,665 ha of land managed for climate resilience, which has increased to 35,140 ha. Other indicators have not increased as the additional investment has been focused in to the demonstrations under Component 2, delivering in addition to the forest restoration a suite of NbS similar as to the original three catchment areas, such as watershed and river protection, ponds and irrigation system support as well other livelihood diversification measures thus a higher impact on land under management, and total direct beneficiaries. The amendment has resulted in significant changes to area under community-based management in the form of community and leasehold forestry, an increase by 19,000 hectares which is more than double the initial target of 10,000 hectares. The area under improved/climate adaptive practices of agriculture and restored/protected from climate-induced disasters in the form of floods, inundation/sedimentation and landslides has also doubled from around 2,500 hectares to more than 6,000 hectares. The major investment from the amendment focuses on Component 2 of the project, in community livelihoods and resilience where the number of local households employing climate-adaptive agriculture technologies and practices, climate-adaptive practices for livestock management and households benefitting from water-efficient technologies and improved irrigation practices has also doubled, from 1,950 households to 3,860 households benefitting around 19,000 individuals from these households where more than 60% of the population is indigenous.

This Project covers the following sector(s)[the total should be 100%]:*

Agriculture	35.00	%
Natural resources management	15.00	%
Climate information Services	0.00	%
Costal zone management	0.00	%
Water resources Management	15.00	%
Disaster risk management	35.00	%
Other infrastructure	0.00	%
Health	0.00	%
Other (Please specify:)	0.00	%
Total:	100	%

This Project targets the following Climate change Exacerbated/introduced challenges:*

- [ ] Sea level rise
- [x] Change in mean temperature
- [x] Increased Climatic Variability
- [x] Natural hazards
- [x] Land degradation
- [ ] Costal and/or Coral reef degradation
- [ ] GroundWater quality/quantity

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided.

F. Project Preparation Grant (PPG)

PPG Required ☑

PPG Amount ($)	PPG Agency Fee ($)
150,000	13,500

GEF Agency	Trust Fund	Country	Focal Area	Programming of Funds	PPG($)	Agency Fee($)	Total($)
WWF-US	LDCF	Nepal	Climate Change	NA	150,000.00	13,500.00	163,500.00
				Total PPG Amount($)	150,000.00	13,500.00	163,500.00

F. PROJECT TAXONOMY

Please update the table below for the taxonomic information provided at PIF stage. Use the GEF Taxonomy Worksheet provided in Annex G to find the most relevant keywords/topics/themes that best describe the project.

Taxonomy* ℹ

Focal Areas, Climate Change, Climate Change Adaptation, Climate resilience, Ecosystem-based Adaptation, Mainstreaming adaptation, Livelihoods, Least Developed Countries, Community-based adaptation, Complementarity, Innovation, Influencing models, Strengthen institutional capacity and decision-making, Demonstrate innovative approache, Stakeholders, Type of Engagement, Information Dissemination, Participation, Consultation, Indigenous Peoples, Private Sector, Individuals/Entrepreneurs, Beneficiaries, Civil Society, Community Based Organization, Non-Governmental Organization, Local Communities, Communications, Behavior change, Education, Awareness Raising, Gender Equality, Gender Mainstreaming, Women groups, Gender-sensitive indicators, Sex-disaggregated indicators, Gender results areas, Access and control over natural resources, Capacity Development, Participation and leadership, Access to benefits and services, Knowledge Generation and Exchange, Capacity, Knowledge and Research, Knowledge Exchange, Field Visit, Learning, Knowledge Generation, Training

33 options selected

PART II: PROJECT JUSTIFICATION

DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN WITH THE ORIGINAL PIF

1a. *Project Description*. Elaborate on: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description); 2) the baseline scenario and any associated baseline projects; 3) the proposed alternative scenario with a brief description of expected outcomes and components of the project; 4) alignment with GEF focal area and/or Impact Program strategies; 5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing; 6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and 7) innovativeness, sustainability and potential for scaling up.

PROJECT SCOPE AND RATIONALE

A preliminary analysis of potential sites for climate change adaptation was conducted prior to the selection of the Marin Watershed in the Sindhuli district. The secondary assessment focused on climate hazards such as flooding, riverbank erosion, landslides and drying up of water sources including incidences of forest fires. This analysis showed that the Marin Watershed is one of the most vulnerable to the impacts of climate change in Nepal where the risks are further exacerbated by the fragile geology and topography of the Chure region. In addition to the geological features, the area has a predominantly indigenous (68.5%) and subsistence living population which is highly vulnerable to the impacts of climate change. The Government of Nepal also has a dedicated program in this area to address the impacts of climate change. The capacity assessment done during the project preparation phase showed that the adaptation capacity needs are high, and as such, Marin Watershed was selected as the project area of focus, to build adaptation capacity for the vulnerable communities. During early project development, consultations were held in all 9 catchments that make up the Marin Watershed. Of these, the 3 highly vulnerable catchments were initially selected as the project area of focus for investment in building adaptation capacity. In order for the Government of Nepal to access the full LDCF envelope of funding, and to generate even higher adaptation benefits for Nepal and particularly for the indigenous and highly vulnerable population in the vast Marin Watershed (70,000 ha), a 'major amendment' was made to the project by adding investment to Component 2, on demonstrations of enhanced resilience of local communities, deepening the work with the original 3 catchments, and adding another 3 catchment areas to the initial 3. Originally the project included the three most critical catchment areas of Marin Watershed; namely Ghagar khola, Kyan khola and Phulbari khola, as being highly vulnerable to climate hazards in the form of landslides and river-bank erosion. With the major amendment, the catchments of Dhungajor, Jalkeni Sakhauri, and Simale, all vulnerable to climate change, have been added for demonstration sites. Under this major amendment, the components, outcomes, outputs and activities remain unchanged. The additional GEF investment will go towards (i) increased demonstration in the original, most critical 3 catchments (for example, where multiple adaptation approaches are warranted, application of more such approaches than was originally envisioned) and (ii) applying the demonstrations in the additional 3 catchments within Marin Watershed to deliver overall higher adaptation benefits to the highly vulnerable population. This results in an improved community-based management of forests of 29,000 hectares, and more than 3,860 households benefitting from adaptation interventions in the form of enhanced livelihoods opportunities, reduced risk of landslides, floods and riverbank erosion to agricultural lands while restored water sources and irrigation systems will benefit an additional 1,000 indigenous households.

(a) CLIMATE CHANGE ADAPTATION PROBLEMS, ROOT CAUSES AND BARRIERS

Nepal featured among the ten countries most affected by climate change between 2010 and 2019 according to the Global Climate Risk Index 2021 . Floods are frequent, triggered by rapid snow and ice melt in the mountains as well as by extreme, torrential rainfall occurrences in the foothills during the monsoon season (June-September). The heavy rains also wear away the geologically fragile mountains and foothills, especially where areas are exposed and degraded due to unsustainable land use and depletion of forest resources, causing landslides, soil erosion and expansion of river banks.

Figures compiled by the World Bank show that floods and landslides are the most common natural hazards, respectively accounting for around 38% and 20% of all natural hazards in the country . Furthermore, as winters become drier, droughts are becoming more frequent and exacerbating seasonal water stress in many parts of the country. Drier and warmer winters also increase the risk of forest fire. The impact of climate change is more pronounced where there is environmental degradation and high levels of poverty .

Key climate change and associated environmental problems that characterize the project area are highlighted below:

Floods triggered by heavy rainfall events: The occurrence of flooding events has increased over the years, albeit with significant inter-annual variation. Due in part to changing precipitation patterns, the frequency of floods is expected to further increase in the Marin watershed in the future, as are the severity of these flooding events. Unsustainable land use and forest degradation also contribute to this by: (i) further reducing infiltration capacity of the landscapes; and (ii) exacerbating erosion and sedimentation, which contribute to riverbed rise, cutting of river banks, change of river course, and flash floods further downstream.

Seasonal water stress due to drier winters and longer dry spells: The dry winter season has become drier, worsening challenges associated with seasonal water stress. As temperatures continue increasing, and post-monsoon and winter precipitation continue to decline, local communities in the Marin watershed increasingly struggle to cope with shortage of water for household use and farming. The effect of water shortage is pronounced on women and girl children as they have the responsibility for fetching water. Extended dry periods throughout the year will pose increasingly significant challenges in the Marin watershed. The area experienced long periods without rain in 1999/2000 (from October to March), 2008/2009 (from November to April) and 2018/2019 (from November to March) . As the number of consecutive dry days continues to increase, rainfall becomes more sporadic, and the water that does fall (during intense precipitation events) increasingly exceeds the infiltration capacity of the landscape with very little retention due to highly fragmented sedimentary formation and sloping terrain, poor agricultural communities will have to find new ways to cope with water deficit.

Soil erosion and landslides triggered by heavy rainfall: Rates of soil erosion and sedimentation have steadily increased, driven in part by the combined effects of drying soils and increasingly extreme precipitation events – trends that are projected to intensify in the future. Churia landscapes are particularly vulnerable because of the fragile geologic formation and steep terrain combined with widespread unsustainable land use and forest management practices. The impacts on local communities and livelihoods are considerable due to degradation of fertile agricultural lands as a result of sediment deposit carried over by flooding, cutting of river banks and expansion of riverbeds. Many of the agricultural fields close to rivers and rivulets belong to poor households, who are ill-equipped to cope with inundation of their agricultural fields by floods.

Climate-vulnerable geological and hydrological features: The geological and hydrological features of the Churia region leave communities particularly exposed to climate-related hazards. The rivers/streams that originate from the Churia are seasonal with surplus water flow during monsoon season, and little or no water flow during the rest of the year. In addition, the Churia consists of highly fractured sedimentary rocks with low groundwater retention potential. During the wet season, rainfall can quickly exceed the infiltration rate. Due to its sloping lands, the Churia is therefore more prone to flash floods, and retains little water to discharge during dry season. The Churia´s fragile slopes are also susceptible to erosion and landslides, particularly as extreme precipitation events become more common.

Land use practices and natural resources degradation: The Churia region is one of the most densely populated areas of Nepal, with a predominantly rural population practising a semi-subsistence agrarian livelihood system that is labour-intensive and heavily dependent on natural resources, including collection of fuelwood, fodder for animals, materials for construction, and a wide variety of products for various local uses. Poor agricultural practices and unsustainable use of forests and other natural resources have reduced the resilience of farms and forest lands, and increased vulnerability to climate change. Fuelwood collection from the forests is very high in the Marin watershed with around 86% of the local households dependent on fuelwood as the main source of energy for cooking . Forest regeneration is also affected by open/ free-range grazing, which is widely practiced in the project area. Deforestation and forest degradation in upstream areas, as well as the use of inappropriate agricultural practices, have resulted in soil degradation, reduced vegetative cover,

and further reduced water infiltration capacity of landscapes. This has contributed to accelerated erosion and sedimentation, resulting in riverbed rise downstream that increases the risk of flash flooding and inundation of agricultural fields close to the rivers, rivulets and creeks with sediments and debris. It has also further exposed the Churia's already steep and fragile slopes, increasing risk of erosion and landslides upstream whilst exacerbating flood and riverbank expansion downstream.

Climate-sensitive livelihoods: Predominant livelihood practices in the project area rely on stable climatic conditions and a healthy natural resource base, and thus are particularly sensitive to climate change and environmental degradation. Many communities are engaged in semi-subsistence rain-fed agriculture, and often use agricultural practices that are not suitable for the local terrain – particularly under the anticipated changing climatic conditions – including cultivation on steep slopes. Increased seasonal variations in river flows, floods and sedimentation have led to depletion in fish species and population in the rivers, affecting the livelihoods of communities, such as the Majhi communities in the project area, who depend on fishing . Longer and drier winters create greater risks of forest fires, which damages and degrades forest resources affecting local communities who depend on forests for fuelwood, fodder and a number of other non-timber forest products for their subsistence.

Institutional Barriers

Managing the impacts of climate change such as landslides, sedimentation and debris flow, flooding, and drought at the watershed level as an ecological unit is especially important for mid-hill areas, which are topographically characterized by steep slopes where upstream disturbances can significantly impact downstream ecosystems and communities. This requires a coordinated and integrated approach to mainstream CCA in municipal and sector plans in a synergic manner based on a sound knowledge of the climate impacts on local livelihoods.

A key barrier for climate change adaptation (CCA) in the Marin watershed is the absence of an integrated watershed approach since its boundaries do not always coincide with the administrative boundaries of municipalities and their specific plans. Many of the rivers and rivulets crisscross municipal and ward boundaries. In accordance with the Local Government Operation Act (2017), the municipalities and the rural municipalities formulate individual local plans and policies that cover environment and disaster management key components of their annual plans and budgets, but the issues of climate change are not systemically addressed or integrated into these plans or key sectors such as agriculture and livestock development. This leads to isolated and ineffective implementation of activities and measures, as the ecological unit is managed in a fragmented manner by numerous administrative units.

Lack of coordination between municipalities and other stakeholders hinders linkages and synergy of efforts for CCA at the watershed level. At the present, there is no institutional mechanism to bring different municipalities and other stakeholders together to discuss, share information and knowledge, and coordinate on climate change issues at the watershed level. The private sector and vulnerable sections of the community, such as women and socially-marginalized groups who are disproportionately more vulnerable to climate change, are often left out from the discussion and decision-making process on climate change adaptation and watershed management issues. While there are community groups that include women, poor and dalit, they generally remain passive participants due to relatively low literacy levels , limited access to knowledge and information, and patriarchal norms which are still prevalent especially among the rural communities. These community groups also generally operate in an insulated manner. Furthermore, key agencies that have a role in addressing the impacts of climate change operate under different institutional systems. While the municipalities function as local government agencies responsible for overall local development in accordance with the Local Government Operation Act (2017), the divisional and sub-divisional forest offices operate as a part of the federal/ provincial government structure in accordance with the Forests Act (2019). This parallel arrangement has not been conducive for dialogue and coordination between these important agencies, which is crucial for an integrated and holistic approach to watershed management and climate change adaptation.

Knowledge, information and tools are inadequate to support CCA mainstreaming. A sound and comprehensive understanding of local climate risks and vulnerabilities, and their impacts on key sectors (agriculture, livestock, forest, water) that support local livelihoods is critical to support coordination and integration of CCA at the watershed level. However, this is currently lacking in absence of any systematic assessment of local climate risks and vulnerabilities at the

municipality level, and their impacts. While there is some climate risk and vulnerability information at the district level, they are generic and does not provide the level of detail required for local-level CCA planning and mainstreaming at the watershed level. Concurrently, the capacity of the municipalities and other local stakeholders is severely limited in terms of knowledge and tools to assess climate change risks and vulnerabilities, and mainstream climate change adaptation in local plans and relevant sectors. While there is a national framework for LAPA, none of the municipalities in the project area have the training and tools to support the planning and mainstreaming of CCA along the lines of this framework. Existing national guidelines for watershed management planning were produced many years ago and do not factor in climate change risks and impacts. For instance, the basic guidelines for Sub-watershed Management Planning were developed in 1994, and Guidelines and Methodology for Sub-Watershed Prioritization in Watershed Management Planning were developed in 1997.

Technology Transfer Barriers

Technology is defined as 'a piece of equipment, technique, practical knowledge or skills for performing a particular activity.' It is common to distinguish between three different elements of technology: the tangible aspects, such as equipment and products (hardware); the know-how, experience and practices (software) associated with the production and use of the hardware; and the institutional framework, or organisation, involved in the transfer and diffusion of a new piece of equipment or product. Technology plays an important part in reducing vulnerability of communities to climate change in rural Nepal. Various climate-adaptive technologies such as drip and micro-sprinkler irrigation, tunnel farming (also known as greenhouse farming), rainwater harvesting, locally modified tools, climate smart agricultural and livestock management practices are available in Nepal, yet their uptake remains limited due to a number of barriers.

The municipalities and sector agencies at the local level are short-staffed and lack the know-how and tools to deliver extension services on climate-resilient technologies and sustainable practices of agriculture, livestock management, and water management. The municipalities have the mandate to deliver extension services for the development of agriculture, livestock and water but they lack adequate staff to fulfil this mandate. For instance, there are only 21 veterinary technicians and five village-level animal husbandry workers for the entire Marin watershed, which is inhabited by 11,338 households with a total number of 112,220 heads of livestock (cattle, buffalo, sheep and goat). The shortage of staff is further aggravated by the remote location of many local communities and poor road connectivity in the project area. And the few who are posted in the project area lack the knowledge and tools to deliver extension services and technical backstopping required for the farmers to learn and adopt climate-adaptive technologies and practices. Household survey carried out for the baseline assessment of the project area revealed that only 3.8% of the households had received any agriculture-related training and 2.1% had received any livestock management-related training.

There are additional costs associated with climate-adaptive technologies and practices, which hinder their transfer to local communities especially the poor households. While climate-adaptive technologies and practices are expected to generate improved socio-economic benefits over the long term, there are additional initial costs. This is especially a major deterrent especially among poor communities, such as in the Marin watershed where poverty rate is very high at 43%. Furthermore, much of the existing farming system is subsistence or semi-subsistence. Baseline household survey indicate that only 0.7% of the farm households sold crop for income while 16.5% sold livestock produce. Therefore, there is currently very little economic incentive for farmers to invest additional resources for climate-adaptive technologies and practices in agriculture and livestock management.

Research and knowledge for technology transfer is lacking and there is little awareness of the linkages between environment, climate change and livelihoods. There is very little research and testing of climate-adaptive technologies and practices in the project area. As a result, there is little to demonstrate to the farmers on how climate-adaptive technologies and practices work in the field and what are the associated costs and benefits. This creates room for uncertainties among local communities to adopt climate-adaptive technologies lest they do more harm than existing traditional practices. There are indigenous agricultural practices that are environment-friendly, such as use of farmyard manure, mulching, composting, and inter-cropping, but these have not been systematically assessed for their potential for integration in the development of climate-adaptive technologies and practices. Inadequate local-level participatory research limits comprehensive understanding of climate change impacts on natural resources and biodiversity, the understanding and prediction of climate change impacts, the understanding of the nexus between climate change,

environment and livelihoods, and the development of local adaptation solutions. There is also a weak understanding of how ecosystem services would respond to climate change and its impacts on local farming system.

Social Barriers

One of the key barriers to climate change adaptation in Marin is the limited access that women, the poor, socially marginalized, and Indigenous people have to knowledge, information and decision making. While community-based groups, such as community forest user groups and water user groups, include women and vulnerable groups, their inclusion is often to meet the 33% representation mandated by law. Even if the vulnerable households are formally included in decision-making on natural resources, their influence in decision-making is negligible. There is no motivation to listen and integrate the feedback and opinions of the marginalized population, only to include them to "check a box". Low literacy among women and socially marginalized communities also inhibits their participation in decision-making and access to knowledge and information. It is these vulnerable groups who most heavily depend on the climate sensitive ecosystem services and subsistence agriculture in the Marin watershed, such as irrigation, collection of water and NTFPs. Women tend to be overly burdened with household work and have less access to participation in policy formulation and the decision-making process. Adaptation is further challenged by poor governance of resources, specifically of natural resources that the most vulnerable and marginalized communities depend on. Ultimately, women and socially marginalized groups are the most severely affected by climate change impacts and their voices need to be incorporated into decision-making to build capacity in an effective and equitable manner.

High level of poverty in the project area hinders communities to invest in climate adaptation. A large proportion (69%) of the local communities are indigenous people, who subsist on crop agriculture and livestock rearing. They have limited access to public services and market opportunities for improved livelihoods due to poor road connectivity. As mentioned earlier, household surveys for the baseline assessment of the project area show that only 0.7% of the households made an earning from the sale of crops and 16.5% made an earning from livestock products. Consequently, there is negligible earning from agriculture and some limited earning from livestock management. Under current circumstances, the poverty rate is very high at 43%.

(b) THE BASELINE SCENARIO AND ANY ASSOCIATED BASELINE PROGRAMS

(a) National Situation

Climate Change Policy Framework

The National Climate Change Policy 2019 replaced the Climate Change Policy of 2011, to effectively address the changes of national and international dimensions in the area of climate change management that have emerged since the implementation of the earlier Climate Change Policy and on the basis of lessons learnt from the implementation of the previous policy. In keeping with the Constitution of Nepal 2015, the new policy is aligned with the federal structure to enable programs pertaining to climate change adaptation and mitigation to operate in an effective manner by integrating the issues of climate change into policies and programs at all three levels (national, subnational, and local) of the government. It is a comprehensive policy document with strategies and working policies spelt out for eight thematic areas and four inter-thematic areas. The thematic areas consist of: (a) agriculture and food security; (b) forests, biodiversity and watershed conservation; (c) water resources and energy; (d) rural and urban habitats; (e) industry, transport and physical infrastructure; (f) tourism and natural and cultural heritage; (g) health, drinking water and sanitation; and (h) disaster risk reduction and management. The inter-thematic areas include: (a) gender equality and social inclusion, livelihoods and good governance; (b) awareness-raising and capacity development; (c) research, technology development and expansion; and (d) climate finance management.

Nepal's climate change policies, plans and programs are also influenced by international climate treaties that the country is a party to, such as the United Nations Framework Convention on Climate change (UNFCCC) that it ratified in May 1994 and the Paris Agreement in October 2016. It is committed to active participation in the global efforts and international processes to fight climate change. The country submitted its Second Nationally Determined Contributions (NDC) in December 2020, updating the First NDC submitted in 2016, and the Third National Communication to the

UNFCCC in August 2021 . The National Adaptation Program of Action (NAPA), submitted in 2010, has identified long-term adaptation needs in various sectors. In order to fulfill medium- and long-term adaptation needs, the Government of Nepal (GoN) has formulated its National Adaptation Plan (NAP) for the period of 2021-2050.

The NAP sets out priority programs in the nine thematic sectors, including agriculture and food security, and forests, biodiversity and watershed management, as outlined in the National Climate Change Policy 2019. The programs include adaptation actions that are best able to address climate vulnerabilities and risks in the short (to 2025), medium (to 2035), and long-term (to 2050), as well as adaptation actions that contribute to the achievement of national economic and development priorities. All in all, the NAP identifies 64 strategic priority adaptation programs/interventions, their estimated cost, duration, alignment with the national policy documents, and the climate vulnerabilities and risks they seek to address.

Cross-sectoral mechanisms to mainstream climate adaptation and resilience

The Government of Nepal (GoN) has identified long-term adaptation needs in various sectors and is in the process of formulating a National Adaptation Plan (NAP). In line with these national policies and plans, adaptation programs and activities are being implemented by various governmental, non-governmental and community-based organizations. During the NAPA preparation there was a realization that a mechanism, which integrates local adaptation actions into Nepal's development planning, is essential for successful adaptation. Thus, the Government prepared a National Framework on Local Adaptation Plan for Action (LAPA) in 2011 and revised it in 2019. The framework provides tools and methodologies for local level adaptation planning, implementation, and monitoring. The framework considers administrative boundaries as the management unit, and is designed to support decision-makers at local-to-national levels to: (a) identify the most climate vulnerable Village Development Committees (VDC's), wards, and people and their adaptation needs; (b) prioritize adaptation options in easy ways with the local people setting priorities; (c) prepare and integrate local adaptation plans for action into local- to national-level planning; (d) identify appropriate service delivery agents and channels for funding to implement local adaptation plans for action; (e) assess the progress of LAPA to ensure effective planning and delivery; and (f) provide cost-effective options for scaling out local-to-national adaptation planning.

Integrated watershed management approach to address climate change impacts

The GoN's 15th Five-Year Plan (2019/20-2023/24) emphasizes an integrated watershed management approach to address climate change impacts along with a focus on increasing production and productivity of forests and biodiversity while ensuring the enhancement of ecosystem services. The plan also stresses the need to improve governance and ensure equitable benefit sharing of natural resources to minimize climate change impacts on vulnerable communities. Furthermore, the plan prioritizes policy and institutional changes including capacity building at federal, provincial and local levels to ensure that climate change and disaster risk management is integrated at every level.

Institutional Set-up for Addressing Climate Change

The promulgation of the Constitution of Nepal 2015 has ushered in a federal, democratic, republican system of governance. It has now a three-tier governance system, involving the federal, provincial and local levels. Each of the three tiers of government under the new federal structure have their constitutionally specified autonomous and shared jurisdictions. In particular, Local Government Operation Act (2017) in its Chapter 3, Article 11 (2, J, 16) has mandated Municipalities and Rural Municipalities to adopt low carbon and environment-friendly development activities. The same act in its Chapter 3, Article 11 (4, E, 1-26) has provided Municipalities and Rural Municipalities authority to protect and manage forests (community, rural and urban, religious, leasehold and collaborative), manage buffer zone forests, promote private forests, carry out afforestation in open lands, manage forest nurseries, promote greenery at local level, adopt low carbon and environment-friendly development activities. The constitutional arrangement entrusts a good part of climate change policies and interventions with the provincial and local governments.

Coordination at the federal level: There are two main mechanisms for coordination at the federal level: Environmental Protection and Climate Change Management National Council (EPCCMNC) and Inter-Ministerial Climate Change

Coordination Committee (IMCCCC). The EPCCMNC has been established by the Environment Protection Act 2019 (Article 32) and is chaired by the Prime Minister, with its members comprising four Ministers, seven Chief Ministers (of all provinces), a member from the National Planning Commission (NPC), two professors, three experts, and the Secretary of the Ministry of Forests and Environment. It is the highest body that directs on integration of matters related to the environment and climate change into the long-term policies, plans and programmes, gives policy guidance to the provincial and local levels with regard to environmental protection and climate change, and manages economic resources for environmental protection and climate change (Environment Protection Act 2019, Article 34 - 1a, 1c, 1d).

The IMCCCC, on the other hand, has been established by the MoFE and is chaired by its Secretary with membership comprising Joint Secretaries of 22 federal ministries, NPC, and representatives of Nepal Academy of Science and Technology (NAST), National Agriculture Research Council (NARC) and AEPC, and additional members invited at the discretion of MOFE secretary.

Coordination at subnational level: Provincial climate change coordination committee (PCCCC), comprising mainly province-level government agencies and representatives of civil society and local governments has been established in all seven provinces to coordinate climate related activities at sub-national level. The coordination committees are chaired by the Secretary of the Provincial Ministry of Industries, Tourism, Forests and Environment. These coordination mechanisms operate mostly as horizontal mechanisms. For vertical coordination, the Constitution of Nepal stipulates that the three tiers of governments will operate on the principles of "cooperation, co-existence, and coordination" and communication from the federal level to sub-national agencies will take place through the Office of the Prime Minister and Council of Ministers (OPMCM) and Ministry of Federal Affairs and General Administration (MOFAGA).

(b) Project Area Situation

Climate Vulnerability and Risks – Sindhuli District

As a part of the National Adaptation Planning process, a series of vulnerability and risk assessments were completed ranking districts on various vulnerability indices. Sindhuli district ranks high or very high on a number of climate vulnerability indices. It is among the districts with high extreme events composite index in the baseline situation and is projected to have very high extreme events composite index in the medium- and long-term future. The district ranks high on the exposure and sensitivity indices while adaptive capacity is moderate for the general population and low in the case of women and marginalized groups, due to limited access to climate-adaptive technology and practices, high poverty rate, and a low human development index. Overall climate vulnerability ranking of the district is high.

In the agriculture and food security sector, Sindhuli district ranks moderate on exposure and sensitivity indices but has very low adaptive capacity. Consequently, the district is considered to have high vulnerability in the agriculture and food security sector. Climate risk to agriculture and food security is ranked very high in the baseline situation as well as in the medium- and long-term (under both RCP 4.5 and RCP 8.5 scenarios).

In the forests, biodiversity and watershed management sector, Sindhuli district ranks high on exposure index due to highly exposed watersheds and distribution of large forest areas and very high on sensitivity index due to occurrence of forest fire, larger forest-fire-prone areas, a large number of households directly engaged in forest-based livelihoods, high landslide- and flood-prone areas, and high drainage density. Climate risk to forests, biodiversity and watershed management sector is ranked high in the baseline situation and is expected to become very high in the medium- and long-term (under both RCP 4.5 and RCP 8.5 scenarios).

In terms of disaster risks in Sindhuli, drought hazard /drying up of water sources is high while landslide hazard is moderate and flood hazard low whereas river bank cutting is a persistent problem in the downstream areas. Within the Marin watershed, the baseline assessment of the project area has identified three most critical catchment areas; namely Ghagar khola, Kyan khola and Phulbari khola, as being highly vulnerable to climate hazards in the form of landslides and river-bank erosion whereas the catchments of Dhungajor, Jalkeni Sakhauri, and Simale are vulnerable. These catchment areas show high levels of land degradation in the uphill areas leading to increased sedimentation and expansion of riverbanks in the downstream areas. Among these, the project will focus on catchments of Kyan Khola, Ghagar khola and Phulbari

khola, Dhungajor, Jalkeni Sakhauri, and Simale to implement a series of NbS interventions linking upstream and downstream problem areas in Kamalamai (ward no. 1, 4, 5), Marin (ward no. 1, 2, 3, 4, 5,), Hariharpur Gadhi (ward no. 4, 5 6, 7 and 8) and Ghyanglekh (ward no. 1) municipalities.

Climate Vulnerability and Risks – Marin Watershed

In the Marin watershed, a participatory assessment of climate risks and vulnerabilities was conducted as a part of the project baseline assessment. Vulnerable settlement and hazard mapping, field observation, focus group discussions, and key informant interviews were used as the main tools and methods. Ward chairpersons and members, including Women's group members, Community Forest User Groups, Farmers Groups, Mother Groups, Indigenous communities and Dalit households, Agricultural Service Center, Livestock Service Center, Divisional Forest Offices, Agricultural Knowledge Centre, Ward chairpersons and members participated in the vulnerability assessments.

At first Municipal Level Consultations were conducted in Marin Rural Municipality and Hariharpur Rural Municipality. After consultations with municipal level stakeholders, the national consultant team conducted vulnerability assessments with ward and community level stakeholders in all of the four municipalities within the Marin watershed for the identification of vulnerable sites within each ward. The national team conducted consultation workshop at Ward Level focusing on identifying vulnerable settlements/toles/village and within wards. Participatory resource and climate impact maps were prepared through group work for mapping vulnerable settlements/toles/village and compiling information, followed by a presentation and validation of the group work. These community consultations helped identify local experiences and impacts in relation to climate change and listed down the most vulnerable areas within these vulnerable catchments in terms of climate impacts such as flooding, sedimentation, drying up of water resources, impacts on local livelihood assets. The vulnerable areas (sites) were primarily selected using criteria such as climate risk exposure, sensitivity, and adaptive capacity, economically and socially vulnerable communities pocket area, potentiality of risks and past disasters and economically poverty pocket area. The baseline assessment consultations in the project area revealed the following climate risks:

1. Flooding affecting mid and downstream areas due to high rainfall in the upstream area, no or insufficient interventions to control flooding, degraded ecosystems due to haphazard development activities such as road construction;
2. Siltation and deposition of silts in agriculture lands due to degraded ecosystems in the upstream area, agriculture cultivation in the steep slopes, lots of landslides, gully and surface erosion, forest fire and open grazing in forest area, disturbances in fragile ecosystems such as haphazard road construction, lack of interventions to reduce siltation in upstream;
3. Riverbank cutting and loss of agriculture lands due to high flooding from upstream area, extreme rainfall and flooding, no interventions to control flooding;
4. Reduction in agriculture production due to dependence on rainfall, irregularity in rain fall, loss of agriculture land by siltation and riverbank cutting, failure of crops due to lack of irrigation or damage or siltation in irrigation canals, crops affected by diseases, unavailability of chemical fertilizer on time;
5. Forest degradation due to frequent forest fire, heaving grazing, and forest exploitation;
6. Low productivity of meat and milk production due to insufficient fodder and forage supply, low productivity of local breeds, marketing problem during rainy seasons, loan problem;
7. Water shortage in dry season due to drying up of water sources, degradation and disturbances in water sources;
8. Loss of human lives, livestock, standing crops, lands and physical properties due to water-related climate disasters.

Climate Change and Agriculture

Agriculture is the main livelihood of the local communities although there is a gradual trend of abandonment of agriculture due to low economic returns and migration of rural youth to urban centres and overseas for better incomes and living standards. However, in the wake of Covid-19 pandemic, the area has witnessed the return of many migrants. The migrant returnees are primarily taking up livestock farming and vegetable cultivation. Land under agriculture constitutes about 21% of the land use in the project area and are located along the downstream of these catchments making them more vulnerable to river-bank erosion and sedimentation from landslides and degradation of watersheds upstream. Much of the agriculture remains under conventional farming system with little or no measures to adapt to the impacts of climate change. In the uphill areas, inappropriate agricultural practices and farmland management on hill slopes are causing loss of soil and soil fertility,

thereby reducing productivity and increasing risks of slope failure. Extension services to advise and train farmers on sustainable and climate-adaptive agricultural practices is inadequate. Local government agencies are short-staffed as well as inadequately -equipped in terms of training and tools for delivery of extension services to address climate impacts in agriculture. Furthermore, the remoteness of the project area has meant that the local communities have had very limited exposure and access to climate-adaptive technologies and practices to improve rural livelihoods.

A major climate-related problem to agricultural livelihoods is seasonal water scarcity in the dry winter season as the rivers and rivulets in Marin watershed are ephemeral with plenty of water during the rainy season but very scarce water in the winter when rainfall is very low. The high porosity of the geologic formation and increasing depth of groundwater due to siltation also contributes to water shortage, burdening especially women and girls who are tasked with the collection of water in rural households. Growing uncertainties in rainfall patterns also hinder agricultural production in the project area, where rice and maize cultivation is largely rain-fed. Furthermore, existing irrigation systems are very rudimentary and largely made up of earthen irrigation channels which are predisposed to erosion and seepage.

Crop damage or crop failure due to extreme weather (drought, heat, hail, unseasonal/ excessive rain) occurs from time to time in the project area, and there are also instances of damages or loss of animal sheds due to heavy rains and landslides. In such events, the poor households are particularly affected and driven further into deep poverty leading to additional pressure on natural resources in the upstreams of the watersheds.

Climate Change and Forests

While overall forest cover is still high in the project area, localized forest degradation is taking place due to encroachment, overgrazing, excessive collection of forest resources, and forest fires, and, more recently, from inappropriately planned development of roads. Fuelwood collection is huge with almost 86% of the local households dependent on fuelwood for cooking . Open grazing in the forest by livestock is very common too, affecting forest regeneration and soil cover. Forest fire risk has also grown due to warmer and drier winter season. There are also instances where local people set forests on fire to invigorate growth of grass that the livestock can feed upon. Forest degradation exacerbates climate-induced hazards and disasters such as landslides and floods, which in turn causes rise and expansion of riverbeds cutting into forests and agricultural lands located along the riversides. Community forests and leasehold forests constitute major forest management strategies of the GoN. Since its formal initiation in the late 1970s, more than 20% of Nepal's forest has been under community forest management involving more than 22,200 CFUGs. The governance of community forests is guided by the Forests Act of Nepal 2019 and community forest development guidelines . In the project area, there are 143 community forest users' groups managing 31,328 hectares of forests. Another 744 ha of forests are managed as leasehold forests by 119 groups made up of 1,157 poor households. However, baseline information from the Marin Divisional Forest Office reveal that only 62 community forests (43.4%) are active with updated operational plans. A major reason for this is the lack of training and funds among the CFUGs. The process of revision of the community forest operational plan (CFOP) requires technical capacity and funds by the CFUGs while the community forests do not generate adequate funds, especially in the Churia region where extractable volume of timber for sale is very low. Community forests are largely only able to address basic forest needs such as fuelwood, fodder and leaf litter. Also, due to out-migration of a generation of male, the women and elderly left behind do not have adequate understanding of the procedures and requirements of CFOP revision.

Climate Disasters and Vulnerable Catchment Areas

The Marin watershed is made up of several catchment areas with steep terrain, fragile geologic formations, and porous soil. It frequently experiences climate-induced hazards and disasters such as landslide, sedimentation and flooding, impacting livelihood assets and resources such as agricultural lands, forests, water sources and fish fauna. While some landslide risk mitigation and flood control activities have been carried out with support from the President's Churia-Terai Madhesh Conservation and Management Program, they remain inadequate in terms of upstream-downstream linkages and, therefore, have not had demonstrable impact. Among all the catchments, three were identified as the most vulnerable – Ghagar khola, Phulbari khola and Kyan khola. Over 400 locations were identified requiring NbS interventions in the three catchment areas through a series of field consultations with the local stakeholders, namely the municipal/ ward officials and local communities, for the project design. These locations were also appraised through GIS map analysis and direct field observations. With an expansion of the total project budget, three additional catchment areas have been added into the project scope, to increase the demonstration area under the same components, outcomes, outputs and activities, to deliver higher benefits to IPLCs and total targets.

(c) Ongoing Climate Change Adaptation Initiatives

President Churia-Terai Madhesh Conservation and Management Master Plan: Recognizing the scale and extent of environmental degradation in the Churia-Terai Madhesh region in Nepal and its vulnerability to environmental degradation and climate-related hazards, the GoN initiated a special program called the 'President's Churia-Terai Madhesh Conservation and Management Program' in 2011 to identify the problems, challenges and issues of conservation of the Churia region and to propose an effective conservation plan. This led to the establishment of the President's Churia-Terai Madhesh Conservation Development Board in 2014 to support integrated and coordinated efforts for conservation of the Churia region and the development of the President's Chure-Tarai Madhesh Conservation and Management Master Plan in 2017 to provide strategic direction for conservation activities in the Churia. More specifically, the Master Plan aims to support the integrated management of upstream and downstream land use activities, promoting an integrated landscape approach, and poverty reduction through conservation and sustainable management of the natural resources and improvement of ecosystem services. It also aims to mitigate climate-induced disasters and hazards, and improve climate resilience through conservation and management of land, water, vegetation and biodiversity. An estimated total investment of around USD 2 billion is required to accomplish the programs in the 20-year period of the master plan. Out of this, USD 0.6 billion is expected to be invested during the first five years.

The program covers 36 districts of the Churia region, including the Sindhuli district where the Marin watershed is situated. The program is supporting flood control in the Marin watershed by construction of embankments of the rivers. The government regularly funds flood control, forest management (encroachment control, nursery management, plantation, fencing) activities through this program along with supporting/ additional activities through the Provincial government and Division Forest Office. The estimated budget allocated for the project watershed is USD 200,000 for the current fiscal year.

FAO/GCF Project on Building a Resilient Churia Region in Nepal: The GoN has accessed financing from the Green Climate Fund (GCF) for the "Building a Resilient Churia Region in Nepal (BRCRN) Project". In November 2019, the GCF approved total financing of about USD 39.3 million over a period of seven years (January 2020 to December 2026). The BRCRN project, which was developed with the support of the Food and Agriculture Organization of the United Nations (FAO) and is being implemented by the MoFE with FAO's technical oversight and guidance, aims to enhance the climate resilience of ecosystems and vulnerable communities in the Churia region through integrated sustainable rural development and natural resource management approaches. The project will directly benefit over 830,000 people, including 50% women, in 26 vulnerable river systems to strengthen their resilience against climate change. Two of the river systems adjoin the MaWRiN project area and, hence, would support improving the ecological integrity of the region, though the project areas do not overlap. Coordination will be pursued with this project through participation in project meetings, as well as exchange visits to share knowledge and learn from each other's experiences.

IUCN/GCF-supported Project on Improving Climate Resilience of Vulnerable Communities and Ecosystems in the Gandaki River Basin, Nepal: This project, which commenced in November 2021 with a GCF grant of USD 27.4 million, aims to mainstream and operationalize a sustainable river-basin approach for watershed management to achieve resilience of climate vulnerable communities and ecosystems in the Gandaki River Basin. This will be achieved through the planning and implementation of climate change adaptation measures across impacted ecosystems and communities both upstream and downstream across the landscape. The project seeks to shift from the traditional district and municipality (political/ administrative boundary) based approach to a more holistic river basin-wide approach for climate-resilient development and management that transcends political/administrative boundaries. On completion in 2026, the Gandaki River Basin will be used as a model to showcase how climate-resilient development in large river basins can occur throughout Nepal. Given the similarity in using watershed as the ecological unit for an integrated and holistic approach to climate change adaptation, the MaWRiN project and this GCF project will benefit from each other's experience and lessons from project implementation. Furthermore, project interventions common to both projects include support for climate-resilient agricultural livelihoods and reduction of climate disaster risks through NbS. The project is executed by the MoFE with support from the World Conservation Union (IUCN).

UNEP/GCF-supported Project on Building Capacity to Advance National Adaptation Plan Process in Nepal: This project, with a financing of USD 2.935 million over three years, executed by the MoFE with support from the United Nations Environment Program (UNEP), aims to reduce vulnerability to climate change and increase resilience through integration of climate change adaptation into development planning processes. It constitutes four key components: (i) strengthening institutional capacity to advance the NAP process; (ii) strengthening system for developing and sharing climate risk and

vulnerability information at different levels; (iii) establishing funding strategy for implementation of the NAP processes; and (iv) strengthening capacity to monitor and review outcomes of the NAP process. A key result of this project is a series of reports providing vulnerability and risk assessment and identifying adaptation options across eight sectors and one cross-cutting theme in accordance with the National Climate Change Policy 2019. Among these reports, relevant to the MaWRiN project are the sectoral reports for agriculture and food security; forests, biodiversity and watershed management; and disaster risk reduction and management; and the cross-cutting thematic report on gender, livelihoods and socio-economics.

Nepal Climate Change Support Program: The NCCSP, implemented by the MoFE with UNDP support and financing from the United Kingdom's Department for International Development (DFID), aims to help the poorest and most vulnerable communities in Nepal to adapt to the effects of climate change. Phase I of the program ran from 2013-2017 and Phase II is from 2017-2022. It supports implementation of the LAPA, which creates jobs, mitigates disaster risks and increases agricultural productivity through improved infrastructure. It has created district-, village- and municipal-level energy and environment committees for LAPA-related activities. Total budget was GBP (British Pound Sterling) 17.6 million for Phase 1 and is GBP 22 million for Phase II.

(c)THE PROPOSED ALTERNATIVE SCENARIO WITH A BRIEF DESCRIPTION OF EXPECTED OUTCOMES AND COMPONENTS OF THE PROJECT

The proposed project builds upon a strong national commitment to strengthen the climate resilience of vulnerable communities and ecosystems in general, and to conserve the Churia region in the face of increasing challenges to the environment and growing vulnerability to climate change. The GoN updated the National Climate Change Policy to enhance its relevance to current circumstances and needs at the national as well as international levels. The Policy is a guiding document and lays out working policies and strategies to address climate change in a comprehensive manner. Immense importance is attached to the Churia region due to its critical socio-cultural, environmental and hydrological features, combined with the growing environmental and climate change threats to the region. The GoN has embarked on a twenty-year President Churia-Terai Madhes Conservation and Management Master Plan since 2017 to provide strategic direction for conservation activities in the Churia and support the integrated management of upstream and downstream land use activities, promoting an integrated landscape approach, and poverty reduction through conservation and sustainable management of the natural resources and improvement of ecosystem services. However, Nepal – as a least developed country – is unable to come up with enough funds required to cover the additional costs of climate change risk management in the highly vulnerable Churia region. With the current level of funding, the efforts in building resilience of communities through ecosystem-based adaptation remain limited and dispersed, and a comprehensive watershed approach cannot be implemented to address climate vulnerabilities of an ecological unit such as the Marin watershed.

Despite the strong commitments to address climate change impacts and to conserve the Churia region, there is insufficient foothold and capacity to remove the institutional, technological and social barriers to achieving enhanced adaptive capacity and resilience against climate change impacts in the project area. In the baseline situation, the institutional capacity of the local governments and other relevant local stakeholders to coordinate, collaborate and plan for climate change adaptation and mainstream climate change issues in local development in an integrated manner at the watershed level is highly deficient. If the current situation continues, activities in Marin watershed will continue without coordination between the municipalities and sectors, local and sector plans will have little or no CCA integration, and local development and CCA will continue to be planned and implemented in silo and remain ineffective against climate change impacts and risks from landslide, flood, sedimentation/ siltation, drought, and forest fire. As a result, climate change impacts will likely exacerbate, leading to increasing loss of livelihoods and livelihood assets impoverishing local communities. Women, poor and vulnerable communities, who are most vulnerable to climate change, will continue to have little voice in local development and climate change matters and remain with little access to knowledge and technology for climate-adaptive agriculture, livestock management and water management practices.

In the baseline situation, local communities have very limited exposure and access to climate-adaptive technologies and practices, and extension services remain deficient due to lack of training among local government staff and CBOs. Local farming systems remain predominantly conventional with little or no integration of climate-resilient methods and practices while climate change impacts are becoming increasingly profound over time. Community forests and leasehold forests lack proper management due to inadequate training and funds. As a result, there is excessive collection of forest resources, overgrazing, encroachment and forest fire, leading to localized forest degradation in the project area. Climate-induced hazards and disasters, such as landslide, sedimentation and debris flow, flooding, drought and forest fire threaten farmlands,

forest resources and community livelihoods every year. Existing climate disaster risk reduction interventions are ad hoc and too small to be effective. If the current situation continues, farm productivity and incomes will reduce and farmers are likely to abandon agriculture, impacting food security. In absence of alternative livelihoods, local communities may exploit forest resources and engage in unsustainable practices that damages the environment. This combined with ineffective community forest/ leasehold forest management would intensify and expand forest degradation, which would in turn diminish the resilience of forest ecosystems and induce further climate hazards and disasters. In the absence of GEF intervention, climate disaster risk reduction interventions will be ad hoc and with no upstream-downstream linkage. In such situation, landslides, sedimentation and debris flow, and flooding will continue to occur year after year, affecting farmlands, forests, community infrastructure and riverine ecosystem, which are critical livelihood assets for the local communities.

With GEF/LDCF financing of USD 9,024,312 and a co-financing amounting to USD 26,820,917 over a six-year period, the project will enable the government and local stakeholders to invest in protecting the Marin watershed while bolstering the longer-term resilience of local and indigenous communities against climate emergencies. The objective of the project is "to enhance climate resilience of Indigenous people and local communities in the Marin watershed through nature-based solutions and livelihood diversification." The fundamental approach will be to address climate change impacts using an integrated approach at the watershed level. This approach is to consider: (a) strengthening coordination between local stakeholders and their capacity to assess climate risks and vulnerabilities, and mainstream appropriate climate adaptation strategies and actions in local development; (b) empowering communities through training and site-based field interventions to enhance the climate resilience of local livelihoods and the resources that the local communities depend upon including through transfer of climate-adaptive technology and practices, sustainable forest management, and employment of nature-based solutions (NbS) to reduce vulnerability to climate hazards and disasters; and (c) generating lessons and good practices, and developing knowledge for replication, adaptation and sustainability of the project results.

IMAGE OF TOC INSERTED HERE

The project's Theory of Change is based on the following logic:

If there is information-sharing, coordination and collaboration among stakeholders in the Marin watershed, and the knowledge and tools to understand climate risks and vulnerabilities, and participatively identify and integrate appropriate adaptation solutions in local development in a holistic manner on the basis of watershed; **then** there will be an enabling environment for mainstreaming climate change adaptation and integrated watershed management in proactive and cost-effective ways.

If sustainable land use and natural resource management practices and technologies are introduced, based on community and local government participatory identification of climate risks and vulnerabilities and potential adaptation interventions, and these practices strengthen community livelihoods and reduce climate change impacts, and NbS interventions effectively reduce risks and impacts of climate hazards and disasters, and there is meaningful participation of the local communities; **then** there will be demonstrated evidence of successful climate-adaptive technologies and practices for larger uptake by the local communities and government;

If lessons and good practices from the project's implementation are garnered and analysed progressively throughout the project, and the project monitoring and evaluation system operates effectively providing timely information on project progress; **then** knowledge will be managed and available for replication and adaptation, and project results will be effectively monitored, understood, disseminated and used.

In summary, when **stakeholders** (specifically municipalities, soil and watershed management office, Divisional and **s**ub-divisional forest offices, community-based groups, and farmers) **in the Marin watershed are capacitated** to assess climate risks and vulnerabilities and accordingly integrate adaptation solutions into development plans through

coordination and collaboration, and learning and knowledge is being complemented by **demonstrated evidence** of sustainable practices of livelihood and natural resources management, and NbS interventions to climate hazards and disasters, then the **resilience of communities** and ecosystems to climate change will improve.

Corresponding to the afore-mentioned approach, the project will be made up of three components.

Component 1: Enabling environment for mainstreaming climate change, through the development of capacity of the municipalities and other key local agencies to assess and understand climate risks and vulnerabilities, and accordingly mainstream climate change adaptation strategies and actions in local plans and policies, and the establishment of a multi-stakeholder platform for dialogue and cooperation on climate change adaptation at the watershed level.

Outcome 1.1: Improved understanding, knowledge and capacity to mainstream climate change adaptation in local plans and policies.

To achieve Outcome 1.1, the following outputs and indicative activities are planned:

Output 1.1.1: Training and exchange visits for community-based organizations (CBOs), soil and watershed management office, division and sub-division forests offices, municipalities and relevant provincial officials on climate change impacts and risks assessment tools and methods for mainstreaming CCA in all sectors and municipal plans in an integrated approach.

This output will focus on developing the knowledge and skills of the municipal officials, divisional and sub-divisional forest officials, and community-based natural resource management groups (forestry, agriculture, irrigation, livestock) for participatory assessments of climate risks and vulnerabilities, and CCA mainstreaming. This will be achieved through a series of training and development of tools (e.g. guidelines), followed by their application for assessment of climate risks and vulnerabilities, and CCA mainstreaming which will reinforce the capacity of the training recipients whilst also providing detailed and systematic information on local climate risks and vulnerabilities. This will then enable the municipalities and local sector agencies to mainstream CCA in local plans and policies at the watershed level. It will also involve exchange visits for the soil and watershed management office, division and sub-division forest offices, community forestry user groups, municipality officials and other local stakeholders to other CCA projects in Nepal, where CCA mainstreaming and LAPA have been done successfully, and abroad to gain hands-on knowledge and insights on CCA mainstreaming carried out by those projects.

Activity 1.1.1.1: Stakeholders consultations to validate and finalize project activities and sites along with execution strategy and workplan given the three additional watersheds.

Activity 1.1.1.2: Assess training needs and, accordingly, develop curricula and materials for training on participatory gender-sensitive assessments of climate risks and vulnerabilities, adaptation options and CCA mainstreaming in key sectors at the local level.

Activity 1.1.1.3: Conduct a series of training for CBOs and government officials to develop their knowledge and skills for participatory gender-sensitive assessments of climate risks and vulnerabilities, adaptation options and CCA mainstreaming.

Activity 1.1.1.4: Support CBOs, municipalities and relevant sector agencies to carry out participatory gender-sensitive assessments of climate risks and vulnerabilities and produce the reports of the assessments through workshops and consultations *(this activity will provide the basis for activity 1.1.2.1 under output 1.1.2).*

Activity 1.1.1.5: Organize learning and exchange visits for communities, local and provincial government officials, enabling them to acquire hands-on knowledge and insights on CCA mainstreaming from other CCA projects in Nepal and abroad.

Output 1.1.2: CCA-integration guidelines developed with communities and municipalities to support and formulate climate-responsive policies and plans on water, agriculture, forestry, and rural development for four municipalities in the Marin watershed, and integrated in the watershed, forestry, and municipal planning process.

This output will focus on the development of CCA-integration guidelines and its application in the revision or formulation of local and sector plans to integrate or enhance their responsiveness to climate change. It is linked to Output 1.1.1 as the systematic information and understanding generated by the participatory CRVAs under that output, will help the municipalities and other local agencies to review local plans and policies, and assess the integration of CCA in these plans and policies. These reviews will then feed into the formulation of CCA-integration guidelines for the municipalities and sector agencies. The guidelines, in turn, will help municipalities and sector agencies to formulate or revise local plans and policies to make them responsive to climate change and its impacts.

Under output 1.1.2, the following indicative project activities are proposed:

Activity 1.1.2.1: Review municipality plans and policies for key sectors and assess the integration of climate change adaptation needs in these plans and policies, taking into account the information generated by the participatory assessments of climate risks and vulnerabilities *(linked to output 1.1.1, activity 1.1.1.3).*

Activity 1.1.2.2: Based on the above review, develop guidelines to support integration of CCA in agriculture, livestock, forestry, and water sectors at the municipality level.

Activity 1.1.2.3: Conduct workshops to disseminate the aforementioned CCA-integration guidelines to officials of the municipalities and relevant sector agencies at the local level.

Activity 1.1.2.4: Support workshops and consultations for formulation or revision of plans and policies at the municipality/ provincial level in accordance with the CCA-integration guidelines.

Output 1.1.3: Multi-stakeholder platform established in the Marin watershed to drive the mainstreaming of adaptation in an integrated watershed approach.

This output will strengthen coordination between multiple stakeholders of different municipalities in the Marin watershed through the establishment and operationalization of a multi-stakeholder platform. The platform will be supported by well-defined operational modality, structure and functions to ensure that it operates as an inclusive, coherent and transparent mechanism for the stakeholders to share information, exchange knowledge and views, coordinate and collaborate on climate change issues in the Marin watershed. It is expected to bring synergy in adaptation efforts and the use of adaptation resources. Particular attention will be given to the inclusion of women, youth, and Indigenous people and facilitating equal opportunity to express views and aspirations and contribute to the collaboration and decision-making process.

Under output 1.1.3, the following indicative project activities are proposed:

Activity 1.1.3.1: Develop operational modality, structure including the composition of the stakeholders and functions for the multi-stakeholder platform.

Activity 1.1.3.2: Organize events to launch the multi-stakeholder platform and create general awareness and common understanding about the platform among the stakeholders.

Activity 1.1.3.3: Support the multi-stakeholder platform to organize workshops, media events and dialogues to facilitate information exchange, and develop coordination and common understanding on climate change issues and adaptation measures.

Component 2: Enhanced Resilience of Local Communities to Climate Change through a) community-based natural resource management such as community identification of adaptation interventions, support and demonstration of sustainable and climate-resilient agriculture and livestock practices, improved water management, strengthened management of community and leasehold forests, and b) Nature-based Solutions that reduce climate impacts and risks.

This will be the largest project component and will focus on field investments to ensure that communities' vulnerabilities as a result of climate change impacts on livelihoods and livelihood resources are reduced, improving their resilience to climate uncertainties and adversities. The project will invest in community training and provision of low-cost materials (e.g. seeds/ seedlings of climate-resilient crop varieties) and equipment (agricultural tools that have low impact on the soil and environment); local communities to take up climate-resilient and sustainable practices of agriculture, livestock management, forestry and water management. The project will further support community forest users and leasehold forest groups, contributing to improved livelihoods whilst also addressing forest degradation, which exacerbate climate hazards and disasters such as landslides, soil erosion, floods and forest fires. It will also support NbS interventions to arrest land degradation and mitigate climate disaster risks in areas/ sites that are most vulnerable. In order to maintain focus and demonstrate tangible results, six critical catchment areas – Kyan Khola, Phulbari khola, Ghagar khola, Dhungajor, Jalkeni Sakhauri, and Simale– have been identified for implementation of NbS interventions taking into account upstream-downstream linkages. The approach will be to first introduce climate smart NbS interventions in the upstream problem areas and then move to midstream and downstream areas. These catchment areas were selected based on their high exposure to climate hazards and disasters, particularly landslides, flooding and sedimentation, and their high sensitivity to climate change due to presence of numerous IIPLCs and large areas under agriculture. In the initial year of the project, an NbS expert will be hired to assist the project together with the safeguards/stakeholder consultation specialist in the identification and design of NbS interventions that are climate-resilient and ecologically appropriate as per local site conditions. The expert will also prepare a detailed plan for implementation and management of the NbS interventions in the six identified catchment areas.

This project component is made up of two outcomes: (i) increased adaptive capacity of vulnerable households in the Marin Watershed to climate-induced disasters such as landslides, floods and droughts; and (ii) NbS reduce climate induced vulnerabilities of community livelihood assets.

Outcome 2.1: Increased adaptive capacity of vulnerable households in the Marin Watershed to climate-induced disasters such as landslides, floods, droughts, and forest fire.

Extensive consultations with IPLCs and municipalities in the project area during project preparation identified several interventions favored by communities to increase their adaptation capacity. See the detailed consultation reports in **Error! Reference source not found.**. This support will be provided through Outcome 2.1 and includes community training and farmer-to-farmer learning, as well as training of local government officials on the delivery of extension services as well as to promote and demonstrate gender-sensitive, sustainable and climate-resilient technologies and practices in agriculture, livestock management and water management, integrating Indigenous Knowledge and practices wherever appropriate (linkage to project component 3, wherein project will support assessment and documentation of Indigenous Knowledge related to climate-adaptive practices). These technologies and practices will help to transform and reorient the local farming system to a more resilient system that ensures food and livelihood security under a changing climate. Climate-adaptive agricultural practices that the project will support will include use of high-value crops and climate-resilient varieties of seeds and seedlings, agroforestry, and the use of higher productivity/low impact small hand-tools and technologies that are labor- and energy-efficient, and also responsive to the needs of women and poor households.

The project will promote water-efficient and farmer-based irrigation systems. This might include upgrading of existing earthen irrigation channels to more resilient structures such as cement masonry channels and HDPE (high density polyethylene) pipe, promotion of drip and micro/ low-volume sprinkler irrigation, environmental-friendly restoration and protection of water sources and springs, and sub-surface water harvesting while also supporting water-lift systems in water-stressed settlements. All these interventions are targeted to increase efficiency and access to existing water resources

Considering the close relationship among local livelihood resources in the form of forests, farm and water, an integrated approach and supporting interventions have been designed through a consultative manner to address multiple impacts of climate change on local communities. Improved livestock and grazing management will also be promoted through support for fodder plantation, veterinary and animal husbandry services, promotion of improved local breeds, and upgrading of animal sheds for improved management of farmyard manure and stall feeding, which will contribute to sustainable agriculture and reduction of open grazing in the forests. Improved animal sheds and access to fodder are targeted to reduce impacts of heavy rainfall and leading on livestock health and also minimize the exposure of local communities to adverse weather conditions in search of fodder for animals. Household-level, small-scale commercialization of agriculture and livestock production, including fishery development, will be supported to provide economic incentives to the farmers and motivate them to adopt and sustain climate-adaptive agriculture and livestock management practices. Women, poor and vulnerable households will be provided locally available construction materials, tools and equipment including locally appropriate fodder plants. In this respect, the project will work with the private agriculture and veterinary service providers in the project and facilitate partnerships between farmers and the private sector based on a cooperative approach that protects farmers' interests whilst strengthening coordination with the private sector. The locally established cooperatives will be provided materials and technology for promotion of seeds and species among the communities and the project will also support to strengthen their operation through capacity building on various aspects of cooperative management including operation, financial literacy, value chain. Additional support will be provided for enhancing the technical capacities of local private veterinary and agriculture service providers and provide material support so that the local communities have enhanced access to such services which have an increasing demand under adverse conditions following excessive rain, drought and forest fires. Since most of the communities remain isolated from the nearest service centers during heavy rain, landslides and flooding during the monsoon, an improvement of the above-mentioned facilities will support to strengthen local livelihoods.

Output 2.1.1: Climate-adaptive technologies and practices for agriculture, livestock management and water management introduced and demonstrated.

This output will focus on technology transfer for climate-adaptive solutions in agriculture, livestock management and water management. It will involve community training, farmer-to-farmer learning, extension skills training for government staff and private service providers in agriculture and livestock sectors, and field demonstrations. Basic equipment and material support will also be provided to the local communities for implementation of climate-adaptive technologies and practices. To economically incentivize farmers to adopt technologies and practices that enhance the climate resilience of their livelihoods, the project will promote household-level, small-scale commercialization of crops and livestock produces emanating from climate-adaptive technologies and practices. This will be pursued through partnerships between the farmers and private sector based on a cooperative approach that protects the interest of the farmers (almost all of whom are smallholding farmers) whilst also attracting private sector to get involved.

To achieve Output 2.1.1, the following indicative activities are planned, and specific activities will be implemented in the communities based on the results of the participatory CRVAs with communities and based on some self-determination by communities on appropriate and priority activities:

Activity 2.1.1.1: Support for climate-adaptive and sustainable agriculture by means of:

(a) Support for expansion of high value crops and climate-resilient varieties of seeds and seedlings for communities
(b) Promotion for commercial production of high value/climate-resilient varieties of seeds and seedlings in collaboration with the private sectors/cooperatives
(c) Identification, development and distribution of energy-efficient and gender friendly tools for agricultural production in coordination with private sector

Activity 2.1.1.2*:* Support for sustainable livestock management by means of:

(a) Upgradation of animal sheds for improved management of farmyard manure and stall feeding with fodder support
(b) Improving veterinary/ animal husbandry services in coordination with private agro/vet sector;
(c) Promotion of improved local breeds and their management;
(d) Fishery development (as a physical barrier to flooding whilst also supporting local livelihood)

Activity 2.1.1.3: Support for water-efficient technologies and farmer-managed irrigation systems including:

(a) renovation/ upgradation of existing irrigation canals/ channels for enhanced climate resilience and water efficiency;
(b) Water-lifting technologies and promotion of drip and sprinkler irrigation restoration and protection of water sources and springs for irrigation and domestic purposes; and
(c) sub-surface water harvesting and distribution.

Activity 2.1.1.4: Train local communities on climate-adaptive technologies and practices in agriculture including commercial farming, livestock management and water management in support of activities 2.1.1.1, 2.1.1.2 and 2.1.1.3.

Activity 2.1.1.5: Train local government officials and private agricultural/ veterinary service providers in the delivery of extension and technical services to local communities on climate-adaptive technologies and practices in agriculture, livestock management and water management, in support of activities 2.1.1.1, 2.1.1.2 and 2.1.1.3.

Outcome 2.2: Nature-based Solutions (NbS) reduce climate-induced vulnerabilities of community livelihood resources and assets.

The project will support the community forest users' groups and leasehold forest groups for improved management of their forests, including plantation and protection against unregulated grazing, forest fire and encroachment. It will also revitalize CFUGs and leasehold forestry use groups that are non-functional or do not have valid operational plans, train them and help them to prepare updated and improved operational plans, which integrate climate change factors. The outcome will support CFUGs on financial literacy, legal and technical aspects of forest management and provide basic material support for functioning of a CFUG. Local forestry officials will be trained to improve their knowledge and skills for delivery of extension services to CFUGs and leasehold forest groups.

The project will invest in designing and implementing NbS interventions to mitigate climate disaster risks at a comprehensive scale, focusing on three initially selected critical catchment areas, Kyan Khola, Phulbari khola and Ghagar khola, which have been identified as the most vulnerable to landslide, sedimentation and flooding while also expanding the investment in three additional catchments of Dhungajor, Jalkeni Sakhauri, and Simale of the Marin Watershed. Over 400 locations were identified for NbS interventions in the nine catchment areas during the field assessments conducted for the project design. In the initial year, the project will reappraise these locations and finalize them. Once the final locations have been selected, the project will identify and design NbS interventions for these locations, and develop a detailed plan for implementation and management of the NbS interventions. Given the highly specialized tasks, the project will hire an watershed/NbS expert to assist the project in the afore-mentioned activities who will be supported by an overseer (Engineer) with proven experience in designing, implementing and monitoring river-bank protection interventions. In the identification and design of the NbS interventions, the project will ensure that they are climate-resilient and ecologically appropriate in keeping with the local site conditions. Replicability and cost factor will also be important criteria in the choice and design of the NbS interventions. These interventions will be carried out in a series, first in the upstream problem areas and steadily moving to midstream and downstream areas. Local communities will be trained to develop their skills for carrying out these interventions.

Output 2.2.1: Management of community and leasehold forests strengthened, and vulnerable catchment areas rehabilitated and protected for reduced vulnerability to climate-induced disaster risks such as landslides, sedimentation, flooding and forest fires.

Under this output, the project will strengthen the management of 29,000 hectares of community and leasehold forests with the purpose of improving ecosystem services for climate resilience of the Marin watershed whilst also improving community livelihoods from sustainable forest use. It will invest in training, awareness-building, equipment and materials for existing CFUGs and LFGs, and the revitalization of non-functional CFUGs by assisting them in the development and implementation of updated community forest operational plans. The second aspect of this output will be the development and implementation of NbS interventions to reduce climate disaster risks in six vulnerable catchment areas, Kyan khola, Ghagar khola and Phulbari khola, Jalkeni Sakhauri, Dhungajor and Simale collectively encompassing an area of 37,000 hectares and an estimated population of 35,500 in around 6,000 households. Wherever appropriate, Indigenous Knowledge and practices will be integrated in the NbS interventions. Community and leasehold forest management will be prioritized all across the Marin watershed considering the fact that these community-managed forest areas need to be maintained while benefitting the local

population to ensure that they are not degraded as this will have a significant impact through landslides and siltation for downstream communities.

Indicative project activities to achieve Output 2.2.1 include:

Activity 2.2.1.1: Strengthen community forest management, including forest nurseries and plantations, forest fire management and grazing management, through support to existing CFUGs with training, awareness-building, equipment and materials.

Activity 2.2.1.2: Strengthen community-based forest management through CFUGs with training, awareness-building and support for development and implementation of updated and improved community forest operational plans.

Activity 2.2.1.3: Strengthen leasehold forest management through support to leasehold forest groups with training, awareness-building, equipment and materials.

Activity 2.2.1.4: Rehabilitate and protect degraded and vulnerable areas in Phulbari khola, Ghagar khola, Dhungajor, Jalkeni Sakhauri, and Simale catchments against climate disaster risks through NbS interventions ensuring community engagement, which will include:

(a) Riverbank protection/ degraded land restoration through bamboo plantation/ fencing, bioengineering.
(b) Check dam on priority streams.
(c) Conservation ponds (for erosion control and landslide risk mitigation but will also contribute to improving water management – activity 2.1.1.3);

Activity 2.2.1.5: Train local communities to develop their skills required for implementation of the aforesaid NbS interventions (listed under activity 2.1.1.4).

Activity 2.2.1.6: Train local forest officials for delivery of extension services and technical support to CFUGs and leasehold forest groups for improved management of community forests and leasehold forests (linked to activities 2.2.1.1, 2.2.1.2 and 2.2.1.3).

Component 3: Monitoring, evaluation and knowledge management, through tracking of project progress on a regular basis, garnering and analysis of lessons and good practices, and development and dissemination of knowledge that reinforces project results from components 1 and 2, providing sound basis for their replication, adaptation and sustainability.

The monitoring, evaluation and knowledge management component of the project will be key to ensure that the project is effectively implemented and progresses in line with expected results and managed adaptively in response to challenges and lessons experienced during project implementation. This component will ensure that lessons learned, and good practices are garnered, documented, analyzed, and disseminated to facilitate knowledge development and visibility of project results. It will keep track of project results, including capturing and sharing of key project lessons with project stakeholders and beyond. This project will consider monitoring, evaluation, and learning (MEL) as a package to enable adaptive management and success of the project interventions, and aid replication and scaling-up.

Outcome 3.1: Project monitoring, evaluation, and learning to enable adaptive management, replication and sustainability.

With GEF/LDCF financing, the monitoring, evaluation and knowledge management component of the project will be key to ensure that the project is effectively implemented and progresses in line with expected results and managed adaptively in response to challenges and lessons experienced during project implementation. Knowledge management will be pursued through case studies to analyse and highlight concepts, approaches and issues that the project addressed, and the lessons and best practices that emerged from project implementation. The project will support the development of information and knowledge products related to CCA including information on the different impacts of climate change across gender, age, and social groups. The project will consider communities as generators of knowledge and promote peer-to-peer and lateral knowledge-sharing. In this respect, it will support the assessment, documentation and dissemination of Indigenous knowledge

for CCA, and promote its integration in adaptation solutions for agriculture, livestock management, water management, and community/ leasehold forest management (linkage with project component 2). Media and communication events will be organized to enhance the visibility of project activities and achievements and create wider awareness of watershed management approach to climate change adaptation and the innovations on the ground. Under this component, the project will have a monitoring and evaluation system in place to keep track of project progress against project results including GESI indicators, ESS indicators, identify constraints and challenges to project progress, and provide information for adaptive management. As required for all full-size GEF projects, a mid-term evaluation of the project will be conducted after two years of project implementation and a terminal project evaluation will be done towards the end of the project. Annual and bi-annual project reviews will be undertaken as a part of the project management, and periodic progress reports will be produced to inform project stakeholders and provide documentation for planning and evaluation purposes.

Output 3.1.1: Knowledge products are developed and disseminated to enable upscaling of the project activities.

This output relates to generation and management of knowledge, especially lessons learnt and best practices, to enable replication and scaling-up and improve future adaptation project design. Case studies will be conducted to analyse concepts, approaches and practices implemented by the project and highlight their strengths and weaknesses, replication potential, etc. The project will also implement media and communication events and produce communication materials to make project activities and achievements visible to the wider audience. Indigenous knowledge will be assessed for their potential integration in the design of climate-adaptive solutions. A project website will also be developed to provide project information and updates, and access to project knowledge resources.

The activities under this output would include:

Activity 3.1.1.1: Conduct case studies, and assess lessons learned and best practices emanating from implementation of project activities, and document and disseminate them for replication and up-scaling.

Activity 3.1.1.2: Assess and document Indigenous knowledge on climate-resilient methods and practices in the project area, and promote their integration in the design of climate-adaptive solutions for agriculture, livestock management, water management, community/ leasehold forest management, and climate disaster risk reduction (linkage with project component 2).

Activity 3.1.1.3: Develop and disseminate communication and education materials through print, broadcast and digital media.

Activity 3.1.1.4: Create and maintain a project website that provides information and updates on project activities, and access to project knowledge resources in particular reports, publications, case studies and other knowledge products.

Activity 3.1.1.5: Organize media and communication events, such as project site visits by journalists, write-shops and media fellowships at local/ district, provincial and national levels, to highlight and disseminate watershed management concept, approach and practices applied by the project for climate change adaptation.

Output 3.1.2: Project progress tracked effectively through project M&E.

This output will involve M&E activities to ensure progress of planned project activities and delivery of project results and facilitate adaptive management according to the challenges and lessons emanating during project implementation. It will facilitate project work planning with course correction where necessary.

Project activities under this output would include:

Activity 3.1.2.1: Project inception and stakeholder engagement

Activity 3.1.2.2: Conduct annual and semi-annual monitoring visits to project sites.

Activity 3.1.2.3: Conduct bi-annual and annual review and planning workshops to reflect on project progress and performance and plan for oncoming year.

Activity 3.1.2.4: Produce and disseminate bi-annual project progress and annual implementation reports.

Activity 3.1.2.5: Conduct Project Steering Committee meetings as required and disseminate meeting proceedings and reports.

Activity 3.1.2.6: Conduct independent mid-term project evaluation and terminal evaluation as scheduled in the M&E plan and disseminate the findings and recommendations of the evaluation reports for follow-up actions by the concerned parties.

(d) ALIGNMENT WITH GEF FOCAL AND/OR OTHER IMPACT STRATEGIES

Alignment with GEF Focal Area Strategy and Objectives

The project will directly contribute to the GEF-7 CCA Strategy goal "to strengthen resilience and reduce vulnerability to the adverse impacts of climate change in developing countries and support their efforts to enhance adaptive capacity." It aligns with the GEF-7 CCA Strategy objectives as described below:

Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation (CCA-1): The project will introduce and demonstrate climate-adaptive technology and practices, including NbS, to increase the resilience of agricultural livelihoods and livelihood resources against climate change and reduce the impacts of climate hazards and disasters particularly landslide, flooding, drought and forest fire. It will develop the capacity of local government agencies to deliver extension services as well as create community-based/ farmer-to-farmer learning opportunities to demonstrate and promote sustainable innovation and technology for climate-adaptive agricultural livelihood practices and management of livelihood resources such as farmlands, forests, grazing lands, and water.

Mainstream climate change adaptation and resilience for systemic impact (CCA-2): The project seeks to address climate change impacts through a holistic and integrated approach at the level of watershed as an ecological unit. It will work with municipalities and multiple stakeholders within the Marin watershed and enhance their capacity to collaborate, coordinate and mainstream climate change adaptation and resilience measures for a larger impact at the watershed level. It will develop the capacity of municipal and other key local agencies to conduct participatory assessments of climate risks and vulnerabilities and use the resultant information and knowledge for mainstreaming climate adaptation in local plans, coherent with the national framework for LAPA.

While the project will directly contribute to above two GEF-7 CCA Strategies, it will also help foster enabling conditions for effective and integrated climate change adaptation (CCA-3): The project will create enabling conditions in terms of improved knowledge and tools for assessing climate risks and vulnerabilities and integrating climate adaptation in local plans. It will also support the establishment and operationalization of the MsDAP to facilitate information-sharing and coordination between multiple stakeholders for integrated and sustainable adaptation solutions to climate impacts at the watershed level.

Alignment with Sustainable Development Goals

The project will directly contribute to SDG 13: Take urgent action to combat climate change and its impacts. Within SDG 13, it will primarily contribute to the SDG target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries; SDG target 13.2: Integrate climate change measures into national policies, strategies and planning; and SDG target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning. Secondarily, the project will contribute to SDG 1: End poverty in all its forms everywhere, in particular SDG target 1.5: Build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters. It will also contribute to SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture, especially in relation to SDG target 2.4: Ensure sustainable food production systems and implement

resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

(e) ADDITIONAL COST REASONING AND EXPECTED CONTRIBUTIONS FROM THE BASELINE, THE GEFTF, LDCF, AND CO-FINACNING & (f) ADAPTATION BENEFITS (LDCF/SCCF)

The following table provides the additional cost reasoning and adaptation rationale of the project:

Barriers	Baseline Scenario	GEF Alternative Scenario	Adaptation Benefits
Component 1: Enabling environment for mainstreaming climate change			
CCA mainstreaming is constrained by lack of sound and holistic understanding of local climate risks and vulnerabilities, and their impacts on key sectors. Technical capacity in terms of knowledge and tools for CCA mainstreaming is non-existent among local government officials and other local stakeholders. There is no mechanism for coordination among stakeholders including between the municipalities and government sectors. Planning and implementation of local development and sector plans occur in isolation, resulting in piecemeal and ad hoc CCA investments, diluting their impact and causing wastage of limited funds. Women, poor and vulnerable groups, who are more directly exposed to climate change risks and impacts, have limited access to knowledge, information and decision-making.	There is some climate risk and vulnerability information up to the district level but there is no systematic assessment and information on climate risks and vulnerabilities at the municipality level and for Marin watershed. There is a national framework for LAPA but none of the municipalities have yet developed a LAPA or an equivalent local plan to enable CCA mainstreaming. There is no hands-on tool for local-level CCA mainstreaming nor do the municipalities and local sector agencies have training in CRVA and CCA mainstreaming. Municipalities have overall responsibility for local development plans and policies, which cover environment and climate change, but have no capacity to coordinate and systematically mainstream CCA in municipal and sector plans. Municipalities rarely coordinate between themselves and synergize their activities, and the forestry sector functions outside the local government system as a part of the provincial/federal system. There are women groups and women representation in some of the community groups such as CFUGs but they have little voice in the decision-making	The project will train local government officials and CBOs and equip them with the knowledge and tools for participatory assessments of local climate risks and vulnerabilities, and CCA mainstreaming. The project will support the municipalities and key sector agencies to carry out participatory assessments of local climate risks and vulnerabilities in a systematic manner, which will enable them to fully understand climate impacts in key sectors and CCA mainstreaming needs. Guidelines for CCA-integration in local plans will be developed and the project will support municipalities and sector agencies to formulate/ revise municipality and sector plans to integrate CCA as per the guidelines. A multi-stakeholder platform will be established, providing the mechanism for dialogue and coordination between multiple stakeholders to facilitate a holistic and coordinated approach to climate change adaptation based on watershed as an ecological unit. This platform will ensure that women, poor and vulnerable groups are represented and have the equal opportunity to participate and contribute to decision-making for CCA.	CCA mainstreaming will be more effective based on sound and systematic understanding of the climate risks and vulnerabilities, and their impacts. Dialogue and coordination on adaptation planning and implementation will improve with better awareness and understanding of the climate risks and vulnerabilities, and their impacts. Improved coordination between stakeholders will enable more effective and efficient use of adaptation resources, and synergy between various adaptation interventions. It will also help mobilize knowledge and views from multiple stakeholders, including women, poor and vulnerable groups, leading to better understanding and decision-making for CCA. Enhanced knowledge and skill among local government officials to systematically conduct CRVAs and mainstream CCA in local plans and policies will lead to high quality CRVAs and CCA mainstreaming. CCA-integrated local plans and policies will improve the quality and effectiveness of local development investments in various sectors, in terms of better adaptation and resilience to climate impacts.

Barriers	Baseline Scenario	GEF Alternative Scenario	Adaptation Benefits
	due to low literacy and limited access to knowledge and information.		
Component 2: Enhanced Resilience of Local Communities to Climate Change			
Local communities lack exposure and access to climate-adaptive technologies and practices. Particularly women, poor and vulnerable groups have limited access to knowledge and skills for employing such technologies and practices. Municipalities are short-staffed as well as lack trained staff for delivery of extension services to build local awareness and knowledge for climate-adaptive technologies and practices. Poverty is high in the project area, which hinders many households to employ climate-adaptive technologies and practices because of the additional costs involved. Poor households are further impoverished by crop and livestock-related damages/ losses caused by extreme weather. Management of community forests and leasehold forests is weak due to lack of training and funds. In absence of a coordinated and integrated approach, adaptation interventions to reduce climate disaster risks tend to be ad hoc with no consideration of upstream-downstream linkages.	Agriculture and livestock management are the main community livelihoods, but existing local farming systems are predominantly conventional with little or no integration of climate-resilience measures. There is very limited extension services and technology transfer at the community level for climate-adaptive agriculture, livestock management and water management. Water scarcity is a major problem especially during the dry winter season, which has become drier and warmer over the years. Current irrigation systems are primitive and largely made up of earthen channels which are easily predisposed to erosion and seepage. Water-efficient technologies are also absent in the project area. Overall, forest cover is healthy but there is localized forest loss and degradation due to excessive use of forest resources, overgrazing, forest fire and encroachment. Community forestry and leasehold forestry constitute the main strategy for sustainable forest management at the local level. There are 143 CFUGs and 119 LFGs in the project area but many of them are unable to be effectively operational due to limited technical capacity and funds. Climate disaster risks, such as landslide, sedimentation and flooding, occur frequently in Marin watershed with no systematic and holistic approach to arrest land degradation (primarily in the upstream areas) and control flood and riverbank expansion (in the downstream areas).	The project will invest in supporting climate-adaptive technologies and practices in agriculture, livestock management and water management through field demonstrations, community training, extension services, and provision of equipment and materials that are affordable, labour- and energy-efficient, and have low ecological impact. Indigenous knowledge will be garnered and integrated in the design of climate-adaptive technologies and practices to enhance their affordability, applicability and acceptability by the local communities. Project support will be extended to farmers commercialize agricultural and livestock products emanating from climate-adaptive practices in collaboration with the private sector. The project will support the poorest of the poor households in the project to secure crop and livestock insurance based on a set of criteria. The project will strengthen the management of community and leasehold forests through support to 95 CFUGs and 110 LFGs with training and awareness-building, and provision of equipment and materials. It will also train local forest officials to strengthen the delivery of extension services and technical backstopping for management of community and leasehold forests. NbS interventions to reduce climate disaster risks will be employed in two critical catchment areas, in a systematic and comprehensive manner beginning with upstream area and steadily moving into mid-stream and downstream areas. An integrated approach, combining a range of NbS interventions depending on local geologic conditions and the nature of the risk, will be implemented. Local communities will be trained to	3,860 farm households will have adopted climate-adaptive technologies and practices in agriculture, livestock management and water management, directly benefitting at least 19,000 local people, including 50% females. 540 ha of agricultural land will be brought under climate-adaptive management. Agricultural productivity and livelihood incomes are expected to improve, enabling local households to invest further in climate-adaptive technologies and practices. 29,000 ha of community and leasehold forests will be brought under improved management, enhancing forest ecosystem services and resilience against climate impacts. Additionally, it is expected to improve the livelihoods of the participating CFUGs and LFGs, enhancing their adaptive capacity. Six highly vulnerable catchment areas will be rehabilitated and/or protected from climate disaster risks through a series of NbS interventions with upstream-downstream linkages.

Barriers	Baseline Scenario	GEF Alternative Scenario	Adaptation Benefits
		develop their skills required for implementation of the NbS interventions.	
Component 3: Monitoring, Evaluation and Knowledge Management			
Knowledge management is not a priority because of limited funds and human resources.	There is no knowledge management system in the project area. Research capacity is lacking, and existing government M&E system is rudimentary and deficient to capture CCA aspect.	The project will carry out case studies and field assessments to garner and analyse lessons learnt and best practices, including indigenous knowledge, on CCA, and disseminate them for replication and scaling-up. The project M&E system will track project progress, appraise challenges, reflect on lessons, and adaptively manage the project implementation. Media and communication activities will be organized, and communication materials will be developed and disseminated to enhance the visibility of project activities and achievements, and highlight watershed management concept, approach and practices applied for CCA.	There will be better visibility and awareness of watershed management concept, approach and practices for CCA and inform future policies and plans. Knowledge management will facilitate replication and scaling-up of effective and sustainable CCA interventions, and generation of wider adaptation benefits with respect to agriculture, livestock management, water management, community and leasehold forest management, and climate disaster risk management at watershed level. M&E will improve project implementation and ensure delivery of project results whilst also providing information for design of future adaptation projects.

The adaptation benefits anticipated from the GEF/LDCF project are summarized below:

- CCA mainstreaming and improved coordination between stakeholders will enable more effective and efficient use of adaptation resources, and synergy between various adaptation interventions. It will also help mobilize knowledge and views from multiple stakeholders, including women, poor and vulnerable groups, leading to better understanding and decision-making for CCA.

- Enhanced knowledge and skill among local government officials to systematically conduct CRVAs and mainstream CCA in local plans and policies will lead to high quality CRVAs and CCA mainstreaming.

- CCA-integrated local plans and policies will improve the quality and effectiveness of local development investments in various sectors, in terms of better adaptation and resilience to climate impacts.

- 3,860 farm households will have adopted climate-adaptive technologies and practices in agriculture, livestock management and water management, directly benefitting 19,000 local people, including 50% females. Consequently, agricultural productivity and livelihood incomes are expected to improve, enabling local households to invest further in climate-adaptive technologies and practices.

- At least 29,000 ha of community and leasehold forests will be brought under improved management, enhancing forest ecosystem services and resilience against climate impacts. Additionally, it is expected to improve the livelihoods of the participating CFUGs and LFGs, enhancing their adaptive capacity.

- Six highly vulnerable catchment areas will be rehabilitated and/or protected from climate disaster risks through a range of NbS interventions with upstream-downstream linkages. This will reduce loss of and damage to community assets and

resources, and enable local communities to sustain and improve agriculture, livestock management, water management and local livelihoods in general in a more resilient and robust ecosystem.

(g) INNOVATIVENESS, SUSTAINABILITY AND POTENTIAL FOR SCALING-UP

Innovation: The project seeks to undertake an integrated approach for climate change adaptation at the level of watershed as an ecological unit, by creating enabling conditions in terms of improved knowledge and tools for CCA mainstreaming in local plans, and implementing demonstrable and sustainable climate-adaptive technology and practices for agricultural livelihoods, community forest management and NbS to reduce climate disaster risks. It will establish and support a multi-stakeholder platform to facilitate dialogue and coordination between multiple stakeholders, including women, poor and vulnerable groups, and private sector, for collective approach to enhance climate adaptation at the watershed level, transcending administrative boundaries. In view of limited government capacity for delivery of extension services for climate-adaptive agricultural and land-use practices, it will not only train local government but also promote community-based/ farmer-to-farmer learning through innovative participatory approaches. To create market incentives among small farmers for adoption of sustainable and climate-resilient technologies and practices, the project will look into value chains, and facilitate partnerships between small farmers and private sector to promote commercialization of agricultural and livestock products. These partnerships will be based on a cooperative approach to ensure that the interests of small farmers are protected whilst also fostering private sector interest in partnering with small farmers. It will employ a comprehensive series of NbS interventions to reduce climate disaster risks, starting in the upstream areas and steadily moving into midstream and downstream. Since this would entail intensive efforts, the project will focus on six critical catchment areas in the project area to make tangible impacts on the ground, providing demonstrable evidence that can be replicated in other catchment areas in Marin watershed and beyond. The proposed project interventions for climate-adaptive solutions to agriculture, livestock management and irrigation management, and NbS for climate disaster risk reduction linking upstream and downstream problem areas will be relatively new for the communities in the project area, as they currently lack access and exposure to such technologies and practices. The project will introduce technologies and practices which have proven to be successful in other areas of Nepal with socio-economic and biophysical conditions similar to the project area. Local adaptations will be made wherever necessary to enhance their suitability based on local conditions.

Sustainability: This project will pursue CCA mainstreaming in local policies building on the national framework for LAPA, which is well-entrenched as a government strategy. It will also build on the foundation provided by the community forestry program, strengthening the capacity of the existing CFUGs for improved and climate-resilient management of their community forests. The training and tools for CRVA and CCA mainstreaming, and the establishment of the multi-stakeholder platform will enhance the capacity of the local stakeholders to sustain the concept, approach and practices for climate change adaptation through integrated watershed management. Field interventions will focus on implementing and demonstrating affordable climate-adaptive technology and practices that are compatible with the local socio-economic and environmental conditions. The NbS interventions will be community-driven and community skills will be developed to carry out the interventions, so that there is ownership and capacity for management of the NbS beyond project period. The Environment and Natural Resource Protection Acts at local level define Climate change, Adaptation and Mitigation and have dedicated Clause on formulation of adaptation plans at the local level as a primary responsibility of the municipality which also emphasize special consideration for inclusion of vulnerable women, disable people, children, elderly, and poor communities while also ensuring that norms and standards of the Government of Nepal on climate change adaptation and mitigation are integrated while formulating annual plans and policies of the municipalities. The act also emphasizes conservation and management of forest areas in coordination with provincial and federal governments where necessary that also contribute to climate change adaptation and mitigation. Hence, the proposed project shall support local governments to further strengthen local governance of climate change.

Potential for scaling up: The replication potential of this investment extends beyond Marin watershed to other areas in the Churia region, which is made up of numerous watersheds and sub-watersheds with similar climate challenges, and related environmental and socio-economic issues. The concept and approach for CRVA and CCA mainstreaming that this project will support through capacity development are national in scope, allowing other municipalities and local agencies in Nepal to undertake similar approaches for integrated watershed management to enhance the climate resilience of local communities and livelihood resources. The project will test the efficacy of CCA mainstreaming in local plans based on better knowledge of local climate risks and vulnerabilities among local stakeholders, and dialogue and coordination between multiple stakeholders. Working with CFUGs to improve sustainability of forest resources as a critical natural asset for local livelihoods and enhanced resilience against climate impacts is hugely replicable in view of the country's agenda of

community forestry as a vital national program to conserve forest resources whilst addressing forest-based livelihood needs of the local people.

1b. Project Map and Geo-Coordinates. Please provide geo-referenced information and map where the project interventions will take place.

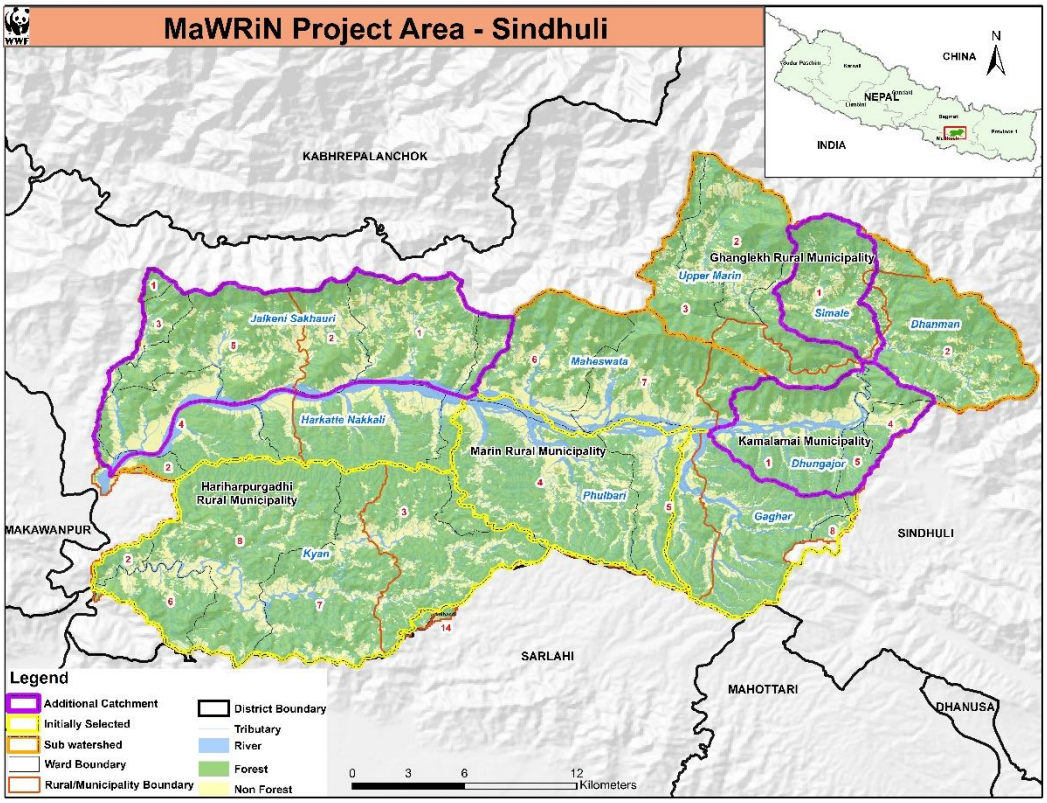
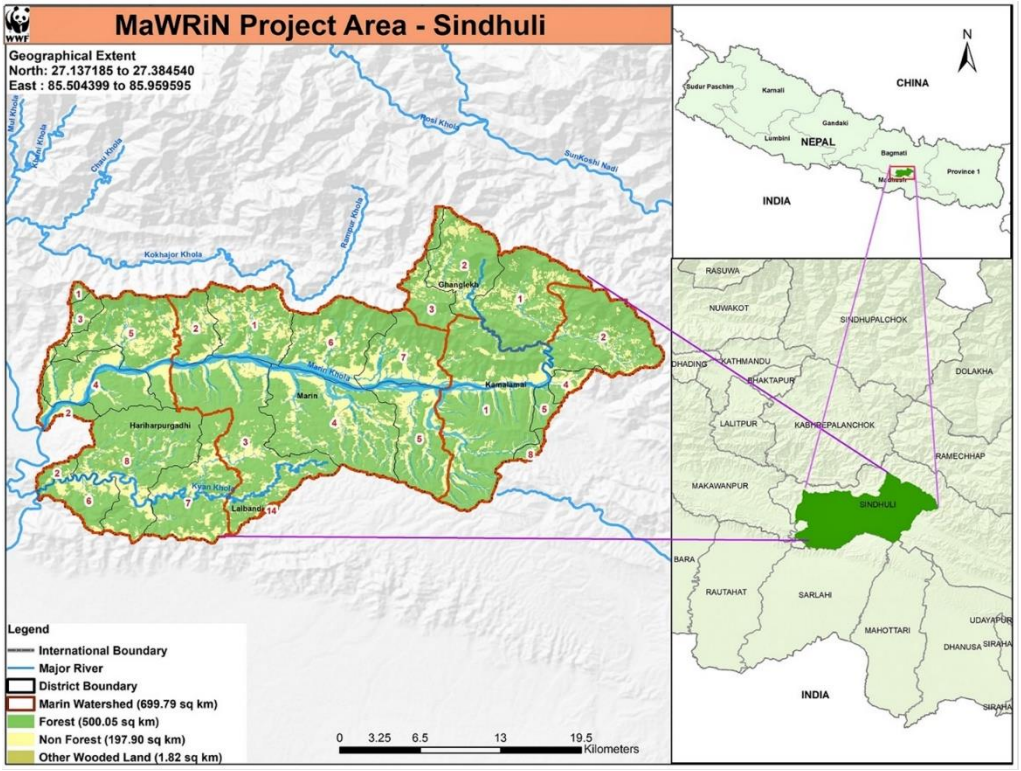


Figure 1: Intitially Selected And Additional Catchments



- 2. *Stakeholders*. Please provide the Stakeholder Engagement Plan or equivalent assessment. (Type response here; if available, upload document or provide link) In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.

Stakeholder Engagement during Project Preparation

Preliminary stakeholder consultations were taken up at the time of project identification. These included municipal officials in the project area, federal, provincial and district government officials, and local community members. Altogether 28 individuals were consulted during the project identification phase; 21% of them were women. These consultations provided a basic understanding of key climate change and environmental issues in the project area, root causes of these problems, existing barriers and opportunities, priorities of the government, issues concerning implementation and role of different organizations in project implementation, ongoing climate-related initiatives and activities, and potential project activities, which helped formulate the project concept.

During the project design preparation, extensive stakeholder consultations were held to derive detailed understanding of the project situation and formulate the project execution strategy in detail. Major stakeholder consultation activities included:

- A Project Planning Committee (PPC) was formed to provide strategic guidance and support to the project preparation team, and to coordinate and facilitate the participation of the project stakeholders, in particular the provincial and local governments, in the project design process. The PPC met three times over the course of the

project preparation. The PPC was chaired by the Joint Secretary, Planning, Monitoring and Coordination Division, MoFE. Other members included the GEF Operational Focal Person from the International Economic Cooperation Coordination Division, Ministry of Finance, Under Secretary of the Planning, Monitoring and Coordination Division, MoFE, Department of Forests and Soil Conservation, MoFE, Climate Change Management Division, MoFE, Gender and Climate Change Focal Person of MoFE, Provincial Forest Director of Bagamati Province, and WWF Nepal.

- A series of stakeholder consultation workshops as shown below:
  - **Project development inception workshop** on 1st October 2021, to familiarize the policy-level project stakeholders with the project, its key components and funding; introduce the plan and process for the project development, and elicit initial feedback and suggestions for the project development from the participants. The workshop was chaired by the Joint Secretary, MoFE, and participated by 19 officials from relevant government agencies including the provincial forest department, NGOs and international development agencies.
  - **Field-level project design workshops** were held with municipality officials and local communities from January 3rd to January 8th, 2022to disseminate baseline assessment information and elicit feedback and clarifications. The objective of these consultations was to also closely consult them to identify project sites, identify specific project activities in the identified sites, and assess capacity of municipalities in accordance with GEF capacity assessment indicators. At these workshops, the project activities were discussed with the government officials and local communities in the project area, to participatively appraise the feasibility of the activities and their suitability to local communities' needs for adaptation to climate change. Activities were modified, where necessary, in accordance with the suggestions from the local government officials and communities. Altogether, these workshops had 178 participants (104 from Kamalamai Municipality and 74 from Marin Rural Municipality). Of these 125 (70.2%) were men and 53 (29.8%) were women. In terms of ethnicity of the participants, 137 (77%) belonged to indigenous group, 28 (15.7%) to Dalit caste, and 13 (7.3%) to Brahmin/ Chhetri castes.
  - **Project Implementation arrangement meetings** were held between 19-24 February 2022 with the Mayor/Chair of the three municipalities, Kamalamai, Marin and Hariharpur Gadhi and MoFE of Bagamati Province, Ministry of Economic Affairs and Planning of Bagamati Province and Ministry of Land Management, Agriculture and Cooperatives of Bagamati Province with participation of the Honourable Minister and Secretary of Forests and Environment.
- Key informant interviews and focus group discussions were conducted from September 3rd to September 9th, 2021, for the GESI analysis. A total of 62 people were consulted during the GESI assessment in the project area. This included 52 women (83.8% of the total respondents), 47 indigenous people (75.8%), and eight Dalits (12.9%).
- Individual consultations and focus group discussions were conducted between September and December 2021, with a total of 385 people to assess climate risks and vulnerabilities in the project area, capacity of municipalities and other local agencies for CCA mainstreaming (project component 1), and community livelihoods, natural resources management, and vulnerable community livelihood assets and infrastructure in the project area (component 2). The consultations included 274 men (71.2%) and 111 women (28.8%). In terms of ethnicity, 137 (77%) belonged to indigenous group, 28 (15.7%) to Dalit caste, and 13 (7.3%) to Brahmin/ Chhetri castes.
- Household survey were carried out in the project area to secure first-hand socio-economic baseline information of the local population in relation to agriculture, livestock management, water use, energy use, climate change knowledge, and income. A total of 419 households in the project area were included in the survey: 66 each in Kamalamai Municipality and Ghyanglekh Rural Municipality; 155 in Marin Rural Municipality; and 132 in Hariharpur Gadhi Rural Municipality. Women comprised 42% of the total respondents and men comprised 58%. The majority (80.2%) of the respondents were between 30 to 59 years old. Other respondents were between 18 to 29 years old and older than 60 years of age. In terms of ethnicity, 72.6% of the households

belonged to indigenous group, 19.3% to Dalit caste, and the remaining 8.1% to Brahmin/ Chhetri and other castes.

Details on the engagement of various stakeholders in the project design can be found in **Error! Reference source not found.**.

The Project Management Unit (PMU) will ensure that the views and inputs of stakeholders are taken into consideration throughout project implementation. For detailed information on how the project will accommodate women's barriers to participation in stakeholder engagement, please refer to the Gender Action Plan in Appendix 11 of the project document. For detailed information about how the project will engage Indigenous Peoples and ensure their rights are respected during the project design and implementation, please refer to the ESMF, which contains an Indigenous Peoples Planning Framework.

-
- To facilitate dialogue and coordination between the local stakeholders to address CCA in an integrated and cost-effective manner at the watershed level, the project will support the establishment of a multi-stakeholder platform and facilitate its operationalization. This will entail the development of the operational modality, structure and functions of the multi-stakeholder platform so that it operates in a transparent, coherent and inclusive manner. An event will be organized to launch and activate the platform and create awareness about it. Subsequently, the project will support the multi-stakeholder platform to organize workshops, meetings and media events to enhance stakeholder awareness and coordination. A key function of the multi-stakeholder platform would be to provide an inclusive forum that ensures the knowledge, views and aspirations of all key stakeholders, particularly Indigenous Peoples, marginalized communities and women, are recognized and inform the development of a coordinated and concerted approach to climate change adaptation in the Marin watershed. The role of the private sector will also be examined for inclusion in the platform.
-

The project seeks to strengthen the engagement of all related stakeholders towards unified and coherent understanding and delivery of integrated approach to climate change adaptation at the watershed level, with enhanced capacity for CCA mainstreaming, climate-resilient livelihoods, and NbS for climate disaster risk reduction. Given the localized nature of the project, the engagement of local stakeholders, in particular the municipal and ward authorities, divisional and sub-divisional forest offices, CFUGs and LFGs, and the local farmers, will be the main actors in project implementation. The the PMoFE (Bagmati Province) will function as the national project executing agency to coordinate, guide, backstop and enable project implementation in the field. The engagement of the various stakeholders in project implementation is outlined in the table below:

-

Stakeholder Name	Relevant Project Components	Role in Project Implementation/ Mode of Engagement
Federal Ministry of Forests and Environment	Policy level guidance as necessary and function as the coordinating ministry between WWF and MoFE Bagamati Province	Policy level and programmatic guidance and backstopping as necessary.
Provincial Ministry of Forests and Environment	All project components, and project management.	As the national project executing partner, MoFE will be responsible for overall project coordination and management. The PMU will be located within the Soil and Watershed Management Office, Ramechhap of the MoFE, and a senior MoFE official will be deputed as the Project Director. Keep GEF Operational Focal Point informed of project progress and performance. Coordinate with WWF GEF Agency in accordance with the agreed project operation procedures.
Municipalities/ Rural Municipalities and constituent wards	Project components 1 and 2	Recipient of capacity development for climate risk and vulnerability assessment (CRVA) and CCA mainstreaming.

Stakeholder Name	Relevant Project Components	Role in Project Implementation/ Mode of Engagement
		Direct implementation role in implementation of activities related to Outputs 1.1.2, 1.1.3, 2.1.1 and 2.2.2.
Divisional and Sub-Divisional Forest Offices	Project component 2	Guidance and backstopping for implementation of activities related to Output 2.2.1
FECOFUN: CFUGs and LFGs	Project component 2	Direct implementation role in implementation of activities related to Output 2.2.1
Local communities	Project component 2 and 3	Will be target project beneficiaries and will have a direct implementation and decision-making role in all household and community-level project interventions with support and guidance from project executing office, and local government and forest agencies.
Ministry of Finance	No direct role in project implementation but will have major advisory role and influence in project decisions.	Participate in Project Steering Committee meetings, keeping track of project implementation and performance and providing executive guidance where necessary. Be informed by the MoFE of project progress and performance.
Other Federal Ministries: Energy, Water Resources, and Irrigation; Agriculture and Livestock Development; Land Management, Cooperatives and Poverty Alleviation; and Water Supply.		Participate in Project Steering Committee and Technical Coordination Committee meetings, providing policy and executive guidance relevant to the affairs of their respective ministries.
Non-governmental Organizations		Participate in Technical Coordination Committee meetings, providing guidance on gender and community empowerment issues and matters related to climate change and environment depending on their organization's experience and expertise.
Other relevant provincial ministries and agencies		Participate in Project Steering Committee and Technical Coordination Committee meetings, providing provincial-level guidance and backstopping relevant to the project.
District Administration Office (Sindhuli District)	No direct role in project implementation but will have an advisory role	Regional level guidance and backstopping to community and leasehold forest management activities.
Private sector enterprises	Collaborative role in project component 2	Collaboration with local communities and cooperatives in commercialization of agriculture and livestock products resulting from project interventions. Agricultural and veterinary service provider and influencer in technology transfer.

-
- Select what role civil society will play in the project:
- ☐Consulted only;
- ☐Member of Advisory Body; contractor;
- ☒Co-financier;
- ☒Member of project steering committee or equivalent decision-making body;
- ☒Executor or co-executor;
- ☐Other (Please explain)
-

3. Gender Equality and Women's Empowerment. Provide the gender analysis or equivalent socio-economic assessment.

A GESI analysis was done as a part of the project design and is provided in subsection 2.5.3 (page 59-61) of the project document. A Gender Action Plan has been done for the project. **Please see Appendix 11** of the project document (page 149-175).

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women's empowerment? (yes ☒ /no☐) If yes, please upload gender action plan or equivalent here.
If possible, indicate in which results area(s) the project is expected to contribute to gender equality:
☒ closing gender gaps in access to and control over natural resources;
☒ improving women's participation and decision making; and or
☒ generating socio-economic benefits or services for women.
Does the project's results framework or logical framework include gender-sensitive indicators? (yes ☒ /no☐)

4. Private Sector Engagement. Elaborate on the private sector's engagement in the project, if any.

The project will work with the local governments, specifically municipal and ward offices, and vulnerable and marginalized communities that are socially bound together through community-based institutions such as CFUGs. Hence, major focus will be on strengthening the local government agencies and community-based institutions. There is an opportunity for private sector engagement for sustainability and upscaling, particularly in Component 2 which focuses on diversifying livelihoods and engaging local communities in small-scale income generating enterprises. Under this component, the proposed project will engage with local private service providers such as agro-vet enterprises and micro-enterprises, other relevant projects that address these issues and micro-finance institutions and cooperatives to build capacity, document and disseminate locally appropriate climate smart technologies and provide enabling environment and access to credit facilities for communities. Though the local agriculture is subsistence in nature, the private sector will be engaged to upscale and add value to the local production systems. Partnerships will be facilitated between local communities and the private sector to promote commercialization of agricultural and livestock produces emanating from climate-adaptive practices. This will be pursued through a cooperative approach to protect the interest of small farmers whilst fostering private sector interest in working with the small farmers.

5. Risks. Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

The overall risk rating of the project is medium and will be managed through the proposed mitigation measures. The key risks that could threaten the achievement of the project results through the chosen project execution strategy, and the mitigation measures that will be employed to manage them are outlined in the Table below. The risk ranking is based on the likelihood of a given risk occurring combined with potential severity of its impact on the success of the project.

Risk Category	Identified Risks	Risk Ranking[1]			Mitigation Measures
		Likelihood	Severity	Rank	
Political	Political instability and/or deterioration in security situation	2	2	4	The project will pursue community-based approach working with CFUGs, farmers' groups, water/irrigation user groups and actively engage with the civil society, building on local institutions and norms that are resilient to political instability and changes. Extensive consultations were held with the officials of the municipalities and other local stakeholders, including community-based groups, during the project design process. This would have fostered local ownership of the project design, which is expected to continue into project implementation even if there is a change of local government. If and when there is a change in the local
	Change in local government -- Local elections are expected to take place in a few months followed by provincial and federal elections. In general, elections would not	3	2	5	

[1] Adapted from WWF Project and Program Management Standards. Likelihood: (1) Very Unlikely; (2) Unlikely; (3) Likely; (4) Very Likely.

Risk Category	Identified Risks	Risk Ranking[1]			Mitigation Measures
		Likelihood	Severity	Rank	
	impact project implementation but, in some cases, there may be delays in decision-making at various government levels.				government during project implementation, the PMU will organize a meeting to fully inform the new government on the project, its progress and plan continued coordination, and follow-up with enhanced communication with key local government officials.
Operational	Staff turn-over in the project and municipalities	3	2	5	PMU staff will be renumerated fairly and will be recruited based on their motivation to help local communities and address climate change at the grassroots level. Should staff change occur, events will be organized to orientate new staff to the project strategy and operational arrangements. The PMU will maintain detailed and up-to-date documentation on project implementation so that there is no information gap for continued project implementation. Furthermore, the PMU will try to engage local human resources to the extent possible.
	Inadequate coordination with other relevant projects/ programs	2	2	4	The project executing agency, MoFE, Bagamati Province will ensure that the project steering committee has representation from all key provincial ministries and line agencies. Coordination and synergy with other relevant projects/ programs will be a key agenda item in the PSC meetings, as well as required to be reported in periodic project progress and implementation reports. Overall, the PMU will have the responsibility to ensure coordination with government agencies and other development partners including GEF/GCF projects.
	Inadequate coordination among stakeholders	3	1	4	At the local level, the project will establish a multi-stakeholder platform to facilitate information-sharing, dialogue, and coordination between multiple stakeholders. At the upstream project management level, the project steering committee will be used as a key mechanism for information-sharing and coordination with relevant government ministries, line agencies and development partners.
	Insufficient government staff for delivery of extension services for climate-adaptive technology and practices	2	3	5	Local communities will be trained and community-based/ farmer-to-farmer learning approaches will be supported to promote and demonstrate climate-adaptive technology and practices. Technical Assistance provided in the form of project staffs at PMU will support the Executing entity.
	Low capacity to disburse and spend project funds	3	2	5	The PMU and WWF will work closely with the executing agency, MoFE of Bagamati Province, and other implementing partners to facilitate timely human resource recruitment, procurement of goods and services, ensure granting and subcontracting process for smooth implementation of planned activities.
Social	Communities may be unwilling to adopt new technology and practices	2	1	3	Participatory methods will be employed and close consultations with local communities will be undertaken to foster community participation and ensure that community needs, and priorities are fully prioritized in technology transfer. Special attention will be given to ensure that new technology and practices are responsive to the needs of women, poor and vulnerable groups. Technical guidance and backstopping will be delivered on a regular basis as per the needs of the local communities. Training and knowledge dissemination will be carried out concurrently to raise awareness and confidence among

Risk Category	Identified Risks	Risk Ranking[1]			Mitigation Measures
		Likelihood	Severity	Rank	
					target communities for adoption of new technology and practices.
	Shifting priorities of local governments with a focus on infrastructure as compared to watershed/natural resources management which could negatively impact biodiversity.	3	2	5	A major project focus is on mainstreaming climate change and watershed management approach in local plans and policies in key sectors which should safeguard the environment and watershed from adverse development impacts, and ensure that infrastructure development fully take into account climate resilience measures. The project will also establish a multi-stakeholder platform, which will enable dialogue and cooperation among stakeholders to ensure that infrastructure development activities do not adversely impact the watershed and its ecosystem services.
	Youth outmigration due to lack of local employment opportunities leading to low youth engagement and effective implementation of project activities.	3	2	5	The project will engage youth through livelihood activities and build their capacities in areas that can generate local employment opportunities based on sustainable rural livelihoods and natural resources management within the scope of the project.
	Conflict and inequity among communities over use of water, forests and other natural resources due to exploitation of resources and effects of climate change.	2	3	5	The project will closely work with local communities and the civil society to support community-based natural resource management in accordance with existing government laws and regulations, and adhere to norms and standards set for equitable benefit-sharing of natural resources. It will also apply WWF environmental and social safeguards to ensure that any potential conflicts over natural resources are effectively mitigated. Through the Gender ESI action plan, the project will ensure that the project interventions do not disadvantage women, poor and vulnerable groups, and instead bring enhanced benefits to them.
Physical	Road connectivity is poor and, during rainy season, many of the target communities and sites would become inaccessible.	3	2	5	Project work plans will take into account the local weather pattern. NbS interventions and the delivery of community training and extension services will be largely carried out before the onset of monsoon. Participatory learning will be promoted to facilitate transfer of knowledge and skills between farmers in the absence of extension services and guidance from local government officials and project staff due to inaccessibility during rainy season.
Disaster (climatic and non-climatic)	Climate-induced disasters (e.g. landslide, flooding) impede project implementation and negate project achievements.	3	3	6	The project will collaborate with municipalities, district line agencies and other key stakeholders to identify the high-risk areas and ensure preparedness while also facilitating local communities to rebuild and recover after such disasters with a focus on NbS while promoting green recovery and reconstruction. The project activities are designed and will be implemented in a manner that there is follow-up and support in such cases in following years and the project will also facilitate to leverage support from local government and other agencies where feasible.
	Non-climatic disasters (e.g. health epidemic, earthquake) impede project implementation and negate project achievements.	2	3	5	By and large, the project will rely on NbS interventions which will be relatively more resilient to disasters. In the event of health epidemic, the project will employ health protocols and good practices recommended by national and international health agencies to ensure that project activities are pursued with minimal health risk to the project staff and intended beneficiaries. Virtual interaction will be employed to the extent possible where physical

Risk Category	Identified Risks	Risk Ranking[1]			Mitigation Measures
		Likelihood	Severity	Rank	
					interaction is to be avoided. Depending on the situation, work plans and implementation approach will be adapted to achieve project results.

Notes on Risk Ranking:
Likelihood: (1) Very Unlikely; (2) Unlikely; (3) Likely; (4) Very Likely
Severity: (1) Low; (2) Medium; (3) High; (4) Very High
Rank: 1-3 Low Risk (Green); 4-5 Medium Risk (Yellow); 6-8 (High Risk)

COVID-19 Risk Analysis:

Risk category	Potential Risk	Mitigations and Plans
Availability of technical expertise and capacity and changes in timelines	Continued or renewed efforts in COVID-19 containment are likely over the course of project development and possibly into implementation.	The project development work plan and team will be built with this in mind, for example, selecting local staff and consultants to conduct stakeholder engagement to minimize the risks associated with international or outside consultants physically interacting with isolated, and rural communities. Project development will be managed by the WWF Nepal office in coordination with the Ministry of Forests and Environment, and the WWF GEF team will use remote technology to connect to in-country consultants and partners to design and consult on the project.
Financial Resources	Changes in baseline – It is not likely that any of the co-financing or baseline will be decreased or delayed due to the Pandemic.	The additional need for resources to address the effects of the pandemic will not likely affect the co-financing available for this project, as the funding for public health crises will not draw on the resources dedicated to the President Chure Conservation Program
Stakeholder engagement process	With the risks COVID-19 poses, extra precautions must be taken during project consultations and analysis in the field of local communities,	Local level consultation will only be undertaken if it complies to national to local government guidelines and WWF national office guidelines. For example, it is likely that a small number of staff engage stakeholders on a broader set of topics such as helpful nature based solutions, agricultural products for improvement, and related project topics in order to limit exposure. Staff conducting consultations will have PPE for themselves and for people they talk to in person. Additionally, COVID protocol will be developed and followed, such as testing, and supply of sanitizer and masks. In any case where either party is not comfortable to engage in discussions; it will not proceed. As much as possible, remote connections will be sought, for example via local government offices visiting communities. In all cases, continued attention will be given to ensuring the voices of IP, women, youth, and any underrepresented community members.
Future risk of similar crises	It is not anticipated that this project will have adverse impacts that might contribute to future pandemics, for example, there will be no focus on increasing the human-wildlife interface or any actions that cause degradation.	This will be a consideration during project implementation that the PMU is made aware of. There are some activities that may reduce current forest degradation which could help reduce human-wildlife conflict.
	It is possible that COVID-19 impacts lead more people to move to rural areas, including areas around the Marin watershed and	As the project will improve watershed management, attention will be paid to affects that incoming residents may have on the water quality and availability. The social dynamics are also affected within households with migrant workers and the project's gender action plan addresses this.

	this may add more pressure to resources there.	

COVID-19 Opportunity Analysis

Opportunity Category	Potential	Project Plans
Can the project do more to protect and restore natural systems and their ecological functionality?	The proposed project will contribute to restoring ecosystems and function within the Marin watershed which includes the river basin and the surrounding forest areas, as a co-benefit of nature- based solutions for adaptation.	At the core of the project ToC is the strategy to reduce landslide, drought and flood threats to vulnerable communities. This will include guidelines for communities and municipalities to support more sustainable agriculture, forestry use and rural development, which will protect land and watershed ecosystems.
Can GWP/BD projects regulate consumption of wildlife and markets?	N/A	
Can the project include a focus on production landscapes and land use practices within them to decrease the risk of human/nature conflicts?	The project will include guidelines and support to climate smart agriculture and local adaptation solutions which will alleviate pressures on surrounding vulnerable forests, and result in less human encroachment on forested areas.	The project will increase adaptive capacity of vulnerable households by specifically promoting sustainable agricultural practices that may include: Water efficient technologies and farmer managed irrigation systems; , promotion of high-value crops, climate resilient seeds, higher productivity/low impact small hand-tools and technologies that are GESI/labor and energy smart.
Can the project promote circular solutions to reduce unsustainable resource extraction and environmental degradation?	This project includes support to address forest degradation and the anthropogenic causes of ecosystem deterioration.	Reducing unsustainable timber extraction from forests may be an outcome of this project, as the extraction of timber from forests on the fragile slopes in the Marin watershed is contributing to the degradation of the targeted landscape.
Can the project innovate in climate change mitigation and engaging with the private sector?	This project focuses more on Climate Change Adaptation and using innovative tools and technology to improve agricultural practices and the management of the Marin Watershed. The project will facilitate partnerships between small farmers and the private sector to promote commercialization of agricultural and livestock products.	Community Based Organizations as well as municipality and provincial officials will be trained on climate change impacts and risk assessment tools that can be utilized in further planning and mainstreaming of climate change in Nepal. Improved climate-adaptive practices will reduce the emissions from the agriculture sector and positively impact the carbon storage capacity of the surrounding forests.

6. Institutional Arrangement and Coordination. Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

The **Ministry of Forests and Environment (MoFE), Bagamati Pradesh, Soil and Watershed Management Office, Ramechhap (SWMO)** will be the main executing agency and will have the overall executing and technical responsibility for the project and will be responsible for the day-to-day management of project results. As Lead

Executing Agency of the project MoFE- Bagamati Pradesh, is responsible and accountable to the WWF GEF Agency for the timely implementation of the agreed project results, operational oversight of implementation activities, timely reporting, and for effective use of GEF resources for the intended purposes and in line with WWF- US and GEF policy requirements. MoFE, Bagamati Province may depute its technical staffs to PMU to strengthen PMU workforce.

WWF Nepal is a key partner of the Government of Nepal and will provide services at the request of the government as co-financing to the project, not accessing any GEF funds. These services include:

- At the direction of MoFE- Bagamati Pradesh, SWMO recruitment of staff (to be seconded to the project) and consultants to be assigned to the PMU,
- Administering funds for hiring the PMU and certain TA activities such as workshops according to WWF policies and procedures,
- Provide technical backstopping for smooth execution of the project.

All other execution functions will be undertaken by MoFE- Bagamati Pradesh, SWMO.

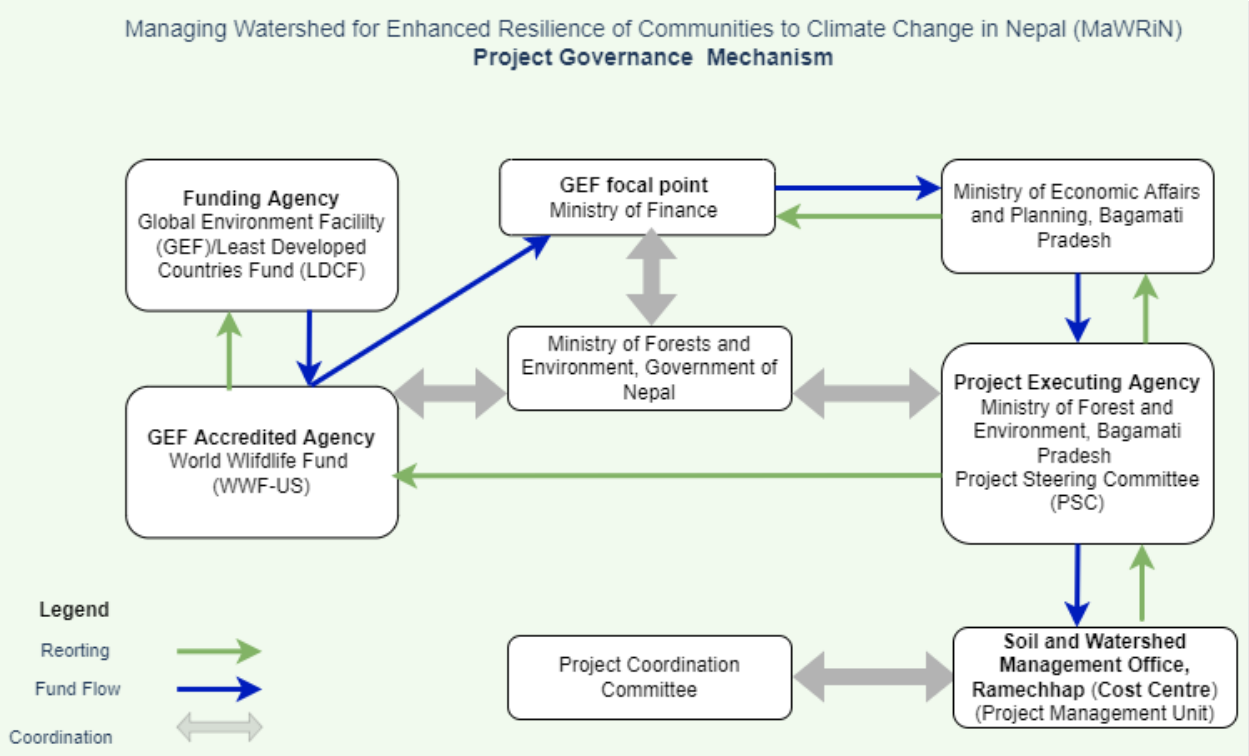
The Ministry of Forests and Environment (MoFE) will play a facilitating and coordinating role at the national level for the project execution. More specifically MoFE will (i) Coordinate with MoF, MoFE, Bagamati Pradesh and WWF-Nepal on matters related to project implementation, (ii) Facilitate periodic monitoring, mid-term and terminal evaluation of the project, and (iii) Provide technical backstopping on institutional capacity building and knowledge management.

The Ministry of Finance is the political and operational focal point of GEF/LDCF. All the financial resources made available to Nepal will be channelized through MoF. MoF will make the necessary arrangement to provide the funds to national or provincial authorities for the execution of the approved project. MoF will ensure timely flow of fund to the provincial executing agency.

Project partners executing project activities in coordination with MoFE- Bagamati Pradesh, SWM will be different government agencies such as the Divisional Forest Office Marin and Sindhuli, IPLCs, and various civil society organizations in the watershed such as community development groups, women groups, farmer's groups, community forest users' groups and leasehold forest groups.

GEF Agency Oversight and Supervision

WWF-US, through its WWF GEF Agency will: (i) provide consistent and regular project oversight to ensure the achievement of project objectives; (ii) liaise between the project and the GEF Secretariat; (iii) report on project progress to GEF Secretariat (annual Project Implementation Report); (iv) ensure that both GEF and WWF policy requirements and standards are applied and met (i.e. reporting obligations, technical, fiduciary, safeguards, M&E); (v) approve annual workplan, budget and procurement plan; (vi) approve budget revisions, certify fund availability and transfer funds; (vii) organize the terminal evaluation and review project audits; (viii) certify project operational and financial completion, and (ix) provide no-objection to key terms of reference for project management unit.



Project Steering Committee (PSC)

The Secretary of MoFE - Bagamati Pradesh will chair the Project Steering Committee (PSC) which will be the main governing body of the project. The PSC will be composed of high-level officials/representatives from relevant provincial and national government agencies, project stakeholders, NGOs, and WWF-Nepal. WWF GEF Agency will serve as an observer.

The PSC is responsible for providing strategic guidance and an enabling environment for the effective implementation across all levels of the government, and guidance to the Project Technical Committee (PTC). The PSC oversees the Project Management Unit (PMU) for the overall project delivery according to the Project Document and approves the annual work plan and budget (AWP/B) and associated procurement plan for project implementation, and the reporting before submission to the GEF Agency. The PSC members will: (i) provide policy and strategic guidance, (ii) technically oversee activities project execution; (iii) ensure a fluid two-way exchange of information and knowledge between their respective agency and the project; (iv) facilitate coordination and links between the project activities and the work plan of their respective agency and approve AWP/B and associated procurement plan; (v) recommend any changes necessary to the project workplan/result framework or project timeline; (vi) approve the project operation manual; (vii) facilitate the provision of co-financing to the project. The PSC will meet at least twice a year to ensure that all relevant project partners are involved in the decision making and implementation of the project.

Composition of PSC

- Chair - Secretary, MOFE, Bagamati Province
- Members
- Province Forest Director, Provincial Forestry Directorate, MoFE, Bagamati Province
- Representative, MoFE, Government of Nepal
- Representative, Ministry of Economic Affairs and Planning, Bagamati Province

- Country representative, WWF Nepal
- Representative, Ministry of Agriculture and Livestock Development, Bagamati Province
- Department Chief, Department of Watershed Management and Environmental Science, Institute of Forestry (IoF), Hetauda
- Faculty of Forestry, Agriculture and Forestry University (AFU), Hetauda
- Representative Rastrapati Tarai, Chure, Madhesh Conservation and Development Board
- Division chief, Science, Environment and Climate Change Division, MoFE, Bagamati Province-Member
- Chief, Soil and Watershed Management Office, Ramechhap
- Technical Team Leader (invitee)
- Member secretary: Division Chief, Forest Management and Biodiversity Division, MoFE, Bagamati Province

Project coordination committee (PCC)

A Project Coordination Committee (PCC), chaired by the mayor of the Municipality/rural Municipality on seniority basis, will be set up to coordinate, review, and monitor project field activities. The PCC will also facilitate the implementation of project activities, and facilitate wider stakeholder engagement for the successful project execution.

Composition of the PCC

- Chairperson- District Coordination Committee Sindhuli
- Members
- Mayor Kamalamai Municipality
- Chairperson-Hariharpur Rural Municipality
- Chairperson-Marin rural Municipality
- Chairperson-Ghyanghlekh Rural Municipality
- District Coordination Officer- Sindhuli
- Divisional Forest Officer-Divisional Forest Office, Marin
- Divisional Forest Officer-Divisional Forest Office, Sindhuli
- Chief-Agriculture Knowledge Centre, Sindhuli
- Chief, Livestock Support Expert Service, Sindhuli
- Member secretary: Chief-Soil and Watershed Management Office, Ramechhap

Project Management Unit PMU)

A Project Management Unit (PMU) will be set up consisting of officials of SWMR, not financed by the Project; and staff to be recruited on the open market according to WWF policies and procedures in coordination with MoFE, Bagamati Pradesh and seconded to the project. Chief of the Soil and Watershed Management Office, Ramechhap will serve as the Project Manager (PM), not financed by the project. Following the guidance of the PSC, the main functions of the PMU are to (i) oversee fiduciary arrangements, (ii) ensure overall efficient management, coordination, timely implementation of the agreed project work plan/result framework including the ESMF and related Safeguard plans, (iii) operational oversight of implementation activities, (iv) timely reporting, and for effective use of GEF/LDCF resources for the approved work plan and (v) monitoring of the project. The PMU will also serve as the secretariat to the project coordination committee and multi-stakeholder dialogue and action platform. PMU will be based in the project area.

The PMU will comprise of the following full-time staff:

1. Chief, Soil and Watershed Management Office, Ramechhap -Project Manager

2. Technical Team Leader (watershed and forestry expert)

3. Project Officer (Agriculture and Livestock)

4. Finance and Compliance Officer

5. Overseer (Lead Engineer)

6. MEL and Communication Officer

7. Gender, Social Inclusion and Safeguards-experts

8. Administration Assistant

9. Project Assistants (2)

10. Project Support Staff

A project operational manual (POM) will be developed by the PMU at the beginning of the project for review and approval by the first meeting of the project steering committee and endorsement at the Project Inception Workshop. The POM will provide overall guidance on project management and operations and lay out the procedures for financial and programmatic operations.

7. Consistency with National Priorities. Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:

- - National Action Plan for Adaptation (NAPA) under LDCF/UNFCCC
- - National Action Program (NAP) under UNCCD
- - ASGM NAP (Artisanal and Small-scale Gold Mining) under Mercury
- - Minamata Initial Assessment (MIA) under Minamata Convention
- - National Biodiversity Strategies and Action Plan (NBSAP) under UNCBD
- - National Communications (NC) under UNFCCC
- - Technology Needs Assessment (TNA) under UNFCCC
- - National Capacity Self-Assessment (NCSA) under UNCBD, UNFCCC, UNCCD
- - National Implementation Plan (NIP) under POPs
- - Poverty Reduction Strategy Paper (PRSP)
- - National Portfolio Formulation Exercise (NPFE) under GEFSEC
- - Biennial Update Report (BUR) under UNFCCC

- Others

National Climate Change Policy 2019: The project is relevant to the implementation of the National Climate Change Policy 2019. It will contribute to the implementation of NCCP 2019 objectives to: (a) enhance climate change adaptation capacity of persons, families, groups and communities vulnerable to, and at risk of, climate change; and (b) build resilience of ecosystems that are at risk of adverse impacts of climate change; (c) mainstream or integrate climate change issues into policies, strategies, plans and programs at all levels of State and sectoral areas; and (d) mainstream gender equality and social inclusion into climate change mitigation and adaptation programs. Within the NCCP 2019, the project will specifically relate to sector strategies and working policies for agriculture and food security, and forests, biodiversity and watershed conservation.

National Adaptation Plan (2021-2050): The project will relate to the following specific NAP objectives: (a) increase crop production through identification and adoption of good, climate resilient, and sustainable agricultural practices under the NAP priority program for sustainable agriculture, food and nutrition and

security, and climate resilient health and hygiene; (b) explore, assess and promote climate smart agriculture technology under the NAP priority program for climate smart transformative agriculture promotion in the hills and mountains; and (c) promote watershed management for conservation of soil fertility and enhanced productivity, and support local livelihoods through watershed management under the NAP priority program for integrated sub-watershed management for climate resilience and increased water availability and agricultural productivity.

Second Nationally Determined Contributions 2020: The project is relevant to the implementation of the adaptation component of Nepal's NDC, drawn in line with the Paris Agreement. It will specifically contribute to the NDC commitment: By 2030, all 753 local governments will prepare and implement climate-resilient and gender-responsive adaptation plans. The plans will address climate change and disaster vulnerability and risks and prioritize adaptation and disaster risk reduction and management measures focusing on women, differently abled, children, senior citizens, youth, Indigenous Peoples, economically deprived communities and people residing in climate-vulnerable geographical areas.

National Adaptation Program of Action (2010): The project is relevant to the implementation of NAPA priorities of: (a) promoting community-based adaptation through integrated management of agriculture, water, forest and biodiversity sectors; and (b) community-based disaster management for facilitating climate adaptation. Under the NAPA priority of promoting community-based adaptation through integrated management of agriculture, water, forest and biodiversity sectors, the project aligns with the following activity components: (a) ensuring ecosystem and community adaptation to climate change through integrated watershed management in Churia; and (b) reducing the vulnerability of communities and increasing their adaptive capacity through flood management. Under the NAPA priority of community-based disaster management for facilitating climate adaptation, the project aligns with the following activity components: (a) building capacity for community adaptation to climatic hazards; and (b) reducing disaster risks at community level with climate change dimension.

Fifteenth Five-Year Plan (2019/20-2023/24): The project is in line with the GoN's 15th FYP, which emphasizes an integrated watershed management approach to deal with climate change impacts along with the focus on the need to increase production and productivity of forests and biodiversity while ensuring to enhance ecosystem services. Given its focus on developing an enabling environment for CCA mainstreaming at the local level, the project also relates to the 15th FYP priority on capacity building at federal, province and local level to ensure that climate change and disaster risk management is integrated at every level.

President Chure-Tarai Madhesh Conservation and Management Master Plan: The project will contribute to addressing two key objectives laid out in this Master Plan: (a) mitigate the damage likely to be caused by climate change and natural disasters through ensuring the sustainable management of the natural resources of the Chure hills and Bhavar region, favourable to their geological, physiographical status and ecosystems; and (b) mitigate the damage likely to be caused by water-induced disasters in the Chure hills, Dun and Tarai Madhesh Landscape, and to continue the flow of the environmental services. The catchment areas – Ghagar khola and and Phulbari khola – where the GEF/LDCF project will implement field interventions for climate-adaptive agricultural livelihoods, community forest management, and NbS to reduce climate disaster risks are areas that the President Chure-Tarai Madhesh Conservation and Management Program has identified among highly vulnerable to landslides, flooding and sedimentation.

National Agriculture Development Strategy 2015-2035: The project will contribute towards the outcome of higher agricultural productivity envisaged in the twenty-year National Agriculture Development Strategy. It will particularly contribute to output 2.10 (improved resilience of farmers to climate change, disasters, price

volatility and other shocks) and output 2.11 (sustainable farming, good agricultural practices, good veterinary animal husbandry practices are established and adopted).

National Forest Policy 2015: The project is consistent with the GoN's National Forest Policy (2015), which identifies community and leasehold forests among key strategies to provide social, economic and ecosystems services from forest resources. The Forest Policy outlines forests as critical to reduce the impacts of climate change through adaptation so as to ensure the flow of forest ecosystem services. The Forest Policy recognizes forests as a renewable natural resource, which contributes to subsistence livelihoods and recognizes subsistence forest use as a stepping stone to increased application of good forest management practices. The project will support improved community forest management to enhance the climate resilience of Marin watershed.

Forestry Sector Strategy 2016-2025: The project will contribute to the following outcomes envisaged in the strategy: (a) forest productivity and sustainable supplies of products and services enhanced; (b) biodiversity, watersheds and ecosystem services improved; and (c) climate resilient capacity of society and forest ecosystems enhanced. With regards to the outcome of forest productivity and sustainable supplies of products and services enhanced, the project will contribute to promotion community-based forestry and enhancing the capacity of the community in forest management; to the outcome of biodiversity, watersheds and ecosystem services improved, it will contribute to the promotion of integrated watershed management by strengthening upstream and downstream linkages; and to the outcome of climate resilient capacity of society and forest ecosystems enhanced, it will contribute to the adaptive capacity of local communities and forest ecosystems, and promotion of ecosystem- and community-based resilience measures.

National Disaster Risk Reduction Policy 2018: The project will contribute specifically to one of the NDRRP 2018 objectives stated as "to mainstream disaster risk reduction in all development processes by integrating it with climate change adaptation activities." It will particularly be in line with the principle of integrated water resource management, addressing river management and inter-relationship of upper and lower riparian areas, outlined in the NDRRP 2018.

Nepal Sustainable Development Goals, Status and Roadmap 2016-2030: In keeping with its commitment to the global SDGs, Nepal has drawn a roadmap for implementation of the SDGs at the country level. This project will contribute to the implementation of the SDG roadmap, primarily the country-level targets and indicators set for climate adaptation and resilience but also those pertaining to poverty eradication and food security.

8. *Knowledge Management.* Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

Output 3.1.1 (under Project Component 3) will constitute the knowledge management part of the project. Knowedge management will be pursued through case studies to analyse and highlight concepts, approaches and issues that the project addressed, and the lessons and best practices that emerged from project implementation. The project will support the development of information and knowledge products related to CCA including information on the different impacts of climate change across gender, age, and social groups. The project will consider communities as generators of knowledge and promote peer-to-peer and lateral knowledge-sharing. In this respect, it will support the assessment, documentation and dissemination of Indigenous knowledge for CCA, and promote its integration in adaptation solutions for agriculture, livestock management, water management, and community/ leasehold forest management (linkage with project component 2). Media and communication events will be organized to enhance the visibility of project activities and achievements and create wider awareness of watershed management approach to climate change adaptation and the innovations on the ground. Under this component, the project will have a monitoring and evaluation system in place to keep

track of project progress against project results including GESI indicators, ESS indicators, identify constraints and challenges to project progress, and provide information for adaptive management. As required for all full-size GEF projects, a mid-term evaluation of the project will be conducted after two years of project implementation and a terminal project evaluation will be done towards the end of the project. Annual and bi-annual project reviews will be undertaken as a part of the project management, and periodic progress reports will be produced to inform project stakeholders and provide documentation for planning and evaluation purposes.

A total budget of USD 164,064 is earmarked for knowledge management. Key knowledge management deliverables will include:

- A series of 13 case study reports analyzing and highlighting watershed management concept, approach and issues addressed by the project and the lessons and best practices emanating from their implementation;
- CCA Indigenous Knowledge Assessment Report including their potential integration in design of climate-adaptive solutions;
- Project website providing up-to-date information on project activities and achievements and access to knowledge resources and communication materials;
- 8 packages of media and communication materials;
- Media event reports (write-shop, journalist visits to project sites)

9. Monitoring and Evaluation. Describe the budgeted M & E plan.

Following M&E instruments will be applied to ensure timely project progress and adaptive management to deliver the planned project results effectively:

Project Results Framework: The main instrument and point of reference for planning project activities, monitoring project progress and evaluating project results will be the Project Results Framework (Appendix 5). The PRF identifies and describes two indicators for the project objective and two to three indicators for each expected project outcome. It provides the baseline for each of these indicators and targets against the baselines, outlines sources/ methods for verification, and assigns responsible person/ entity. The monitoring of the results indicators throughout the life of the project will be necessary to assess the extent to which the project has successfully achieved its expected results. Yearly reporting on the PRF will contribute to the annual project development objective rating.

Annual Work Plan Tracking: Towards the end of each project year, the PMU will work with project implementing partners to develop a detailed Annual Work Plan and Budget (AWPB) that includes targets for key activities to achieve the outputs. When possible, the development of the AWPB will take into account suggestions for adaptive management and lessons learned that result from the reflections workshop and which are reported in the biannual Project Progress Reports. The AWPB will be given a no-objection from the WWF GEF Agency and endorsed by the Project Steering Committee prior to start of the next project year. Tracking against the AWPB targets will be reported on annually, and the end of year tracking will contribute to the project's implementation progress rating.

Quarterly Field Reports: The PMU will receive quarterly field reports from the project implementing partners, using a Project Progress Report template. These reports will track progress on project activities, challenges encountered, expenditures, lessons learned, adaptive management applied, and GESI/ safeguards aspects.

Quarterly Financial Reports: The project's F&A Officer will submit a financial progress report every three months using the WWF Network Standard financial reporting template. These reports will be delivered to the WWF-GEF Agency and the WWF-US Program Operations team and will include information on expenditures to date along with expected future expenditures and requests for disbursement to cover expected expenditures from the next quarter.

Project Progress Reports (PPRs): The PMU will deliver a Project Progress Report to WWF on a six-monthly basis using the WWF-GEF Project Progress Report (PPR) template. The report will include: self-rating of project development objective and implementation progress, and risks using WWF/GEF rating criteria; action plans for sub-optimal ratings (Annual PPRs only); summary of project outcomes and impacts based on project M&E plan including PRF plus tracking of output-level indicators (Annual PPRs only); challenges and strengths of the project; progress of project based on approved annual work plan; lessons learned and opportunities for adaptive management; and financial progress.

Annual Adaptive Management Review: At the end of each year of the project, the PMU, project implementing partners and other key stakeholders will convene and conduct a review exercise to improve the strategic direction of the project and aid planning forward. At each exercise, a review of the M&E data, project progress and challenges will occur, and the project theory of change will be assessed to decide whether or not any assumptions or strategies need modification. This will provide opportunities for adaptive management that will lead to changes in the project design, management or operation. The changes will be largely reflected and incorporated into the new Annual Work Plans. All modifications will be reviewed for no objection by the Project Steering Committee and the WWF GEF Agency.

Annual Project Audit: The project will be subjected to statutory audit annually by a registered certified Chartered Accountancy Firm. The audit conducted based on Generally Accepted Accounting Principles and other applicable standards of the country. A copy of the audit report must be submitted to the WWF-GEF Agency and to the government authorities as required by the laws. The books of account and other financial records of the project shall at all reasonable times be available for inspection, review, and audit by the WWF-GEF Agency.

Project Closure Report: The executing agency and PMU will develop a project closure report, using the WWF GEF Agency template. The report will outline the same areas as the PPRs, but will be cumulative for the whole project period, and will also include information on project equipment handover, an assessment of WWF GEF performance, an exit and sustainability plan, and will focus on key lessons from the project. This report will be due within one month of project closure.

GEF Tracking Tools: The GEF Capacity Development Tracking Tool and the GEF-7 CCA Results Framework Tracking Tool apply to this project. The GEF Capacity Development Tracking Tool provides baseline scores for five capacity results using a total of 15 indicators and provides target scores for the mid-term and end of the project. The PMU will assess progress towards the capacity results at the mid-term and at the end of the project. The GEF-7 CCA Results Framework Tracking Tool shows project baselines and targets for relevant GEF-7 CCA Core Indicators and relevant indicators of GEF-7 objectives, outcomes and outputs. Progress towards these targets will be assessed at the mid-term and end of the project.

Annual WWF-GEF Project Implementation Report (PIR): At the end of each calendar year, the WWF-GEF Agency will deliver to the GEF Secretariat an Annual Project Implementation Report (PIR), building on the semi-annual PPRs delivered by the PMU. The PIR includes general project information, implementation summary, results framework (tracking of high-level M&E plan), ratings of GEF rating criteria, and financial status.

Annual WWF-GEF Monitoring Review (AMR): In August each year, the WWF-GEF Agency will send to the GEF Secretariat a Monitoring Review: an Excel document with ratings for every project in the WWF-GEF Agency's portfolio, including this project. The ratings will be determined by the WWF-GEF Agency in conjunction with the PMU.

Supervision Mission Reports: Annually the WWF-GEF Agency will conduct a supervisory support mission to discuss project progress with the PMU, key stakeholders and executing partners, and guide and backstop the PMU and project executing partners depending on issues emanating during the mission. The PMU will assist with organizing logistics for the support mission in communication and coordination with the WWF-GEF Agency, and the mission will serve to assist the WWF-GEF Agency in supervising project implementation and monitoring WWF Safeguard Policies in the project regions. The WWF-GEF Agency will develop a report for each annual mission, to which the PMU will respond and adapt its action plan.

Mid-term Project Evaluation: In coordination with the PMU, the WWF GEF Agency will organize an independent Mid-term Project Evaluation (MPE) before the end of the third year of project implementation, providing an external evaluation of the project progress, effectiveness and efficiency to date and recommendations for improvement of project performance in the second half of the project. The WWF-GEF Agency in collaboration with the PMU and the Program Steering Committee will provide a formal management response to the findings and recommendations of the MPE.

Terminal Project Evaluation: An independent Terminal Project Evaluation (TPE) will take place within six months of project completion providing an external evaluation of the project progress and achievements, and project performance in terms of effectiveness, efficiency and sustainability. As with MPE, this will also be organized by the WWF GEF Agency in coordination with the PMU. It will provide recommendations for GEF and its agencies on future related projects and to the project team on consolidation of project achievements and impacts after completion of the project. The WWF-GEF Agency in collaboration with the PMU and the Project Steering Committee will provide a formal management response to the findings and recommendations of the PFE.

The table below summarizes the purpose, timeframe, budget and responsibility for M&E activities and documents that would inform project progress and performance over the course of project implementation:

M&E Activity/ Document	**Purpose**	**Timeframe/ Frequency**	**Responsible**	**Budget (USD)**
Project Inception Workshop and Report	▪ Summarize decisions made during inception workshop, including changes to project design, budget, project results framework, etc; ▪ Endorse implementation arrangements and initiate implementation (3.1.2.1)	Within three months of project commencement	Technical team lead, Project Manager and M&E/ KM Officer (PMU)	7,500
Quarterly Field Report	Inform PM/PMU on progress, challenges and needs of activities in field.	Every three months	Project Field Office Staff	Staff costs built into components estimated to be $ 10,167
Quarterly Financial Reports	Assess financial progress and management.	Every three months	F&A Officer (PMU)	Staff costs built into components estimated to be $ 10,167
WWF Project Progress Report (PPR) with RF and workplan tracking.	▪ Inform management decisions and drafting of annual workplan and budget; ▪ Share lessons internally and externally; ▪ Report to the PSC and GEF Agency on the project progress.	Every six months	Project Manager, Technical team lead, and M&E/ KM Officer (PMU)	Staff costs built into components estimated to be $ 10,167
Supervision Mission and Reports	▪ Discuss project progress with the PMU, key stakeholders and executing partners; ▪ Guide and backstop the PMU and project executing partners depending on issues emanating during the mission; ▪ Ensure compliance of WWF/GEF	Annually, at the end of each year	WWF-GEF Agency in coordination with the PMU	Costs covered by WWF US

M&E Activity/ Document	Purpose	Timeframe/ Frequency	Responsible	Budget (USD)
	standards and requirements			
Annual WWF-GEF Project Implementation Report	▪ Inform GEF SEC on project implementation status, progress against results framework (tracking of high-level M&E plan), ratings of the project implementation as per GEF criteria, and financial status; ▪ Build on all periodic project progress reports.	At the end of each project year	WWF-GEF Agency in coordination with the PMU	Staff costs built into components estimated to be $ 10,167
Bi-annual and annual monitoring visits	Monitor project progress and project activities in the field, understand field issues and provide backstopping/ guidance (3.1.2.2)	Biannually/ Annually	WWF-GEF Agency in coordination with the PMU	30,000
Bi-annual and annual review and planning workshops	Conduct bi-annual and annual review for project progress, reflect on project implementation, and plan including adaptive management (3.1.2.3)	Biannually/ Annually	PMU	14,400
Project Steering Committee and Coordination Meetings	Conduct PSC/PCC meetings to review project progress, provide oversight, guidance and decisions. Coordination of project plans, budgets and activities (3.1.2.5)	21 meetings over the project duration	PMU	18,000
GEF Capacity Development Tracking Tool	Inform GEF SEC on progress in capacity development against capacity results and indicators outlined in the GEF Capacity Development Tracking Tool	CEO endorsement, mid-term (before MPE) and end of the project (before TPE)	WWF at the time of CEO endorsement, and thereafter Technical team lead, and M&E/ KM Officer (PMU)	WWF to cover costs outside the project activities
GEF-7 CCA Results Framework Tracking Tool	Inform GEF SEC on the contribution of the project against relevant indicators and targets of the GEF-7 CCA Results Framework Tracking Tool	CEO endorsement, mid-term (before MPE) and end of the project (before TPE)	WWF at the time of CEO endorsement, and thereafter Technical team lead, and M&E/ KM Officer (PMU) in coordination with PMU	WWF to cover costs outside the project activities

M&E Activity/ Document	Purpose	Timeframe/ Frequency	Responsible	Budget (USD)
Mid-term Project Evaluation Report	▪ External formative evaluation of the project; ▪ Recommendations for adaptive management, course correction and improved project performance in the second half of the project period depending on evaluation findings; ▪ Inform PSC, GEF and other stakeholders of project progress and performance to date.	Mid of the third year of the project	External evaluator(s) recruited by WWF GEF Agency in coordination with PMU	10,000
Terminal Project Evaluation Report	▪ External summative evaluation of the overall project; ▪ Recommendations for future project design and implementation, consolidation of project results, lessons learnt and good practices, and sustainability of project interventions.	Towards the end of the project, before two months of project completion	External evaluator(s) recruited by WWF GEF Agency in coordination with the PMU.	10,000
Project Completion Workshop and Closure Report	▪ Review project completion and officially close the project; ▪ Provide cumulative progress report for the entire project period.	Within a month of project closure	WWF-GEF Agency in association with national executing partner	-
Total				**130,067**

10. *Benefits.* Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

The adaptation benefits anticipated from the GEF/LDCF project are summarized below:

- CCA mainstreaming and improved coordination between stakeholders will enable more effective and efficient use of adaptation resources, and synergy between various adaptation interventions. It will also help mobilize knowledge and views from multiple stakeholders, including women, poor and vulnerable groups, leading to better understanding and decision-making for CCA.
- Enhanced knowledge and skill among 1,200 local government officials and community-based organisations to systematically conduct CRVAs and mainstream CCA in local plans and policies will lead to high quality CRVAs and CCA mainstreaming.
- CCA-integrated local plans and policies will improve the quality and effectiveness of local development investments in various sectors, in terms of better adaptation and resilience to climate impacts.
- 3,860 farm households will have adopted climate-adaptive technologies and practices in agriculture, livestock management and water management including application of water efficient technologies, directly benefitting around

19,000 local people, including 50% females. Consequently, agricultural productivity and livelihood incomes are expected to improve, enabling local households to invest further in climate-adaptive technologies and practices.
- At least 29,000 ha of community and leasehold forests will be brought under improved management, enhancing forest ecosystem services and resilience against climate impacts and this will engage as estimated 14,000 households. Additionally, it is expected to improve the livelihoods of the participating CFUGs and LFGs, enhancing their adaptive capacity.
- Three highly vulnerable catchment areas and three vulnerable catchments will be rehabilitated and/or protected from climate disaster risks through a range of NbS interventions with upstream-downstream linkages. This will reduce loss of and damage to community assets and resources, and enable local communities to sustain and improve agriculture, livestock management, water management and local livelihoods in general in a more resilient and robust ecosystem. These interventions will protect an area of 7,500 hectares in the catchments of which an estimated 5,600 hectares of degraded land will be brought inder improved management.

PART IV: ANNEXES

Annex A: Project Results Framework (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

The project results framework is in Annex 5 of the project document. Please see page 83-89 of the project document.

Annex B: Response to Project Reviews (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion, and responses to comments from the Convention Secretariat and STAP at PIF).

STAP Review Comment at PIF stage: STAP suggests the project consider (1) an expanded role for natural resource management groups in terms of project design and implementation, as they are likely to understand how best to tailor NbS to the Chure context, and (2) to consider community members beyond these groups as explicit stakeholders whose knowledge of their own vulnerabilities and opportunities might inform project design.

Response: Extensive consultations with local communities, including with natural resource management groups such as community forest users' groups and water users' groups, were undertaken during the project design and local knowledge of climate vulnerabilities and risks were used to participatively identify all project activities under Component 2, including the NbS interventions. Six critical catchment areas, Kyan khola, Ghagar khola and Phulbari khola, were selected for NbS interventions through a participatory process, which combined consultation meetings with local municipal/ ward officials and local communities, direct field appraisal of the sites jointly with the local government officials and local communities, and GIS map analysis. The NbS interventions are planned to be community-driven and community skills will be developed to carry out the NbS interventions. CCA Indigenous Knowledge and Practices will be assessed and integrated, wherever appropriate, in the design of climate-adaptive solutions related to agriculture, livestock management, water management, forestry, and disaster risk reduction. Furthermore, the project will work with 70 community forest users' groups and 100 leasehold forest groups in the Marin watershed, developing their capacity and building on community knowledge and skills for natural resource management.

STAP Review Comment at PIF stage: Climate risk measures have not been projected against project outputs across the 2020-2050 period, nor is there an explicit discussion of the sensitivity of the project to climate change and its impacts. As a result, there is no real discussion of resilience measures that might address these risks and impacts. Instead, the PIF appears to suggest they will be addressed through preparedness (which is left vague in the PIF) or rebuilding after the event. STAP suggests the project identify near term and longer-term climate risks to the project, and carefully articulate mitigation and resilience steps that might limit the impacts of such risks on project outcomes.

Response: Climate projections for Sindhuli district, where the project area is situated, are given in the project document for the medium-term (2016-2045) and long-term (2036-2065) under RCP 4.5 and RCP 8.5 scenarios based on the assessments done for the National Adaptation Planning process in 2019. The project interventions under Component 2 are inherently measures that will primarily address climate risks in the medium-term (2016-2045) as well as to a good extent in the long-term depending on the quality of project interventions. In particular, the project will support NbS interventions to address long-term climate risks taking into account upstream-downstream linkages. The project emphasis will be to ensure that the interventions are of high climate-resilience standard that they are able to withstand climate risks not only in the medium term but also in the long term. Furthermore, the project activities are designed to be implemented in a manner that there is follow-up and support, including leverage of government and community resources for the long-term effectiveness of the project interventions. The CCA mainstreaming through Component 2 will also reinforce this approach.

Comments from GEF Council Review, LDCF 2020:

Canada Comments
Mainstreaming Climate Change Risk Management into Development (MCCRMD)

developed ‘vulnerability assessment tools’ on 6 six sectors of which ‘drinking water and irrigation’ could be close to ‘watershed management’. Canada recommends the GEF consider using this as a reference when developing and implementing the proposed project

- The ADB project “Nepal: Mainstreaming Climate Change Risk Management in Development” has produced a Technical Assistance Completion Report, which the GEF Agency has consulted and incorporated the major lessons learned into section 5:Risks, within this CEO Endorsement Request. Major lessons that were noted included; *Key implementation issues relevant for other similar initiatives include (i) support of high government officials is needed to ensure that recommendations are implemented, (ii) engaging stakeholders requires significant time to ensure buy-in is achieved, and (iii) frequent government staff turnover affects the likelihood of sustainability of TA efforts and should be managed as a risk.*

Germany Comments

Germany approves the following PIF in the work program but asks that the following comments are taken into account: Germany welcomes the proposal which aims to enhance climate resilience of indigenous people and local communities in the Marin watershed through nature-based solutions and livelihood improvement. Germany recognizes the strong focus on community-based organizations (CBOs), as well as on gender aspects. This is crucial considering that most young men in the project area, according to the proposal, have migrated for employment leaving women in charge of managing natural resources and households, yet less than 1/3 of women have ownership of their fixed property.

Germany provides the following suggestions for improvements to be made during the drafting of the final project proposal:

• Germany appreciates the clear adaptation rationale of the proposed project. The components as outlined in the proposal appear logical and comprehensive. However, more detailed information on the implementation of the planned activities under Component 1 and 2 would be helpful. Output 2.1.1, for example, lists climate smart agriculture and local adaptation solutions (e.g. “Higher productivity/low impact small hand-tools and technologies that are GESI/labor and energy smart”) the project aims to support in order to increase the adaptive capacity of vulnerable households. Germany suggests clarifying whether this agricultural technology support will be provided by the Agency, or in cooperation with another organization/ private sector. Local service providers are mentioned in section 4 (Private sector engagement, p.37), yet it would be useful to elaborate this in more detail in the Component description.
• Germany agrees with the PIF review that “livelihood diversification” which is included in the project aim, should also be further elaborated in the final project document. At present it is somewhat unclear how the proposed project will address this issue.
• As stated in the proposal, the watershed will be under additional pressure since many migrant workers are returning home due to the Covid-19 pandemic, and that additional support will be provided to mitigate this pressure. Germany appreciates the consideration of potential impacts in this context. However, Germany suggests specifying what kind of additional support will be provided. In our view, livelihood diversification efforts could play a role in this regard.
• Germany appreciates the efforts undertaken to include gender-related approaches into the planning of this project. Still, the exposition of gender-related aspects remains on a surface level. It would be very helpful to gain additional insights into measures that seek to support women in the project area.
• As stated in the PIF, this project is one of many in Nepal seeking to enable higher resilience of local communities against environmental impacts. In addition, these projects are carried out by a variety of entities. Synergies and conflicts with these measures are 6 not presented in a detailed manner. Thus, it remains unclarified how the project at hand is embedded within this landscape of international aid. Further information would help getting a clear picture of the project’s position.
• Finally, Germany suggests reviewing the theory of change and formulating quantifiable outputs. We consider this essential for an effective monitoring and evaluation (M&E) system under Component 3, and for tracking project results in general.

In response to Germany’s comments;

- Components 1 and 2 have been elaborated on to include more details on where the agricultural and technological support will be obtained from for the project. Given the highly specialized tasks, the project will hire a Nature based Solutions expert to assist the project in the specified activities and then local communities, Community Forest User Groups, Divisional and Sub-Divisional Forest Offices will be trained to develop their

skills for carrying out these interventions. More details on the engagement of each stakeholder group and partner in implementation by component can be found in the table on stakeholder engagement in the CEO ER.

- Component 2 has been elaborated on to include more details on activities specifically related to livelihood diversification and the potential technologies that will be implemented (based on local conditions) have been listed. Some activities to address livelihood diversification include; Train local communities to develop their skills required for implementation of NbS interventions, provide alternative seed varieties for crops, Improve veterinary/ animal husbandry services, etc.
- The Stakeholder Engagement Plan as well as consultations with stakeholders that took place during project development, take into consideration the large amount of male migrant workers that had returned to the project area due to the pandemic. In order to mitigate potential issues arising from an influx of people, attention will be paid to affects that incoming residents may have on the water quality and availability. The social dynamics are also affected within households with migrant workers and the project's gender action plan addresses this.
- A Gender Action Plan has been drafted to examine the gender dynamics in the project area and outline how the project will address gender gaps.
- The baseline section of the project includes a detailed overview of the projects with relevant objectives and synergies. Each project is listed and summarized, and GEF Projects are also included in the relevant coordination section.
- The Results Framework provides a more detailed explanation of the quantifiable results expected from the project and reflects well the Theory of Change.

Annex C: Status of Utilization of Project Preparation Grant (PPG) (Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF:			
Project Preparation Activities Implemented	***GETF/LDCF/SCCF Amount ($)***		
	Budgeted Amount	***Amount Spent To date***	***Amount Committed***
Salaries	28,100	21,248	14,102
Lead Project Development Consultant	40,000	22,100	17,050
Baseline and Prodoc Consultancy and Stakeholder Engagement	35,457	31,863	
Travel and workshops	9,900	2,834	7,066
Safeguards			
Consultants	30,000	12,685	17,315
Project Governance	3,000	2,825	
Other Direct Costs	3,543	912	
Total	**150,000**	**94,467**	**55,533**

If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue to undertake exclusively preparation activities up to one year of CEO Endorsement/approval date. No later than one year from CEO endorsement/approval date. Agencies should report closing of PPG to Trustee in its Quarterly Report.

Annex D: Calendar of Expected Reflows (if non-grant instrument is used)
Provide a calendar of expected reflows to the GEF/LDCF/SCCF Trust Funds or to your Agency (and/or revolving fund that will be set up)

Not applicable

Annex E: Project Map(s) and Coordinates
Please attach the geographical location of the project area, if possible.

Annex F: GEF 7 Core Indicator Worksheet
Use this Worksheet to compute those indicator values as required in Part I, Table F to the extent applicable to your proposed project. Progress in programming against these targets for the program will be aggregated and reported at anytime during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Not applicable

Annex G: GEF Project Taxonomy Worksheet
Use this Worksheet to list down the taxonomic information required under Part I, item G by ticking the most relevant keywords/ topics/themes that best describe this project.