Building a Resilient Churia Region in Nepal

Environmental and Social Management Framework

Accredited Entity: Food and Agriculture Organization of the United Nations[1]

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LIST OF ABBREVIATIONS

AEPC	Alternative Energy Promotion Centre
BRCRN	Building a Resilient Churia Region in Nepal
CBD	Convention on Biological Diversity
CBO	community-based organization
CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
CFUG	Community Forest Users Group
CKC	Churia Knowledge Center
DRR	Disaster Risk Reduction
ESA	Environmental and Social Analysis
ESCP	Environmental and Social Commitments Plan
ESM	Environmental and Social Management
ESMP	Environmental and Social Management Plan
ESMF	Environmental and Social Management Framework
ESS	Environmental and Social Standards
EWS	Early Warning System
FAO	Food and Agriculture Organization of the United Nations
FPIC	Free, Prior and Informed Consent
IFC	International Finance Corporation
ILO	International Labour Organization
IP	Indigenous People
GAP	Gender Action Plan
GCF	Green Climate Fund
GDP	gross domestic product
GESI	Gender Equality and Social Inclusion
HDI	Human Development Index
LDC	least developed countries
LRP	Local Resource Person
M&E	Monitoring & Evaluation
MFE	Ministry of Forests and Environment
MIS	management information system
NDA	National Designated Authority
NDC	Nationally Determined Contribution
NEFIN	Nepal Federation of Indigenous Nationalities
NGO	Non-governmental organization
NPD	National Project Director

NTFP	Non-Timber Forest Product
OHS	Occupational Health and Safety
OIG	Office of the Inspector-General
PCU	Project Coordination Unit
PMC	ProjectManagement Committee
PMSU	Project Management Support Unit
PS	Performance Standard
PSC	Project Steering Committee
NRM	Natural Resource Management
SDG	Sustainable Development Goals
SME	Small and medium enterprise
SNRM	Sustainable Natural Resource Management
TCM	Technical Committee Meeting
UNCCD	United Nations Convention to Combat Desertification
UNFCC	United Nations Framework Convention on Climate Change

EXECUTIVE SUMMARY

The Government of Nepal together with the Food and Agriculture Organization of the United Nations (FAO) developed the *´Building a Resilient Churia Region in Nepal´* (BRCRN) Project. The overarching objective of the proposed Green Climate Fund (GCF) project is 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 at least 750 community-based organizations, containing over 173,160 households and 831,168 people (50% women), in 26 vulnerable river systems to strengthen their resilience against climate change. Indirectly the project will benefit over 3.2 million people living in the BRCRN project area.

The project is aligned with the country´s National Development Plans, climate change policy and key sectoral strategies, as well as Nepal´s international commitments, including its Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC). The project has been designed through extensive stakeholder consultations at the national, regional and local level, including consultations with local community-based organizations, indigenous federations, women's groups and Dalit organizations, among other stakeholders. The National Designated Authority (NDA) has issued a letter of no-objection for the project, and has been closely involved throughout the elaboration of the concept note, funding proposal and supporting documents.

An Environmental and Social Management Framework (ESMF) was elaborated to guide the identification and management of potential adverseenvironmental and social impacts of the proposed project. The ESMF was prepared in compliance with FAO´s Environmental and Social Management Guidelines, while further considering the congruence between FAO´s Environmental and Social Standards(ESS) and the GCF Interim Environmental and Social Safeguards (i.e. International Finance Corporation (IFC) Performance Standards). Specifically, the ESMF aims to support:[2]

- The promotion of sustainable agriculture and food systems.
- The identification, management and evaluation of the environmental and social risks and impacts associated with the BRCRN project.
- Adoption of a mitigation hierarchy based on:

- Avoidance of adverse environmental and social impacts as a priority
- Where avoidance is not possible, minimize or mitigate risks to acceptable levels, and
- Where residual impacts remain, compensate for/ offset them whenever technically and financially feasible

The document is organized into seven main sections beginning with the introduction (Section 1) and project description (Section 2) and a description of the Environmental and Socio-Economic Conditions (Section 3). The legal and institutional framework at the international, national and local level is then presented in Section 4, which describes the legal framework in place that ensures social and environmental safeguards are appropriate and in place. This is followed by

[2] FAO 2015

adescription of the applicable safeguard policies from FAO and GCF (Section 5), including the project risk classification process and results. A monitoring and evaluation framework to monitor, evaluate and mitigate potential environmental and social risks and impacts is then provided (Section 6). An overview of the stakeholder consultation and engagement plan and results is integrated into Section 7. An indigenous peoples and social inclusion planning framework is presented within Section 8that ensures that the rights of indigenous peoples and socio-economically excluded/ marginalized groups are respected, and that the project will not have a negative impact on these communities. Section 9 describes the biodiversity management framework, which presents the approach applied by the project to avoid and mitigate negative impacts on biodiversity, and to further promote measures that enhance biodiversity conservation within the project area. Beyond these core sections of the ESMF, various annexes are provided with detailed supporting information.

1 INTRODUCTION

1. The Government of Nepal in coordination with the Food and Agriculture Organization of the United Nations (FAO) is developing the project ´*Building a Resilient Churia Region in Nepal*´ (BRCRN) as a cross-cutting project to be submitted to the Green Climate Fund (GCF). GCF grant resources, together with government co-financing, will invest in climate-resilient land use planning, as well as the implementation of climate-resilient sustainable natural resource management (SNRM) and disaster risk reduction (DRR) measures in 26 river systems that are vulnerable to climate change.
2. At the implementation level, it will focus primarily on local community-based organizationsto strengthen their capacities on climate-resilient land use practices, and support them to scale up such activities. At least 750 local community-based organizations will directly benefit from the project. This will result in at least 200,681 households as direct beneficiaries, containing approximately 963,268 people, where approximately 50% of the beneficiaries are women, of which at least 77% consist of groups that are considered to have experienced inter-generational socio-economic exclusion.[3] The project will directly and indirectly benefit over 3.2 million people (11% of the population of Nepal) through the development of strategies for climate-resilient land use in three provinces, and 26 action plans for each of river sheds that comprise the project area.
3. The Environmental and Social Management Framework (ESMF) ensures that environmental and social management is integrated into the development cycle of projects. The exact locations and interventions will be finalized with the implementation of Component 2, and thus ESMF was selected as the most suitable instrument.
4. This ESMF for the proposed BRCRN Project has been conducted in accordance with FAO´s Environmental and Social Safeguards Policy and GCF´s Environmental and Social Safeguards.This document has been designed to ensure to support the following key activities:[4]
   - Identification, management and evaluation of the environmental and social risks and impacts associated with the BRCRN project.
   - Adoption of a mitigation hierarchy based on:
     - Avoidance of adverse environmental and social impacts as a priority
     - Where avoidance is not possible, minimize or mitigate risks to acceptable levels, and
     - Where residual impacts remain, compensate for/ offset them whenever technically and financially feasible
   - Promotion of sustainable agriculture and food systems.
5. Sub-activities where possible environmental and social risks have been identified will develop environmental and social management plans (ESMP) that include information on the

[3] Note: 'Excluded´ or marginalized groups include those who have experienced inter-generational discrimination and have been systematically excluded due to *economic [situation], caste, ethnicity, gender, disability, sexual orientation, and geographical reasons*" (GESI Working Group 2017). This includes groups including women, poor people, Dalits, Adivasi/ Janajati, Madheshis, Muslims, people with disabilities, third-gender and people living in remote areas. For more information refer to the note on vulnerability in Section 2.3.

[4] FAO 2015

mitigation measures, indicators, responsibilities and timeframe where the completion of such measures are expected (refer to Chapter 6.1 for more detailed information).

2 PROJECT DESCRIPTION

6. The project focuses on the Churia-Terai region of Nepal. The Churia range extends west to east from Pakistan to North India, passing through Nepal (Figure 1). The Churia region of Nepal represents one of the country's most fragile ecosystems with friable soils, high vulnerability to various natural hazards such as extreme heat, water scarcity, wild fires, flooding and landslides. Yet, due to its strategic location, the region is key to Nepal's ecological and socio-economic sustainability. Wedged between the high mountain areas (Mahabharat range) of the north and the plains of the south (Terai) as a contiguous landscape, the Churia hills perform several critical social and ecological functions:
   - In terms of upstream linkages, all major river systems in Nepal pass through the Churia hills. They are effectively the last frontier between these river systems and the densely populated alluvial plains in the Terai and in northern India. Particularly in the monsoon season, the degree of runoff and sedimentation from the Churia hills can determine whether swells in river flows can be controlled or whether they lead to severe floods and potentially damaging changes in the directions of watercourses. The effective long-term management of the Churia hills is thus a transboundary issue, even if activities under initiatives such as this project are limited to the boundaries of Nepal.
   - In terms of downstream linkages, with more than 50% of its area under forests and riverine areas, the Churia hills render hydrological services such as regulating surface water flows and recharging groundwater. They are the main source of water for more than 14 million people inhabiting the downstream Terai plains. With the clearance of the majority of forest areas in the Terai over the last century, the Churia hills are now the primary source of timber, fuelwood, fodder and other forest products for not only communities living in the Churia hills, but also for downstream communities in the Terai-Madhesh region. Together, the Terai and Churia comprise about 25% of Nepal's land area, but harbor close to 50% of its population.[5]

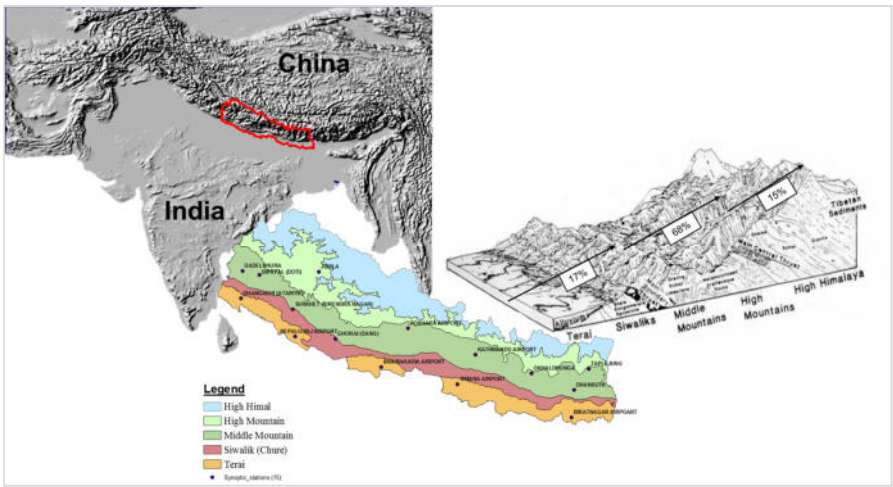

Figure 1: Location of the Churia-Terai Madhesh region in Nepal

Sources: Adapted from PCTMCDB 2016

[5] http://www.rccp.gov.np/

2.1 Project Objective and Outputs

7. Unsustainable land use practices exacerbate the exposure to aforementioned hazards and climate risks, where deforestation, unsustainable agriculture and forestry practices lead to various impacts such as accelerated erosion and sedimentation, river bed rise due to sedimentation, soil degradation, increasing areas of landslide and flood-susceptible areas, ecosystem degradation and habitat loss, reduced water recharge, and reduced availability of forest products (fuelwood, fodder, forage, non-timber forest products), among others (Figure 2).If adaptive measures are not adopted and business as usual practices prevail, the Churia region of Nepal will be increasingly exposed to extreme heat, water stress, wildfires, flooding and landslides having detrimental impacts on local people, ecosystems and the country´s economy.

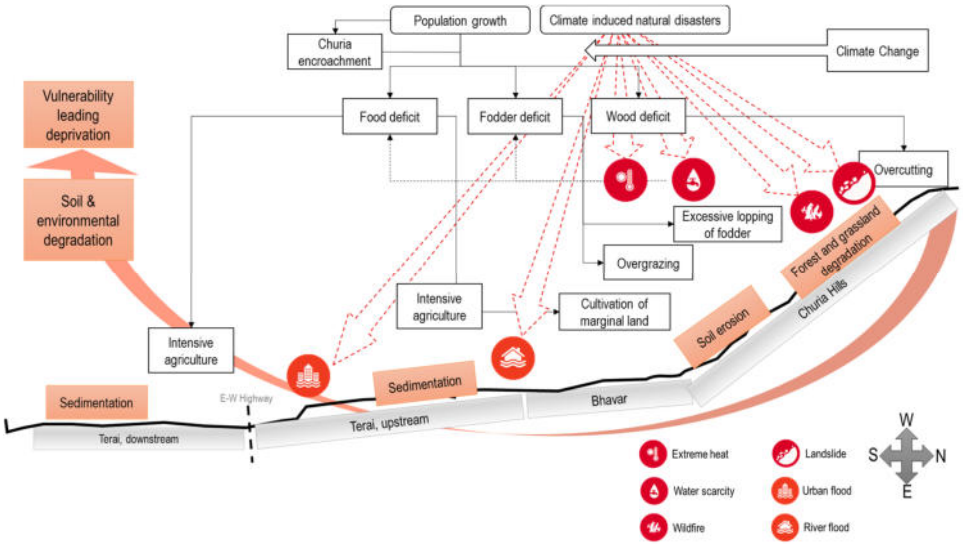

Figure 2: Overview of climate induced natural disasters and drivers of land use change in the Churia and Terai regions of Nepal

8. **Project Objective:** The overarching objective of the proposed GCF project is to enhance the climate resilience of ecosystems and vulnerable communities in the Churia region through integrated sustainable rural development and natural resource management approaches.
9. In particular, the BRCRN project will focus on:
   - Establishing and strengthening an enabling institutional environment for climate-resilient SNRM;

- Strengthening the capacities of at least 750 local community-based organizations/ user groups[6] on recognizing climate threats, climate-resilient land use planning and sustainable natural resource management, and supporting them to implement climate-resilient land use interventions;
- Large-scale adoption and promotion of climate-resilient land and forestry management practices on at least 512,499 ha, which specifically respond to climate-related threats, including landscape-scale restoration of critical ecosystems in vulnerable river systems;[7]
- Reducing the incidence of sedimentary and flash flooding by improving soil and water conservation, and constructing small-scale infrastructure (stone walls, contour bunds, check dams, among others);
- Reducing deforestation and forest degradation through the implementation of sustainable natural resource management (SNRM) practices and other measures that address the direct and underlying drivers of deforestation and forest degradation;
- Improving water recharge systems by reducing surface run-off water through the adoption of water conservation and water management practices/ technologies;
- Improving information consolidation, dissemination and monitoring to raise awareness on climate change and climate resilient land use practices, and strengthen the utilization of climate information in decision making and planning processes.

10. The following Figure provides a depiction of envisaged climate-resilient development pathway as result of the project:

[6] Including community-forest user groups, leasehold forestry, private forest users and public forest user groups, water user groups, among others.
[7] Note: some activities may be implemented on overlapping parcels of land (e.g. measures to reduce deforestation such as controlled grazing, with sustainable forest management practices).

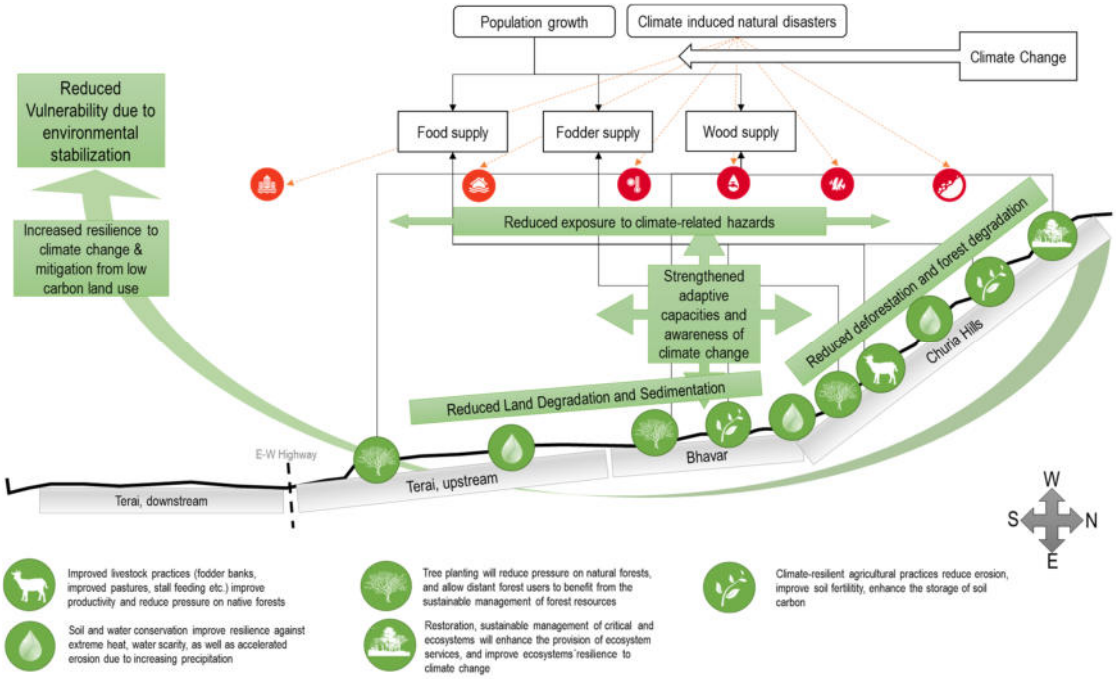

Figure 3: Overview of envisaged climate-resilient land use in BRCRN biophysical zones

11. The project will directly benefit 750 local community-based organizations/ user groups, containing at least 173,160 households with over 831,168 people (at least 50% of which are women, with proportional representation of indigenous peoples, Dalits and other marginalized groups[8]) in 26 of the most vulnerable river systems in the Churia Region in Nepal. Together with reduced deforestation and forest degradation resulting from project activities, the BRCRN project will result in lifetime emission reductions estimated at11.48 million tCO_2eq. Over 206,277 ha of critical ecosystems (forests, wetlands and grasslands) will be restored through project implementation leading to reduced greenhouse gas emissions as well as improved ecosystem resilience to climate shocks.
12. The proposed project is comprised of three complementary Outputsand tensupporting activities. While the following provides a brief overview of these Outputsand activities, more detailed information can be found in the BRCRN GCF funding proposal and feasibility study.
13. The project will support activities focused on scaling up proven climate-resilient SNRM approaches to strengthen ecosystem stability and resilience in vulnerable river systems within Output 1.To support the implementation and scaling up of climate-resilient SNRM, activities within Output 2 will focus on strengthening local and provincial capacities, supporting operational planning at the local level within each of the project´s 26 target river systems and mainstreaming climate-resilient land use planning at the provincial level. Output 3 includes measures to strengthen extension materials for farmer-field schools, operational costs to

[8] Refer to Section 2.3´s ´note on vulnerability´ for more information on excluded groups.

scale-up the reach of extension services, and trainings for trainers to implement climate-resilient SNRM approaches.

14. Together, these complementary measures will help to overcome barriers to adaptation and mitigation, and will support the desired paradigm shift with a strong enabling environment and the scaling up of interventions that will increase the resilience of both communities and critical ecosystems to climate change.
15. The project objective will be achieved through the following Components:
    - Component 1: Scaling up climate-resilient Sustainable Natural Resource Management (SNRM).
    - Component 2: Strengthening institutions and planning for climate-resilient SNRM.
    - Component 3: Improving knowledge, awareness and local capacity for climate-resilient SNRM.
16. Under Component 1, the project will support activities focused on scaling up proven climate-resilient SNRM approaches to strengthen ecosystem stability and resilience in vulnerable river systems. Such interventions will focus on climate-resilient agricultural practices on agricultural land, ecosystem restoration and sustainable management in degraded and critical ecosystems, and tree planting on non-forested land to build resilience and reduce pressure on natural forests for fodder, fuelwood and forage, targeting especially distant forest users in the upstream Terai. This support will be delivered in each of the 26 targeted river systems, with the specific constellation of support (capturing upstream and downstream dynamics) to be defined in consultation with government and community stakeholders during the process of developing Critical Ecosystem Restoration Plans (CERPs) under Activity 2.1.2 – an Activity that will precede (and guide) field-level interventions under Component 1.
17. To support the implementation and scaling up of climate-resilient SNRM, Activities within Component 2 will focus on strengthening local and provincial capacities, supporting operational planning at the local level within each of the project´s 26 target river systems and mainstreaming climate-resilient land use planning at the provincial, local (i.e. rural municipality) and community-level. This Component will balance top-down integrated spatial planning with participatory land use planning for climate-resilience at the CBO level. Importantly, this Component will support the development of CERPs in each of the 26 targeted river systems. These plans (and the priorities and interventions identified therein) will be consulted and validated with the relevant CBOs within each river system, thereby ensuring full community buy-in for interventions to be delivered under Component 1.
18. Project activities will further enhance awareness, knowledge and communication on climate risks, climate-resilient SNRM. Component 3 includes measures to strengthen extension materials for farmer-field schools, operational costs to scale-up the reach of extension services, and trainings for trainers to implement climate-resilient SNRM approaches. This will ensure such approaches are mainstreamed into training materials and that government extension staff and service providers understand climate change threats, low-carbon and climate-resilient land use practices. The establishment of an innovative knowledge center will further enhance climate monitoring, knowledge management and dissemination.
19. Together, these complementary measures will help to overcome barriers to adaptation and mitigation, and will support the desired paradigm shift with a strong enabling environment

and the scaling up of interventions that will increase the resilience of both communities and critical ecosystems to climate change.

Component 1: Scaling up climate-resilient sustainable natural resource management (SNRM)

20. Component 1 focuses on implementing and scaling up of climate-resilient SNRM practices to increase the resilience of ecosystems and local households within 26 river systems that are vulnerable to climate change. CBOs and their members, as well as local governments will be provided with technical and financial support to scale up sustainable practices including climate-resilient agricultural practices on 60,965 ha, restoration of 202,237 ha of critical forest, wetland and grassland ecosystems (including areas that are highly susceptible to landslides and flooding), and tree planting on 23,800 ha as new forest systems (including enrichment planting on shrub land, conservation and commercial plantations and horticulture). Such measures will not only increase the adaptive capacities and resilience of communities, but also enhance the resilience of ecosystems and the provision of key ecosystem services.
21. Promoted measures have been selected based on their relevance given the key climate risks faced by the region, and considering differentiated vulnerabilities within each river system.Implementation of these measures will be supported throughriver system-based spatial and operational plans developed under Component 2. Investments in climate-resilient land use practices and technologies will further be supported by knowledge products and resources developed within Component 3, including guidelines and educational materials for field schools and extension trainings. The monitoring of such measures will be integrated with the Churia Knowledge Centre (developed under Component 3).
22. Scaling up climate-resilient land use practices will help address the proximate and underlying drivers of deforestation and land degradation in the project area, leading to further emission reductions through reduced deforestation and forest degradation as well as improved carbon sequestration in areas under forest and tree cover.Measures will have numerous positive socio-economic and environmental impacts, including improved water security, food security, soil nutrition, biodiversity conservation and agricultural productivity. Since poverty is a major barrier to the adoption of climate-resilient land use practices in the BRCRN project area, investments in climate-resilient land uses will be provided to local CBOs, although communities are expected to provide in-kind labor in exchange for participating in farmer field schools and/or trainings and receiving ongoing extension / technical support.
23. **Sub-Component 1.1 – Climate-resilient land use practices are adopted.** This sub-component will work with farmers and other land users in the 26 targeted river systems (the "Project Area") to scale up the adoption of farming and other land use practices that enhance the resilience of agricultural production in the Project Area. This Sub-Component will directly train and support farmers from relevant CBOs, and equip them to return to their communities to teach and train other farming households on project-promoted practices. This Sub-Component will also establish crucial local infrastructure in each river system to enhance resilience against climate change-induced erosion, sedimentation and flooding risks.

a. **Activity 1.1.1 – Establish Farmer Field Schools (FFSs) in the Project Area to promote climate-resilient land use.** This Activity will establish 120 FFSs in the Project Area to encourage the use of climate-resilient farming practices, with at least 3 FFS to be established in each of the 26 targeted river systems. These FFSs will be used to deliver trainings on climate-resilient farming practices to Farmer Beneficiaries under Activity 1.1.2, as well as to continue promoting climate-resilient land use in the Project Area after project closure. A FFS technical expert recruited by the project will design the overall approach to thisActivity, including the development and supervision of agreements with national service providers to identify sites, establish FFSs and orient local communities regarding their function. A second agreement will be developed, under the supervision of the FFS technical expert, to deliver Training of Trainers (ToT) for MoITFE and MoACLM field staff, based on the modules developed under Activity 3.2.1. The FFS technical expert will identify the equipment needs for all 120 FFSs and organise the procurement and delivery of this equipment, including agricultural and forestry technical supplies for training purposes. The Provincial Project Management Units (PPMUs) will cover the travel and logistical costs for MoITFE and MoACLM field staff to establish capacity of all 120 FFSs to deliver capacity building activities based on the FFS training modules. This is anticipated to require a total of 120 visits, by teams of 3 field staff, to FFS over the project period in provinces 2 and 3, and 240 in province 1, to ensure the long-term ability of all FFS to deliver all modules to local farmers and communities as required.

b. **Activity 1.1.2 – Train farmers to adopt and apply climate-resilient land use practices.** This Activity will train Farmer Beneficiaries in each of the 26 targeted river systems to understand and apply climate-resilient farming practices (CRFPs) that are most relevant to the challenges and conditions within their communities (see *Annex 2: Feasibility Study – Appendices A1.2-A1.5* for more information on promoted practices). Farmer Beneficiaries will not only be equipped to apply relevant CRFPs on their own land, but will also be able to teach and train other members of the communities on such practices. Widespread adoption of such practices will build resilience of farming households against many of the climate change impacts outlined in Section C.1 (above), while also reducing soil runoff and erosion that have significant negative impacts in downstream communities. Based on the results of the Critical Ecosystem Restoration Plans (CERPs) developed under Activity 2.1.2, project staff will identify the CRFPs most appropriate for vulnerable areas of the 26 river systems, and identify the CBOs to be targeted for capacity building efforts and the training approaches to be employed, both on-site and in FFSs. Based on this analysis, carried out on an annual basis, the equipment needs for support to the CRFP training programme will be identified, and the procurement and delivery of this equipment will be organized through FAO (as co-EE). Under Activity 1.1.2, the project will organize 260 training events (approximately 10 per river system), each of which will be supported by 3 government field staff and train approximately 30 Farmer Beneficiaries. In total, Activity 1.1.2 is expected to train about 7,800 Farmer Beneficiaries.

c. **Activity 1.1.3 – Train farmers to adopt agroforestry and livestock management practices.** This Activity will support Agro-Forestry and Livestock Beneficiaries to apply agroforestry and livestock management practices in their fields in each of the 26

targeted river systems, and equip them to promote more widespread adoption of such practices within their communities (practices are described in more detail in *Annex 2: Feasibility Study – Appendices A1.6-A1.7*). Such practices will not only enhance resilience of agricultural production among Agro-Forestry and Livestock Beneficiaries, but will also contribute to easing the expansionary pressures that are driving deforestation and forest degradation in the Project Area. Importantly, such practices will also contribute to increasing incomes for the predominantly poor and vulnerable small-scale farming and livestock-owning households with which this Activity will work. Building on the identification of priority areas and appropriate practices from the CERPs under Activity 2.1.2, Activity 1.1.3 will train approximately 120 Agro-Forestry and Livestock Beneficiaries from relevant CBOs to understand project-promoted practices, and procure the materials needed for them to establish small on-farm tree nurseries to continue supporting agroforestry within their communities and beyond project closure. Once these small on-farm nurseries are established, three full-time government field staff in each province will conduct regular visits (from PY3-7) to communities in which on-farm nurseries have been established to train additional Agro-Forestry and Livestock Beneficiaries to adopt project-promoted agroforestry and livestock management practices, drawing in part on the seedlings produced at the on-farm nurseries established in PY3. During the training/extension visits, government field staff will also identify about 500 livestock-owning households within the relevant communities (in line with the selection process and eligibility criteria outlined in Table 6 above) who are eligible to access the government's biogas subsidy, and provide them with the technical assistance and guidance needed to access this subsidy and ultimately purchase and install a biogas digester on their respective farms.

d. **Activity 1.1.4 – Construct check dams, gully stabilization measures and other local infrastructure to enhance resilience against climate change-induced erosion, sedimentation and flooding risks.** This Activity will work with relevant CBOs to construct local structures (described in more detailed in *Annex 2: Feasibility Study – Appendix A2.2*) that will play a crucial role in reducing community vulnerability to climate change impacts, accounting for both upstream and downstream dynamics in each of the 26 river systems that collectively comprise the Project Area. In particular, these structures will reduce erosion risk and sedimentation in upstream areas, and reduce flooding risk and water stress in downstream areas. Building on the key risks and priority areas for specific structures identified in the CERPs developed under Activity 2.1.2, MoFE will recruit 3 civil engineers to work with provincial technical support officers in MoACLM, rural municipalities, watershed management centres and local communities to identify specific sites and approaches for local structures. The engineers will develop detailed project reports and technical standard guidelines to be followed in construction, which will be carried out by service providers contracted by MoFE (with technical supervision and backstopping from MoFE and FAO project staff). In particular, Activity 1.1.4 will: (i) establish relevant structures and practices to stabilize 86 gullies, mostly in the Churia hills; and (ii) establish and maintain check dams and/or community-managed water harvesting ponds in 129 sites, mostly in the Bhavar zone.

24. **Sub-Component 1.2 – Natural forest ecosystems are better maintained and protected.**This Sub-Component will work with communities to support more sustainable management and preservation of existing, natural forest ecosystems in the Project Area. In so doing, the project aims to reduce the rate of deforestation and forest degradation, which will produce important climate change mitigation benefits while also preserving (and enhancing) crucial ecosystem functions that are essential to the resilience of communities (both upstream and downstream) throughout each of the 26 targeted river systems that collectively comprise the Project Area.

    a. **Activity 1.2.1 – Support all forestry-related CBOs to develop/strengthen and deliver forest management operational plans.** ThisActivity will focus on the improvement of sustainable forest management (SFM) in all forest land managed byforestry-related CBOs in the Project Area, to ensure silvicultural practices are implemented to maximise ecosystem service provision, both in terms of climate resilience and in terms of enhancement of forest carbon stocks (see *Annex 2: Feasibility Study – Appendix A2.4* for more information on promoted practices). Building on the priorities and relevant CBOs identified in the CERPs developed under Activity 2.1.2, project staff will recruit qualified service providers in each province to work with relevant CBOs to develop and/or strengthen forest management operational plans to enable coordinated and sustainable management of their local forest ecosystems. Project staff will then procure relevant equipment for each of these CBOs (including for inventory, plantation, cultivation and harvesting operations) to be distributed to the relevant CBOs in accordance with the specific needs identified in their forest management operational plans. Under Activity 1.2.1, project staff will subsequently work with these CBOs throughout PY3-7 to provide ongoing advice and guidance to enable implementation of their forest management operational plans. In so doing, Activity 1.2.1 expects to support sustainable management of 186,247 ha of forest land within the Project Area.

    b. **Activity 1.2.2 – Train CBOs and land owners to enable more sustainable management of forest ecosystems.** This Activity will build the capacity of government staff and all forestry-related CBOs to better understand the principles and practices that underpin sustainable management of forest ecosystems, and continue applying such principles and practices after project closure. Such trainings will go beyond simply supporting delivery of forest management operational plans developed under Activity 1.2.1, and aims to build broader capacity among key actors within the Project Area to continue promoting *and* scaling up relevant knowledge and practices after project closure. To do so, Activity 1.2.2 will support the development of a regular, locally-relevant and demand-driven extension service on forest planning and management for CBOs and other land owners. Project staff will start by delivering 26 Training of Trainers (ToT) events for MoITFE field staff at local level ("Professional Beneficiaries") during PY3-5. These field staff will in turndeliver 122 local training events to CBOs and other land owners ("Forest Training Beneficiaries") to build their capacity on sustainable management of forest ecosystems. Representatives from forestry-related CBOs to be trained under Activity 1.2.2 will be nominated by the executive committee of their respective CBOs.

25. **Sub-Component 1.3 – Forests and tree cover are restored and maintained in the river system landscape.** This Sub-Component will work with CBOs and other forest stakeholders to expand tree cover and restore forest ecosystems in the Project Area. In so doing, this Sub-Component will contribute to enhancing resilience in critical areas (e.g. along riverbanks) and restoring other ecosystem services that enhance resilience for downstream communities. Forest restoration and expanded tree cover will also deliver important mitigation benefits by increasing biomass and carbon sequestration, as well as providing alternative fuelwood and timber sources that enable local communities to meet their needs without encroaching on natural forest ecosystems.

    a. **Activity 1.3.1 – Establish and support the operation of 52 multi-purpose tree nurseries to serve the plantation and restoration needs of CBOs and other forest sector stakeholders.** This Activity will establish tree nurseries that are needed to support tree planting and forest restoration under this project, as well as by communities throughout the Project Area (specifications for project-supported nurseries are available in *Annex 2: Feasibility Study – Appendix A3.3*). Nurseries are expected to continue providing seedlings to support continued planting and restoration activities beyond project closure, in line with CERPs and other local plans supported under the project. Without such services, CBOs and other actors in the Project Area would struggle to procure the necessary seedlings in the future, which would risk undermining local buy-in and support for the broader process of sector transformation that this project aims to set in motion. To accomplish this, project staff will procure the equipment and materials needed to establish two nurseries in each of the 26 targeted river systems, for which sites will be selected in accordance with the criteria and process outlined in Table 6 of the Funding Proposal. Project staff will also procure material inputs (e.g. poly bags, soil, sand) and labour inputs needed for production of seedlings from PY3-7, ensuring that each nursery has the capacity to produce at least 50,000 seedlings per year. Nurseries will be operated by local forest offices, and project staff will work with MoITFE to ensure operations and maintenance costs for these nurseries are integrated into their annual budgets by project closure. Nurseries will be developed in line with GESI principles, promoting equitable employment opportunities for women, as well as indigenous peoples, Dalits and marginalized groups.

    b. **Activity 1.3.2 – Establish and maintain 7,300 ha of forest plantations to enhance resilience.** This Activity will establish and support maintenance of several different forest plantations in the Project Area that will contribute to building resilience and mitigating climate change, while also equipping local stakeholders to promote and support more sustainable forestry activities beyond project closure. These are described below, while technical specifications are provided in more detail in *Annex 2: Feasibility Study – Appendix A3.2*).

        i. *Demonstration plantations:* Project staff will establish demonstration plantations to expand tree cover and build capacity of local MoITFE staff (those who train and support CBOs, land owners and other forest users in the Project Area) to promote sustainable plantation management beyond project

closure. This in turn will deliver important long-term adaptation and mitigation benefits. To do so, project staff will train 20 MoITFE staff in each of the three provinces (60 total "Professional Beneficiaries") on how to promote/support sustainable plantation management. Project staff will in turn procure materials and seedstock needed to establish 1,300 ha of demonstration plantations of native species (including teak) in the Bhavar and Terai zones of the 26 targeted river systems. These demonstration plantations will contribute to enabling trained MoITFE staff to promote and support sustainable plantation management after project closure.

ii. *Public land forests on river bank sites:* Building on the priorities identified in the CERPs developed under Activity 2.1.2, project staff will work with vulnerable and marginalized communities to plant grasses, bamboo and trees along key river banks, primarily in the Bhavar zone in each of the 26 river systems. This will contribute to stabilizing these river banks, which in turn will build resilience for within the Bhavar zone but also for downstream communities whose vulnerability to sedimentation and flooding will be reduced. The CBOs with whom project staff will work to establish these plantations will also be supported to take over management responsibility for these forests by signing formal agreements with their respective Municipality offices. Project staff will further support these CBOs to develop management plans that will guide post-project management of these forest resources. In total, this Activity is expected to result in the establishment of 1,000 ha of riparian plantations (with at least 25 ha being established in each river system), and equip local CBOs to sustainably manage these forest resources after project closure.

iii. *Public land forests on community land:* Building on the priorities identified in the CERPs developed under Activity 2.1.2, project staff will work with vulnerable and marginalized communities to plant multipurpose trees in open community land, primarily in the (upstream) Churia hills and Bhavar zone in each of the 26 river systems. This expanded forest cover will enhance resilience against climate-change induced soil erosion (thus reducing downstream risks related to sedimentation and flooding) and enhance crucial ecosystem functions that underpin the resilience of upstream communities, while also providing important mitigation benefits. The CBOs with whom project staff will work to establish these plantations will also be supported to take over management responsibility for these forests by signing formal agreements with their respective Municipality offices. Project staff will further support these CBOs to develop management plans that will guide post-project management of these forest resources. In total, this Activity is expected to result in the establishment of 5,000 ha of plantations (with at least 50 ha being established in each river system), and equip local CBOs to sustainably manage these resources after project closure.

c. **Activity 1.3.3 – Train government field staff and CBOs on Forest Landscape Restoration, and support CBOs to implement Assisted Natural Regeneration on 15,990**

ha. This Activity will assist CBOs to expand forest cover and restore forest landscapes in critical locations in each of the 26 targeted river systems, in line with the priorities identified in the CERPs developed under Activity 2.1.2. This will enable CBOs to restore crucial ecosystem functions and ecosystems resilience in each river system, while also generating significant mitigation benefits. Under Activity 1.3.3, the project will not only support CBOs to expand and restore forests in the Project Area, but will also build their capacity (and that of government) to continue scaling up such approaches after project closure, in line with their CERPs and drawing on the network of services and resources (e.g. nurseries) established under this project. In particular, the project will support the approaches outlined below, technical specifications for which are included in *Annex 2: Feasibility Study – Appendix A2.3*).

i. *Forest Landscape Restoration (FLR):*Project staff will prepare training materials on FLR, which they will then use to train 240 provincial forestry field staff ("Professional Beneficiaries") through 12 training events (20 Professional Beneficiaries per training) organized in PY3-5. These provincial forestry field staff will in turn organize 180 training events for relevant CBOs ("Forest Training Beneficiaries") to enhance their understanding and ability to apply FLR approaches in their respective communities. Approximately 30 Forest Training Beneficiaries will be trained at each training, reaching a total of about 5,400 Forest Training Beneficiaries.

ii. *Assisted Natural Regeneration (ANR):* Building on the priorities and areas identified in the CERPs developed under Activity 2.1.2, project staff will work with relevant CBOs (557 CFUGs and 3 CoFMs) to implement ANR on at least 15,990 ha of community-managed forest land, focusing in particular on the Churia hills and Bhavar zones in the 26 targeted river systems. Project staff will start by identifying specific sites (in line with the selection criteria and process outlined in Table 6) and developing ANR methodologies and implementation plans that are suited to the local contexts. Project staff will then procure tools, equipment, inputs and local labour needed to implement ANR in collaboration with relevant CBOs, which may include (depending on the needs of specific sites):

- **Plantation for protection and stabilization:** To reduce degradation and promote the ecosystem services and sustainable use of forests, communities will be supported to establish fodder banks, fire breaks and other locally-appropriate measures, while ensuring that measures to control grazing or forest product extraction do not disproportionately affect marginalized or poor households within CBOs.
- **Measures to accelerate natural forest recovery (e.g. direct seeding, planting seedlings) in degraded primary or secondary forests:** Promoted measures will include the establishment of enrichment planting

to restore over-exploited forest-dominated ecosystems, especially along upstream riversides.9

- **Measures to support natural regeneration will involve promoting tree seedlings and favorable species within a forest landscape, supporting multiple-use forest management plans, with equal consideration of social, ecological and economic functions of forest ecosystems**: Planning concepts and components such as multi-functional zoning and control forest inventories will be supported where necessary.

d. **Activity 1.3.4 – Provide technical guidance and seedlings to establish tree cover on 16,500 ha of woodlots to enhance ecosystem resilience, and improve fuelwood and timber availability in downstream communities.** This Activity will work with small-scale land owners to establish woodlots on their lands (see *Annex 2: Feasibility Study – Appendix A3.2* for more detailed technical specifications). In so doing, the project will further enhance resilience of soils (against erosion upstream, and the associated sedimentation downstream) and broader ecosystem services that are essential to the overall resilience of the river systems. This Activity will also provide additional sources of fuelwood and timber for downstream communities, thereby reducing expansionary pressures on natural forest ecosystems. To do so, project staff will draw on the prioritized areas in the CERPs to guide the identification of landowners with whom to collaborate (in line with the selection process outlined in Table 6). Project staff will then organize exchange visits between these small-scale landowners and other successful forest owners in neighbouring districts to enhance their interest in engaging with the project. Interested landowners will then provide the necessary labour for establishing woodlots on their land, while project staff will procure the necessary seedlings and government field staff will provide the necessary extension and advisory services. Under this Activity, the project will support at least 100 households in each of the 26 river systems (to be selected according to the criteria and process outlined in Table 6). Each household will receive support to establish woodlots on a maximum of 1 ha of their land. The government remains committed to continue providing extension support for such planting, further contributing to the potential to scale up tree planting on woodlots beyond project closure.

Component 2: Strengthening institutions and planning for climate-resilient SNRM

26. Component 2 is designed as a precursor for the investments in Component1, and will support the necessary planning for interventions within each of the 26 targeted river systems while equipping government officials and CBO members with the capacities to understand and apply climate-resilient land use. Given Nepal´s ongoing political transition, Provincial

[9] Native species will be promoted to the greatest extent possible, however in highly degraded areas locally-adapted exotic species with no risk of invasion may be required to facilitate soil restoration (as a nurse crop for the eventual recovery of natural forest). Measures to avoid and mitigate adverse impacts are further described in the ESMF in Section F.

and Local governments have new responsibilities over natural resource management and there is a need to build awareness on climate threats and low carbon and climate-resilient land use practices, providing support to mainstream climate-resilient land use planning into local strategies and processes. Local CBOs also play an important role in managing local resources, however there is limited awareness about the long-term risks that climate change poses as well as sustainable natural resource management approaches that can strengthen their adaptive capacities and overall resilience to climate change.

27. Ultimately, this Component will address climate change risks by improving awareness of threats and building capacities to continuously monitor climate change and vulnerability at the provincial, local (rural municipality) and CBO level. It will further raise awareness of suitable low carbon and climate-resilient practices that are adapted to local conditions and differentiated vulnerabilities and contexts. It is closely linked with Component 3, which focuses on improving knowledge, strengthening extension services and trainings and improving knowledge dissemination to support awareness raising and the enhancement of adaptive capacities.

28. **Sub-Component 2.1 – Planning for climate-resilient SNRM is enhanced.** This Sub-Component will support government stakeholders and CBOs to identify and assess climate change risks and resource degradation within the Project Area, and develop corresponding plans that will enable relevant actors to respond to such challenges. This Sub-Component will also build the capacity of these actors to further monitor local risks and resources in the future. In so doing, Sub-Component 2.1 not will only provide an evidence-based foundation to guide interventions under Component 1, but will also equip government stakeholders and CBOs to continue investing in climate-resilient SNRM – in a manner that coordinates upstream and downstream interventions to maximize adaptation and mitigation benefits – beyond project closure.

    a. **Activity 2.1.1 – Strengthen institutions on climate change impacts and ecosystem mapping.** Under this Activity, the project will build the capacity of key entities that intend to collaborate with and/or benefit from the project – including those whose mandates are linked to promoting climate-resilient SNRM in the Project Area, and who will play an important role in sustaining and scaling up support for such practices after project closure – on climate change and climate resilient land use planning and management practices. To do so, project staff will organize four national-level trainings, three provincial-level trainings and 64 local-level trainings for Professional Beneficiaries on such topics. Trainings will further include a component on Gender Equality and Social Inclusion (GESI), discussing how differentiated vulnerabilities to climate change affect the overall vulnerability of communities, as well as key considerations to enhance and strengthen GESI within the context of the BRCRN project (building on measures identified in the Gender Action Plan, Indigenous Peoples Planning Framework and cross-cutting measures to support social inclusion).

    Project staff will organize one national-level training and 6 provincial-level trainings for staff from MoFE, MoITFE and other relevant provincial and municipal authorities ("Professional Beneficiaries") on the production and use of GIS tools used in the multi-criteria analysis that informed the development of CERPs under Activity 2.1.2. In so doing, the project will equip key provincial and local stakeholders with the

knowledge and tools needed to continue monitoring climate change impacts and natural resources in the Project Area after project closure – knowledge that is essential to enable government to continue refining the support it provides for climate-resilient SNRM.

b. **Activity 2.1.2– Develop and validate Critical Ecosystem Restoration Plans (CERPs) for each of the 26 targeted river systems.** Under this Activity, project staff will work with a range of provincial and local stakeholders to develop and validate CERPs, which will enable evidence-based planning for interventions under Component 1, while also providing governments and CBOs with common plans and priorities to guide coordinated investments in climate-resilient SNRM in the future. Project staff will start by recruiting a qualified firm to perform a multi-criteria spatial analysis for each of the 26 targeted river systems to help identify: climate change risks within each river system; critical ecosystems within each river system; priority climate-resilient SNRM practices and approaches for each biophysical zone in each river system; priority interventions to be delivered (under Component 1) to enable short-term action on the aforementioned priorities, including priority areas for such interventions; and CBOs for inclusion/involvement in prioritized interventions in each river system. Building on this analysis, project staff will organize a series of 26 river system-level consultations (one per targeted river system) to discuss the identified priorities with key stakeholders and develop this into a Critical Ecosystem Restoration Plan (CERP).

   Once the CERPs are validated, project staff will organize a series of field consultations (following FPIC principles) to ensure: (i) interventions identified in the CERPs are locally-relevant and appropriate; (ii) relevant CBOs and other local stakeholders in each river system are supportive of the priorities and plans outlined in their respective CERPs; and (iii) the implementation methodologies are adapted to local circumstances as appropriate, including to address locally-specific social and environmental risks and capacity gaps. In so doing, project staff will ensure that prioritized interventions reflect the relevant management regimes, such as community forestry, leasehold forestry, collaborative forestry, public land forests, and private forestry, among others. While promoting collective action through local CBOs/ user groups, the project will take into account the priorities and needs of vulnerable groups (e.g. women, Dalits and indigenous peoples). In total, project staff will organize 52 local-level consultations (2 per river system) to secure community buy-in and support for the CERPs and the specific interventions prioritized therein. Project staff will then discuss the community-endorsed CERPs with stakeholders at the national and provincial levels (through two national workshops and six provincial-level workshops) to secure feedback on the planning processes and government validation of the plans, and discuss opportunities for mainstreaming CERP priorities into regular planning cycles.

c. **Activity 2.1.3 – Support provincial governments to plan and increase resilience to projected climate change-related extreme events.** Due to an increasing risk of climate change-induced extreme events (e.g. flooding) in the Project Area, it is essential that government stakeholders understand these risks and how best to support

enhanced preparedness – both within the government and at community level. Under this Activity, project staff will raise awareness of such risks among provincial and local government staff ("Professional Beneficiaries") and support them to develop corresponding risk management plans. Project staff will begin by organizing 26 awareness-raising workshops (one in each targeted river system) for provincial and local government staff, during which participants will learn about river system-specific risks (drawing on analysis done under Activity 2.1.2) and train them on relevant guidelines and tools for further assessing such risks in the future. Participants will also be trained on how to access information from the Churia Knowledge Centre in their respective provinces (established under Activity 3.2.3), and how this important resource can facilitate future analysis of climate change risks in each of the targeted river systems. Following the awareness-raising workshops, project staff will work with provincial governments ("Professional Beneficiaries") to develop provincial-level risk management plans for climate change-related extreme events, building on detailed hazard mapping, vulnerability assessments and risk mapping from the CERP planning process under Activity 2.1.2. Once these plans are developed, project staff will subsequently work with provincial governments organize 26 multi-stakeholder validation workshops to secure endorsement and community buy-in for such plans.

29. **Sub-Component 2.2 – Community-based organizations (CBOs) are equipped to scale up climate-resilient SNRM.** This sub-component will work with local stakeholders and CBOs to improve local-level planning, build their capacity to provide support for climate-resilient SNRM in their river systems, and address other legal and institutional barriers that otherwise inhibit local actors from taking a leadership role in shifting the management of land, forests and other natural resources toward more climate-resilient and low-emission pathways.

    a. **Activity 2.2.1 – Establish, formalize and register CBOs to enable climate-resilient SNRM.** Community organizations play a key role in managing natural resources within the Project Area, and are essential to shifting the management of forests and other resources toward more climate-resilient and sustainable approaches. Such organizations also play an important role in supporting individual households to adopt and sustain climate-resilient practices in their own fields. In order to empower such organizations to provide support at scale, project staff will support them to overcome key institutional hurdles under Activity 2.2.1. Project staff will begin by working with all 750 beneficiary CBOs to ensure they are registered with the relevant authorities, in line with Provincial and Federal Law. This will include CFUGs, collaborative forestry user groups, pro-poor leasehold forestry groups, soil conservation user groups, farmer groups, agriculture cooperative groups, public land forest user group. While existing CFUGs, collaborative forestry user groups, leasehold forestry and private forest users are registered with the Department of Forestry, with the ongoing political transition they will be required to register at either the provincial or local level (Article 11, LGOA 2017). Meanwhile, project staff will also support local governments to formalize recognition of public land forest user groups, comprised of primarily marginalized and highly vulnerable households, to benefit from the sustainable management of public land forests. Many of these groups already exist (particularly where pilot projects have successfully engaged them in the sustainable management of public forests) but are not yet formally recognised. Based on the

local government operation act (2017), local government will have the authority to formalize such groups, having positive impacts on highly vulnerable households. Finally, project staff will help establish 26 networks of CFUGs and private forest owner networks. This will include organizing initial workshops for such groups in each river system, as well as supporting the organization of annual meetings of such groups from PY3-7. This will encourage information exchange among similar groups within each of the targeted river systems. It will also provide important platforms to exchange experiences and lessons learned, and support long-term capacity development of these local institutions.

b. **Activity 2.2.2 – Train CBOs on climate-resilient land use planning, and assist them to mainstream climate-resilient SNRM into their CBO management plans.** Under this Activity, project staff will strengthen the technical capacities of CBOs to better understand climate change risks and how best to respond through climate-resilient SNRM approaches that are catered to their local needs (drawing on insights gained through the CERP process under Activity 2.1.2). Trainings will also include sessions on GESI principles to promote (inter alia) greater involvement of women in climate-resilient SNRM, as well as to promote greater understanding among males CBO members of women's roles. In so doing, CBOs throughout the Project Area will be better equipped to sustain and scale up climate-resilient SNRM practices beyond project closure. To accomplish this, project staff will start by recruiting a service provider to organize a training of trainers (ToT) for Local Resource Persons (LRPs) (on behalf of "CBO Beneficiaries") on climate-resilient land use. LRPs will include women, indigenous peoples and marginalized minority groups (including Dalits), and all trainers will be given additional training on GESI to ensure women and marginalized groups are effectively engaged. Once LRPs have been trained, project staff will organize at least 250 community-level workshops for 750 local CBOs (with 3-5 CBOs per workshop), at which LRPs will train CBO members to improve their awareness on climate change and associated risks, and support them to map out adaptation needs and strategies to build resilience at the local level. Such an approach is based on multi-stakeholder participation, and will promote the empowerment and inclusion of women as well as indigenous peoples, Dalits and members from other marginalized groups. After the initial workshops and trainings, project staff will select the 250 most vulnerable CBOs (in line with the selection criteria and process outlined in Table 6), and recruit a qualified service provider to support these CBOs to develop CBO management plans that effectively mainstream support for climate-resilient SNRM. These plans are expected guide members/households of these 250 CBOs to scale up climate-resilient SNRM within their communities in a coordinated manner.

Component 3: Improving knowledge, awareness and local capacity for climate-resilient SNRM

30. Component 3 will improve awareness of climate change threats and build capacities to continuously monitor climate change and vulnerability at the provincial, local (rural municipality) and CBO level. It will further raise awareness of suitable low carbon and climate-resilient practices that are adapted to local conditions and differentiated vulnerabilities and contexts. It is closely linked with Component 2, with a stronger focus on improving knowledge, strengthening extension services and improving the dissemination of information to support awareness raising and the enhancement of adaptive capacities. This is crucial to the broader process of transforming the way communities manage natural resources within the Project Area.
31. While the project aims to strengthen coordination and the use of networks for vertical and horizontal information and knowledge dissemination, there is also a need to establish a formal mechanism to monitor climate change and natural resource management in the Project Area, and to share knowledge and information, such as templates for operational guidelines, success stories/lessons learned, action plans and strategies, among other documents.Component 3 therefore aims to establish a systematic knowledge and information sharing and monitoring mechanism concerning climate-resilient SNRM: The Churia Knowledge Centre (CKC). CKC will serve as a comprehensive resource including a database of natural resources – including soil, water, ecosystems and forests – to support informed policy-/decision-making and planning, and knowledge-sharing mechanisms. The CKC will include an online digital platform and will further have regional representation within MoITFE´s Science Environment and Climate Change Division in each province, where IT and computer experts are employed. The CKC will play a crucial role in enabling local stakeholders to continue delivering (and even scale up) climate-informed extension services to farmers and other land users after project closure, and in areas in Provinces 1, 2 and 3 that are beyond the Project Area.
32. **Sub-Component 3.1 – Local knowledge on climate-resilient SNRM is enhanced.** This Sub-Component will collect and analyse existing local and indigenous knowledge about climate-resilient SNRM in the Project Area, and support the effective dissemination of this knowledge. In so doing, this Sub-Component will catalyse broader interest in climate-resilient SNRM among communities in the Project Area, thereby reinforcing interest in engaging in Component 1 Activities (the implementation of which will coincide with awareness-raising Activities under this Sub-Component) as well as in scaling up climate-resilient SNRM beyond the scope of the direct support provided by the Project.
    a. **Activity 3.1.1 – Equip LRPs with best practices on climate-resilient SNRM from local experience, including indigenous knowledge.** Under this Activity, project staff will gather local and indigenous knowledge on climate-resilient SNRM, and distil this information into user-friendly guidelines for LRPs and other local stakeholders to train and support CBO members to adopt such practices during and beyond the pro-

ject. To do so, project staff will start by recruiting qualified service providers to organize 105 local/community consultations[10] (about 4 consultations in each of the 26 targeted river systems) to better understand and consolidate traditional knowledge on climate resilience and SNRM. Project staff will then develop a compendium of local and indigenous knowledge based on these local-level consultations, and subsequently organize five provincial-level workshops to review and validate this compendium, drawing on additional information from civil society organizations (CSOs), development cooperation partners and government officials. Once the compendium of local and indigenous knowledge is validated at the provincial-level workshops, project staff will recruit a qualified service provider to develop best practice guidelines for LRPs to assist them in promoting and training CBO members on climate-resilient SNRM. These guidelines will draw in part on the compendium of local and indigenous knowledge, as well as additional information about lessons learnt and best practices from other projects and programmes that have been implemented in the Project Area.

b. **Activity 3.1.2 – Raise awareness on climate-resilient SNRM through local schools, media and intra-regional exchange.** Under this Activity, project staff will organize awareness raising campaigns to promote climate-resilient SNRM, and increase interest in such practices among communities and households living throughout the Project Area. Project staff will start by recruiting a qualified service provider to develop a knowledge dissemination and communication plan. Working with local and provincial governments, NGOs, indigenous people's federations, Dalit organizations, women's organizations and others, the service provider will establish methods for widespread dissemination of project-generated information (including that which is developed under Sub-Component 3.1, as well as the information contained in the CKC established under Sub-Component 3.3) via these entities' respective networks. Project staff will subsequently recruit a service provider to develop curricula on climate-resilient SNRM for local high school students. Project staff will then work with schools in the Project Area to establish student-run eco-clubs and organize 260 awareness-raising sessions for the eco-club members. To further raise awareness within the Project Area, project staff will recruit service providers to develop and broadcast 119 local-level radio programmes on climate change risks and climate-resilient SNRM. These radio programmes will be adapted to the local contexts in which they will be broadcast, drawing on the insights gained from the CERP process (under Activity 2.1.2) and the local and indigenous knowledge gathered under Activity 3.1.1). Finally, to enhance awareness of climate-resilient SNRM among local governments – whose buy-in and support are essential to the longer-term process of transforming land-use practices and natural resource management in the Project Area – project staff will organize 28 exchange visits within Nepal for local govern-

[10] Adapted based on an approach piloted for the Government of Nepal´s study on ´Indigenous and Local Knowledge and Practices for Climate Resilience in Nepal´ (2015).

ment authorities ("Professional Beneficiaries") to demonstrate good practices related to technical implementation of climate-resilient SNRM and extension processes through which to promote such practices.

33. **Sub-Component 3.2 – The extension system is equipped to promote climate-resilient SNRM.** This Sub-Component will ensure that recent projections on climate change impacts and appropriate response measures (including local and indigenous knowledge) are integrated into the extension system in the Project Area. It will ensure that extension workers and trainers are equipped to promote climate-resilient SNRM, and can scale up the provision of climate change-informed extension services to ensure local communities, farmers and other land users are able to benefit from such services during and after the project.

    a. **Activity 3.2.1 – Develop 10 modules on climate-resilient SNRM to be used by extension workers, including in the farmer field schools.** This Activity will ensure that government extension workers have locally-adapted training modules to be used when training farmers and other land users to adopt project-promoted climate-resilient SNRM practices. Project staff will develop 10 training modules to be used by government personnel and extension workers during and beyond the project, including for trainings on farmer field schools. Project staff will also recruit a qualified service provider to translate these modules in local languages to ensure they cater to local needs. Project staff will ensure these modules draw on the feasibility work done for this project, as well as the insights gained from the CERP process (under Activity 2.1.2) and the collection of local and indigenous knowledge (under Activity 3.1.1). The modules will cover sensitisation and extension processes for rural communities and beneficiaries including implementation planning, self-learning, quality assurance and incentive structures, and will support the facilitation of all key interventions under Component 1.

    b. **Activity 3.2.2 – Enhance and deliver quality extension services on climate-resilient SNRM to households.** The extension system plays a crucial role in shaping how farmers, forest users and communities use land and other natural resources in the Project Area. To promote lasting and sustainable behavourial change, it is therefore essential to scale up the delivery of high-quality, climate-informed extension services in all 26 targeted river systems. Under Activity 3.2.2, project staff will therefore organize 78 training events during which they will train government extension workers and LRPs ("Professional Beneficiaries") to understand and apply the 10 training modules developed under Activity 3.2.1. In total, these trainings are expected to benefit approximately 2,340 extension workers and LRPs (about 30 at each of the 78 training events). Under this Activity, the project will also cover the financing of improved and climate-informed extension services within the Project Area. MoFE co-financing will be used to engage the services of provincial-level extension workers (on secondment with MoITFE and MoALMC) to specifically support the delivery of climate-informed extension modules and support under the BRCRN project. These extension workers will directly support delivery of project-financed trainings and extension & advisory services under Component 1. They will also provide ongoing advice, guidance and support to CBOs throughout the project implementation

period to enable the continued adoption and use of climate-resilient SNRM practices promoted by the project, including among households who were not selected by their CBOs to directly participate in formal trainings organized by the project. By building the capacity of local extension workers and drawing on their existing insights and networks, the project expects to generate high adoption rates among CBOs. This approach will also ensure that the provincial governments are well equipped to continue providing climate-informed extension services in the Project Area after project closure – thereby increasing the prospects for scaling up and out that are so important to the broader process of sector transformation that this project aims to set in motion.

c. **Activity 3.2.3 – Establish and operate the Churia Knowledge Centre (CKC) in each province to enable continuous delivery of climate-informed extension services and planning, and to monitor implementation and results of CERPs and CBO management plans.** To effectively provide climate change-informed extension and advisory services beyond project closure, the government requires a user-friendly platform to store relevant knowledge and training materials, as well as the latest data and tools to track evolving climate change impacts and the state of natural resources within the Project Area. Project staff will therefore recruit qualified service providers to design and establish the CKC. This online platform will include a database of natural resources within the Project Area (including soils and forests), as well as provide a centralized and easily-accessible repository for project-generated information, knowledge, guidelines and materials. In addition, the CKC will be used to facilitate participatory monitoring of the impact of project Activities (as described in Section H.2). The service providers will also establish regional CKC hubs in the MoITFE offices in provinces 1, 2 and 3, specifically within the Science, Environment and Climate Change Division. This platform will not only underpin the delivery of climate-informed extension services, but will also enable government and other stakeholders to continuously monitor the evolving impacts and needs in the 26 targeted river systems, and update relevant plans and support programmes/services accordingly.

   Once the CKC is established, project staff will organize one national training and three provincial trainings to build the capacity of Professional Beneficiaries on the CKC online platform and regional hubs. The three provincial trainings will focus in particular on building the capacity of MoITFE staff in each of the provincial CKC hubs to operate the CKC. To complement this support, project staff will develop manuals, protocols and guidelines will be developed to guide provincial staff on CKC knowledge generation, gathering and management, including after project completion. This will include the development of Standard Operating Procedures (SOPs), which will be agreed with MoITFE to ensure the provincial CKC hubs are well operated and maintained beyond project closure. Project staff will also train relevant MoITFE staff on these protocols, guidelines and SOPs in PY7 to build their capacity to continue operating the CKC, and ensure it fulfils its role as a repository to support climate-informed extension services and planning into the future.

2.2 Project location

34. The BRCRN project area consists of 26 priority river systems that were identified as having ´high´ or ´medium´ priority under the vulnerability assessment (Figure 4; Table 1).[11] These river systems cover 720,620 ha in total. Excluding settlements and bodies of water, the total area is 702,011 ha. These river systems are located in Provinces 1, 2 and 3, covering the former districts of Jhapa, Ilam, Morang, Sunsari, Udayapur, Saptari, Siraha, Dhanusha, Mahottari, Sarlahi and Sinhuli.[12]

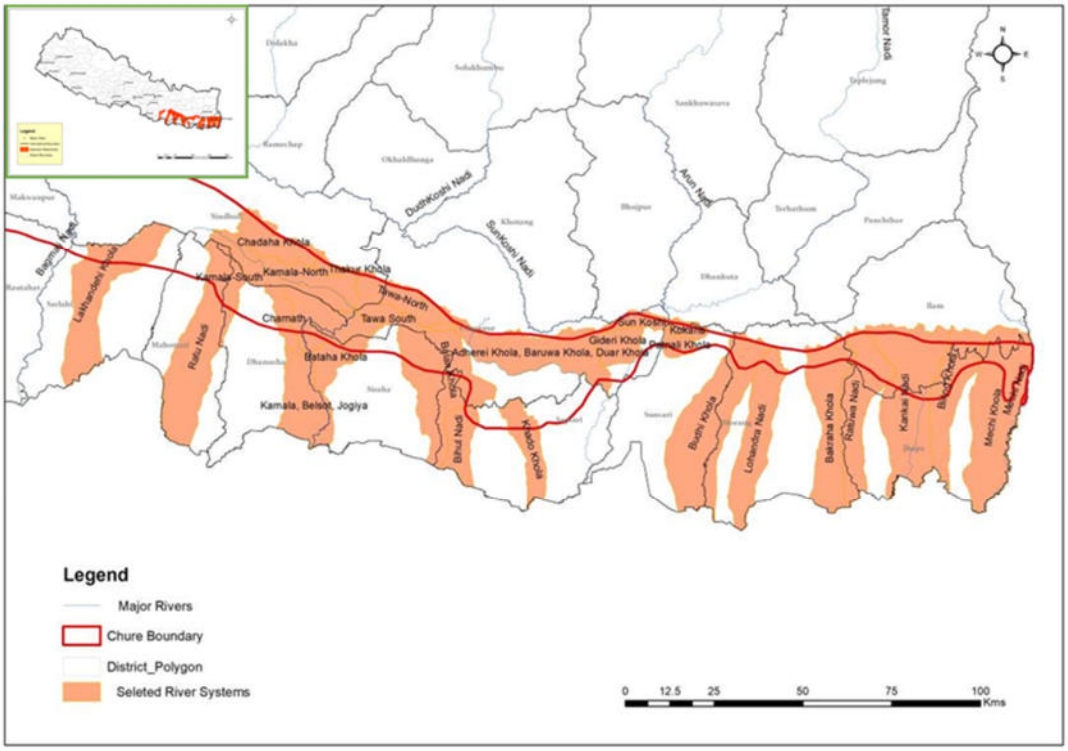

Figure 4: Selected river systems for the BRCRN project*

**Note: The red boundary shows the core BRCRN intervention zone within the river systems including the Churia hills, Bhavar, Dun and upstream Terai*

[11] An overview of the vulnerability assessment procedure can be found in Annex 5. More detailed information can be found in the BRCRN feasibility study and funding proposal.

[12] Nepal is currently undergoing a transition from a constitutional monarchy to a federal democratic republic, involving major restructuring of regional and local level institutions – including the establishment of seven provinces and the devolution of power over natural resource management to the local level. Formerly Nepal was organized into districts.

Table 1: Overview of the selected 26 river systems for the BRCRN project

#	Name of River System (RS)	Risk rating	(Former) Districts Covered by RS	RS Total Area (ha)	RS Area without settlements and water bodies	Population 2011*	Annual Deforestation Rate 2000-2015 (%)	Forest Cover 2015 (%)	Degraded Area (%)	Area under Slope Instability (%)	Percentage of Settlements located in the Churia Hills (%)	Area prone to flooding (%)	Area in Churia Hills (%)	Population Density Increase 2001-2011(%)
1	Kokaha	High	Sunsari	3312	3309.472707	5,090	3%	44%	9%	66%	82%	3%	77%	5%
2	Gideri Khola	High	Udayapur	11694	11596.27167	13,549	1%	61%	23%	24%	48%	8%	61%	35%
3	Patnali Khola	High	Sunsari	5,185	4,994	8,912	1%	64%	5%	16%	53%	5%	57%	10%
4	Thakur Khola	High	Sindhuli	2423	2422.51262	6,957	2%	71%	7%	41%	91%	2%	83%	38%
5	Sun Koshi	High	Upayapur	4,829	4,818	6,657	3%	72%	3%	66%	71%	0%	72%	32%
6	Chadaha Khola	High	Sindhuli	16,118	16,083	34,833	2%	63%	2%	39%	85%	4%	87%	35%
7	Kamala-North	High	Sindhuli	17,070	16,775	35,478	1%	55%	1%	18%	41%	16%	61%	47%
8	Tawa-North	High	Sindhuli	18,564	18,516	43,667	1%	57%	1%	12%	50%	10%	66%	29%
9	Tawa-South	High	Sindhuli	9,119	8,970	12,282	1%	66%	9%	10%	47%	12%	60%	41%
10	Kankai Nadi	High	Ilam	56,578	55,657	164,140	2%	29%	0%	24%	21%	17%	31%	17%
11	Ratuwa Nadi	High	Ilam	36,689	35,396	174,593	1%	21%	0%	15%	19%	17%	27%	41%
12	Adherei Khola, Baruwa Khola, Duar Khola	High	Udayapur	37,146	36,516	97,233	1%	63%	0%	14%	24%	11%	44%	36%
13	Lakhandehi Khola	High	Sarlahi	47,611	46,006	284,033	1%	24%	0%	5%	25%	13%	24%	20%

#	Name of River System (RS)	Risk rating	(Former) Districts Covered by RS	RS Total Area (ha)	RS Area without settlements and water bodies	Population 2011*	Annual Deforestation Rate 2000-2015 (%)	Forest Cover 2015 (%)	Degraded Area (%)	Area under Slope Instability (%)	Percentage of Settlements located in the Churia Hills (%)	Area prone to flooding (%)	Area in Churia Hills (%)	Population Density Increase 2001-2011(%)
14	Kamala-South	High	Sindhuli	14,854	14,673	27,575	1%	62%	3%	53%	2%	13%	52%	60%
15	Biring Khola	Medium	Ilam	26,952	26,485	106,496	2%	27%	1%	19%	11%	21%	18%	14%
16	Balan Khola	Medium	Siraha	52,255	50,921	179,215	0%	40%	2%	5%	33%	16%	51%	29%
17	Charnath	Medium	Dhanusa	8,485	8,351	22,053	1%	51%	0%	21%	4%	13%	61%	38%
18	Bataha Khola	Medium	Udayapur	12,327	11,827	67,387	1%	15%	5%	3%	0%	13%	16%	40%
19	Budhi Khola	Medium	Sunsari	62,057	59,389	456,343	1%	18%	0%	6%	8%	5%	10%	26%
20	Lohandra Nadi	Medium	Morang	36,111	34,773	171,347	1%	22%	2%	4%	5%	7%	10%	10%
21	Kamala, Belsot, Jogiya	Medium	Dhanusa	53,042	51,102	242,845	0.40%	30%	1%	14%	2%	25%	31%	30%
22	Ratu Nadi	Medium	Mahottari	58,539	56,841	391,732	1%	18%	0%	11%	0%	16%	15%	13%
23	Mechi Khola	Medium	Ilam	59,326	58,292	310,479	2%	20%	0%	8%	7%	10%	8%	18%
24	Bakraha Khola	Medium	Ilam	38,448	37,534	161,374	1%	22%	1%	9%	8%	15%	11%	6%
25	Bihul Nadi	Medium	Saptari	14,542	14,144	87,611	1%	6%	2%	1%	0%	6%	8%	13%
26	Khado Khola	Medium	Saptari	17,344	16,621	104,367	0.30%	25%	11%	3%	0%	18%	26%	14%

Source: Feasibility study for the BRCRN Project

**Note: Population is determined by the aggregated ward-level population statistics for those wards located within each river system. The most recent ward-level data available is from 2011.*

2.3 Project beneficiaries

35. The BRCRN project will include some measures focused on mainstreaming climate resilience into provincial policies and plans at the provincial level, and institutional strengthening for provincial level authorities in the same provinces. Such measures will benefit over 15.4 million people living within these provinces.

36. The population in the core BRCRN intervention area (i.e. within 26 river systems) is over 3,216,428 - around 11% of Nepal´s population. There are 670,052 households in the project area, with an average household size of 4.8 members – which is slightly larger than the national average (4.5 people/ household).[13] There are more female inhabitants than male inhabitants in the proposed project area, where women make up 51% of the population.[14]This is partly due to migration trends, where 25% of households in the project area are considered '*absentee households*,' with household members (88% of which are male), migrating to larger cities or neighboring countries for economic purposes.[15]Diverse cultural, ethnic and caste groups inhabit the project area:[16] Indigenous Peoples (Janajati/ Adivasi; 31%), Terai-Origin Madheshi peoples (28%), hill-origin high caste (19%), Terai Dalits (9%), Hill Dalits (4%) and Muslims (5%), and others (4%). The majority of community-based organizations have heterogeneous membership in terms of caste, ethnicity and sociocultural backgrounds.

37. At least 77% of inhabitants of the BRCRN core intervention area are from groups who are considered to have experienced some form of inter-generational socio-economic exclusion (Indigenous peoples [*Janajati/Adivasi*], Dalits, Madheshis, Muslims, refer to the following note on vulnerability and exclusion), thus highlighting the importance of the project to build the resilience of some of the most vulnerable people and regions.

Note on Vulnerability and Exclusion

38. **Vulnerable groups** are defined as "…*groups of people whose disadvantage is situational rather than structural. Their depravations are as a result of a particular situation (in some cases only temporarily) that has reduced their ability to withstand shocks rather than their more deeply embedded social identity*".[17]

39. Local communities, ecosystems and ecosystem services are expecting ever increasing exposure to climate change induced temperature rise and precipitation variability in entire country. The Churia region is expected to be impacted most because of steep mountain slopes, fragile soil, poor moisture regime, and high disturbance factors. Increased exposure, therefore, would increase the risk of climate-led hazards such as flooding, landslides, and droughts; which are expected to worsen unless prevailing unsustainable and inefficient land use and natural resource management practices are halted. BRCRN inhabitants are living in

[13]CBS 2014
[14] Ibid.
[15] CBS 2014; Based on district-level data
[16] CBS 2014 – based on VDC level data (Ward level data unavailable for 2014; and 2011 ward-level data does not include information on caste/ethnicity/cultural groups.
[17] GESI Working Group 2017

26 of the most vulnerable river systems in Nepal, where exposure to flooding, landslides and drought is becoming increasingly common with climate change, and accelerated by unsustainable natural resource management. The impacts of climate change and unsustainable NRM are not only felt by those living within the project area, but both nationally and internationally. With the Terai region serving as the grain-basket of Nepal, and the Bhavar and Churia hills serving as the water reserve for the Terai and downstream areas in India, the Churia region plays a critical role in terms of both national economy and integrity, as well as transboundary-water management.

40. While all project beneficiaries live in highly and moderately vulnerable river systems, there is differentiated vulnerability within the river systems, where some inhabitants are considered more vulnerable due to their socio-economic situation, location of settlement (e.g. in high risk areas for flooding or landslides), or due to inter-generational exclusion/ marginalization (see following note on excluded/ marginalized groups), among other factors. In terms of exposure, over 700,000 inhabitants of the project area (22%) live in areas that have a high risk of flooding during the monsoon season, whereas 94,000 inhabitants (3%) live in areas that are considered high risk for erosion and landslide. Unsustainable land use practices contribute to growing vulnerability and exposure to climate risks.[18]

41. **Excluded groups** are defined as "…those who have experienced inter-generational discrimination and have been systematically excluded due to economic [situation], caste, ethnicity, gender, disability, sexual orientation, and geographical reasons".[19] This includes groups including women, poor people, Dalits, Adivasi/ Janajati, Madheshis, Muslims, people with disabilities, third-gender and people living in remote areas.[20] Women comprise 51% of the project beneficiaries. Socially-excluded groups comprise over 77% of the project population (including Indigenous Peoples 31%, Terai-Madheshi 28%, Dalits 13% and Muslims 5%).

42. There are differentiated vulnerabilities within members of excluded groups as well. Within the project consultations it was mentioned that women, poor households, indigenous peoples and Dalits are particularly vulnerable to climate change. These groups are often more vulnerable to climate change and climate-induced natural disasters for various reasons, due to the barriers they face as a result of inter-generational discrimination (social and economic exclusion) and socio-cultural barriers, among other factors.[21] Many of these groups are heavily dependent on natural resources (agricultural land, forests) to maintain their livelihoods, but often lack the resources and activities to invest in SNRM – often leading to a cycle of poverty and environmental degradation which exacerbates their vulnerability to climate change. In addition, often poor households and highly marginalized groups (especially Dalits) live in high risk areas that are often along river beds or in susceptible landslide or erosion areas.[22]

[18] PCTMCDB 2017
[19] GESI Working Group 2017
[20] Ibid.
[21] Social Inclusion Action Group 2015; Maharjan et al. 2017
[22] BRCRN Consultations; Maharjan et al. 2017

43. Climate change will have a disproportionate adverse impact on these excluded communities, and thus it will be important that project activities empower and ensure the engagement of these particularly vulnerable groups. While all project beneficiaries can be considered vulnerable, the project has been designed to include activities which can be targeted to diverse beneficiaries, including excluded groups, to ensure that differentiated vulnerabilities, contexts, priorities and needs are taken into consideration to increase people´s resilience and adaptive capacities.
44. More information on group-specific challenges, as well as proposed measures to promote gender equality and social inclusion within the context of the BRCRN project can be found in the gender assessment and gender action plan (separate documents), and the Indigenous peoples and social inclusion planning Framework in Section 8.

45. The main project beneficiary will be local community-based organizations.[23] In terms of direct beneficiaries, the project will target at least 750 local community-based organizations. Based on average membership figures in the project area, this will equate to at least 173,160 households representing over 831,168 people (~26% of inhabitants in BRCRN project area). At least 50% of beneficiaries will be women, and the project will promote proportional representation of indigenous peoples and marginalized groups. All 3.2 million people living in the BRCRN project area will indirectly benefit from the project through the elaboration of a climate-resilient strategy for the BRCRN area and the elaboration of action plans for each of the 26 vulnerable river systems. In addition, local capacities will be built on climate-resilient land use planning and management, which will have a long-term impact to continue to build the resilience of communities within the Churia region of Nepal.
46. The following Table provides a brief overview of the different user groups to be included within the project:

Table 2: Overview of community-based project beneficiaries

Beneficiary	Brief Description
Community Forest User Groups	▪ The community forestry system was established in Nepal in the late 1970s, and is defined as the control, protection and management of forest resources by the rural communities who depend on the trees and forests for their livelihoods.[24] Community forests, and their association community forest user groups, have significant control in the management and use of forest resources as provisioned in the Community Forest Act of 1993. As of June 2013, 18,133 community forest user groups have been established, with a total membership of 2,237,195 households and covering a total of 1,700,048 ha of forest area.[25] This represents a 99% increase in forest area under

[23]Community-based user groups will include: community forest user groups (CFUGs), collaborative forestry user groups, pro-poor leasehold forestry groups, soil conservation user groups, farmer groups, agriculture cooperative groups, private forest users and public land forest user groups. Specific beneficiary groups will be identified within Activity 1.1.
[24] Gilmour and Fisher 1991.
Joshi,
[25] MoFSC, 2014

Beneficiary	Brief Description
	community control since 2002, and the promotion of Community forests and community forest user groups continues to be a priority of the Ministry of Forests and Environment.[26] ▪ Community forest user groups are made up of members of a community coming from a variety of economic backgrounds. Monthly membership fees, fines and penalties, along with donations from various outside groups, are used to raise the group income of a community forest user group, which can then be used to implement development activities ▪ Community forestry has significantly contributed to the protection of forests in the middle hills of Nepal.[27] Most of the CFUGs are able to manage forests and generate a group fund. Such funds are being used for local community development activities such as school building construction, road and trail maintenance and construction; provide irrigation facilities, constructing community buildings, etc.[28] CFUGs have developed policies to support poor and disadvantaged members in a community in a variety of ways. For example: special preferential quota for membership of the executive committee and benefit sharing for Dalits and poor, obligatory 50 percent women participation in all executive committee, and providing funds to support income generating activities. In some cases, CFUGs have funded poor students for their education and health. ▪ The Federation of Community Forest Users' Groups in Nepal (FECOFUN) is a federated body established in 1995 to represent the interests of CFUGs and community forestry practitioners at the national level. It has chapters in all of Nepal's forested districts and has newly-established province-level chapters in all of Nepal's seven provinces. FECOFUN is recognized nationally as the representative body for CFUGs and the project will therefore engage with FECOFUN in all matters relating to the representation of CFUGs in project activities and management structures.
Farmer Groups and Soil Conservation User Groups	▪ Agriculture and Livestock development office organize farmers to develop collective plans and implement Agriculture and livestock improvement activities in their communities. Such farmers groups are informal and often targeted to certain commodities focused pocket groups and terminate after project activity is over. However, success achieved by such groups from collective decision often motivates them to emerge as registered farmer cooperatives. ▪ Soil conservation user groups are formed by District soil conservation offices to involve local communities in conservation related activity implementation. These groups are not officially registered though but play important role in developing soil conservation plan, activity implementation, and maintenance.
Leasehold forestry Groups	▪ Leasehold Forestry first appeared in Nepal through the Hills Leasehold Forestry and Forage Development Project (HLFFDP) in 1992, with the objectives of alleviating poverty and improving the ecological conditions of the hilly region. ▪ Leasehold forestry emerged as a result of poor households being excluded and unable to benefit from community forests and is designed to lease degraded forest lands to groups of poor households for their exclusive use, leading to both forestland regeneration and income generation. Although HLFFDP was a 10 year project introduced in 10 districts by the government of Nepal with support from IFAD, ADB, and FAO, after seeing the resulting benefits, the Government of Nepal continued the leasehold forestry mechanism.

[26] Ibid.
[27] Kanel and Dahal, 2008
[28] Dahal and Chapagain, 2008

Beneficiary	Brief Description
	▪ Although leasehold forestry for poor is not visualized in the Forest Act of 1992, the Forest Regulation of 1995 makes a strong legal backing for Leasehold forestry and makes a special provision for the leasing of forests to disadvantaged groups. Beneficiaries of leasehold forestry are households living under the poverty line with limited land and/ or annual income. ▪ Leaseholder forest user groups are arranged by grouping several of these households together and are then allocated land. Land can only be used for leasehold forestry if the community is not willing to take parts of it into the community forest and are often shrub land, land recovered from forest encroachers or natural calamities, forests with limited crown cover or areas vulnerable to soil erosion.[29] ▪ Despite its limited coverage, leasehold forestry has become popular amongst poor households because it has helped to improve forest condition and contributed to the livelihoods of the members. However, due to procedural complexities and limited ability of leasehold groups to access financial and technical assistance from the involved organizations the progress in terms of scaling up of this model has so far been relatively slow compared to the expansion of community forestry. Furthermore, the progress is constrained as most of the forests allocated to leasehold groups are degraded and demand intensive and costly restoration efforts. ▪ As of June 2013, a total of 7,413 households are households who are living below the poverty line, leading to the management of 42,773 hectares of forest.[30] The leasehold forestry programme has been implemented in 39 districts and have contributed to restoring degraded forestlands, conserving biodiversity and alieving poverty.
Collaborative Forest Management Groups	▪ Collaborative forest management (CFM), a joint forestry management strategy between government and community, was introduced in Nepal through a cabinet decision in May 2000 in response to the continued deforestation within the Terai region.[31] CFM designates the management modality for 'contiguous large blocks' of productive Terai and Inner-Terai national forests.[32] ▪ Although the community forestry strategy had taken hold in the hilly regions of Nepal, leading to increased forest conservation in these areas, the Terai area remained mostly under government management and experienced severe forest degradation through programs such as the malaria eradication programs and East-West highway construction. ▪ The argument for CFM creation to manage forests in the Terai despite already existing CF systems was four-fold. First, it was argued that CF and government-managed forest modalities were not sufficient in patrolling and preventing forest encroachment and crime in the high-value forest systems of the Terai. CFMs were, therefore, needed to increase forest productivity through professionally managed silvicultural interventions and forest management to both fulfil the need for forest products and conserve biodiversity, while also promoting local livelihoods and poverty reduction. Another argument was that 'scientific' management of these forests was lacking. Third, CFs were argued to be insufficient to provide equal benefits to the geographically distant and more traditional Madheshi forest users of the Terai and to ensure that any groups that may have been excluded in the CF scheme are included. Finally,

[29] Laudari *et al.,* 2013.
[30] MoFSC, 2014
[31] Bampton *et al.,* 2007
[32] Bampton *et al.,* 2007

Beneficiary	Brief Description
	CFMs are intended to serve as a link between community forests and the local government, and in this way CFMs ensure that the local government also benefits from forest management. The local government is included as a stakeholder in forest management and thus CFM generated income can also be used for local development activities. Benefits made by CFMs are divided, with 25% to the district level for local development projects and 75% to the central government.[33] ▪ The key objectives of collaborative forestry are to meet local demand of users and demand for commercial use of forest products, and to reduce poverty by creating employment while enhancing biodiversity. Local residents living within 5 km from the forest are considered as primary users of collaborative forestry. Collaborative forestry also follows the principles of participatory forest management and has been trying to maintain equity by providing preferential treatment to poor households (discounted price on timber purchase etc.), and encouraging women to participate in decision making. As the regime is relatively new, the economic, social and environmental outcomes are yet to be understood. ▪ According to DoF, since 2004 thirty collaborative forests, covering a total land area of 73,364 hectares in twelve Terai districts have been established.[34] ▪ The Association of Collaborative Forest Users Nepal (ACOFUN) is a federated body established in 2004 to represent the interests of CFM users' groups and collaborative forestry practitioners at the national level. ACOFUN is recognized nationally as the representative body for CFM users and the project will therefore engage with ACOFUN in all matters relating to the representation of CFM users in project activities and management structures.
Private Forest Users	▪ Private forest users include all trees and forests growing on private lands, including leasehold forests that are leased by private institutions for commercial raw material production. The cultivation of NTFPs on private lands also fall under this category.[35] ▪ The area of land falling under private forests has increased throughout the country and in August 2013, there were 2,458 registered private forests accounting for a total of 3,329,885 trees covering an area of 2,361 ha of land. Between 2000 and 2013, there has been a 9.3% increase in the number of trees falling within private forests and a 12.9% increase in private forest area.[36] ▪ The scale of private forests in Nepal is insignificant so far, making up only 0.01% of total forest area, but slowly people are being encouraged toward establishing registered private forests as per Forest Act 1993. Some have started agroforestry within their private agriculture land or renting other people's land for private forestry with an arrangement of having tree tenure. In any case, private forests provide direct economic benefits to the individual as 100% benefit goes to the private owner. ▪ These days' farmers with abandoned agricultural land are shifting their priority from agriculture farming to tree farming due to a shortage of labour for farming and better income from trees.[37] The complicated process of private forest registration at District Forest Office and regulatory barriers often demotivate private landholders from growing forest trees in their farm land. Registration of private forestry is a legal requirement to have rights to harvest timber and to sell timber commercially. Unlike

[33] Rai *et al.,* 2017
[34] FMS NFD/ DOF 2018
[35] MoFSC, 2016.
[36] MoFSC, 2014.
[37]Gilmour 2016

Beneficiary	Brief Description
	the community, leasehold and collaborative forestry models, no comprehensive studies have been undertaken to find out the impacts of private forests. ▪ Nevertheless, increasing interest from people indicates that private forests are perceived to contribute to livelihoods and income through employment generation and sale of forest products. In addition, private forests could help in maintaining local environmental condition. ▪ Within the BRCRN project, private forest users will be provided with technical support under Activity 1.14. ▪ Associations of private forest users in Nepal include the Association of Family Forests Owners Nepal (AFFON), which was established in 2015 and is active in 45 districts, including all districts covered by this project. It has a national assembly and district-level committees. The project will therefore consult with AFFON as a matter of course, with respect to activities related to private forests, and to representation of private forest owners in decision making processes and project management structures.

47. An estimated 66% of BRCRN inhabitants are literate (comparable with the national average), however there are discrepancies between within the project area (Figure 5).[38] For instance inhabitants in Ilam and Jhapa have literacy rates above 75%, whereas inhabitants of Mahottari and Sarlahi districts have literacy rates around 46%.[39]On average, 34% of project inhabitants are unable to read and write (45% of women and 27% of men), thus approaches must be used to build capacities, raise awareness and promote the leadership and engagement of communities within the BRCRN project (cf. Section 6).

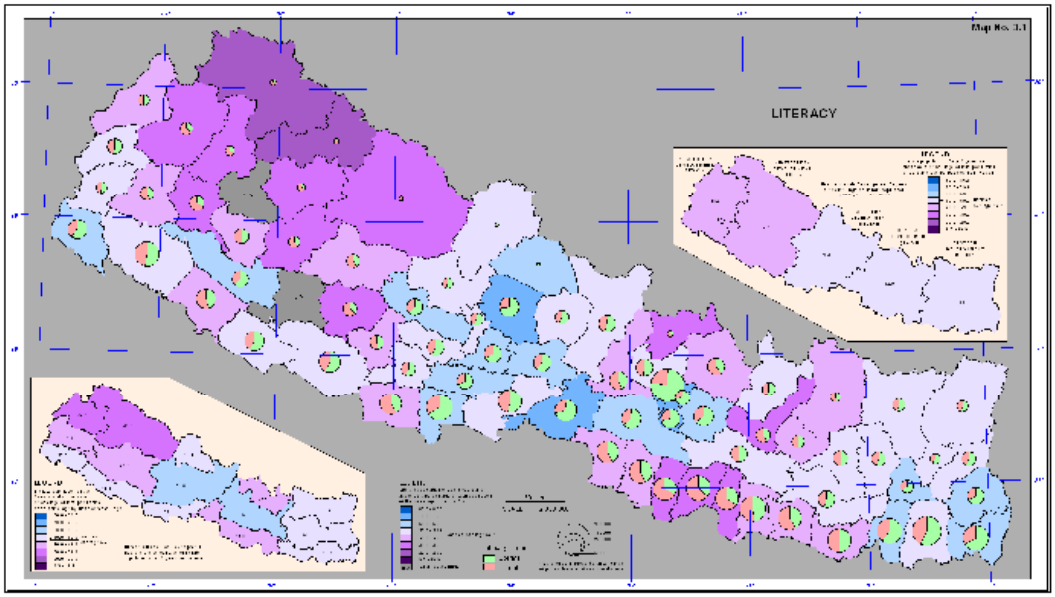

Figure 5: Literacy rates in Nepal

Source: CBS 2011; http://cbs.gov.np/index.php?route=information/gis_maps

[38] CBS 2011, based on district averages

[39] CBS 2011

2.4 Project implementation arrangements[40]

48. The institutional framework for this project will engage a wide range of stakeholders, ensuring their sustained engagement from project design to implementation, to monitoring and evaluation (M&E).

49. Nepal´s new governance structure envisions three tiers of Government structure (i.e. local, provincial, national), with fully devolved authority to local government to conserve, monitor, regulate and use natural resources within its jurisdiction. To avoid any conflict or confusion or roles between different levels of the government or with other non-governmental stakeholders, the institutional arrangement for this project establishes operational clarity on the scope, authority and responsibilities of the government at different levels, as well as their cooperation structure with CBOs and other stakeholders.[41] The following Figure provides an overview of the proposed project implementation arrangements:

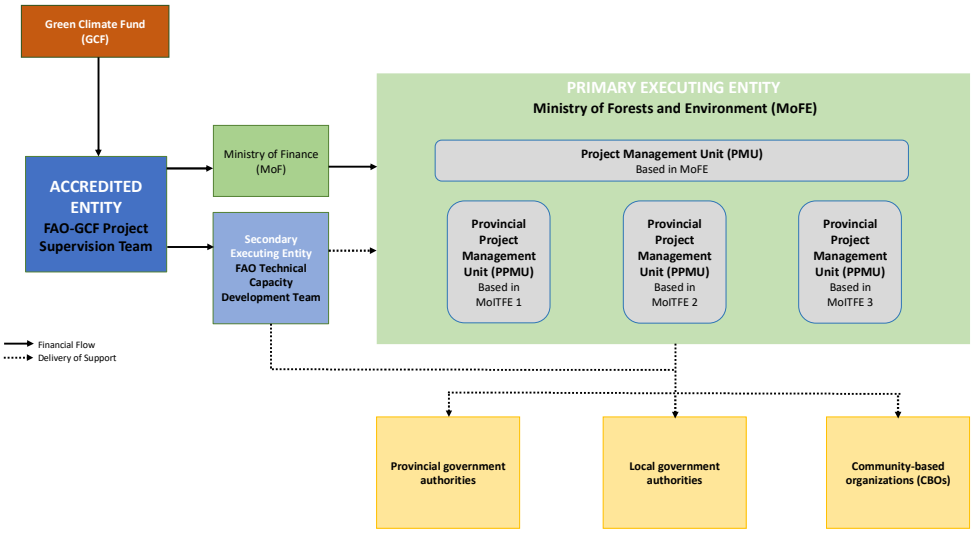

Figure 6: Overview of project implementation arrangements

Project Coordination and Management

50. In its role as executing entity, MoFE will establish a national **Project Steering Committee (PSC)** chaired by the Secretary of MoFE. This committee will be comprised of joint-secretary level representative members from relevant federal ministries, provincial ministries, FAO (in its role as Accredited Entity), as well as a member secretary of PCTMCDB. The gender focal point of MoFE will also participate in the PSC. The PSC will also invite representatives from relevant CSOs (including those representing Indigenous Peoples, Dalits, women, Forest and

[40]Additional information on the institutional arrangements can be found in the Feasibility Study
[41] LGOA 2017, Article 11 (3) (4) clarifies the role of local governments in Schedule 9; however, these provisions have yet to be translated into provincial and federal acts.

Water Users, Farmer Cooperatives, among other), the private sector and academia as necessary to discuss thematic issues as well as partnership opportunities. PSC´s main responsibility will be to provide strategic guidance and support coordination among government institutions, and will provide general oversight for the implementation of the project. PSC will further be responsible for revising and approving annual working plans and budgets, and mobilizing relevant technical expertise where necessary. They will approve the Project Implementation Manual (PIM) and Project Reporting Guidelines (PRG) during the inception phase.PSC meetings will be held twice a year - prior to annual budget planning and after the closure of fiscal year.

51. MoFE will also establish and host a **Project Management Unit (PMU)** at the federal level. It will be headed by a full-time National Project Director (NPD), appointed by MoFE in consultation with the PSC, and will include three provincial-level support teams, termed **Provincial Project Management Units (PPMUs)** – one in each of Provinces 1, 2 and 3. The PMU will be responsible for implementation of project activities according to annual work plans and budgets submitted to, and approved by, the PSC. The PMU will also prepare and submit to the PSC annual progress reports to track performance against project targets, and against the targets of the Gender Action Plan, Indigenous peoples and social inclusion planning Framework and ESMF. In the inception phase, the PMU will develop a detailed work plan and monitoring framework for the full project duration, and the PIM and PRG, for submission and approval by the PSC. These will govern the roles of all responsible institutions and project stakeholders, including in terms of procurement, monitoring, reporting and auditing.Close coordination will be ensured between the PMU and the Gender Focal Point within MoFE, as well as other government institutions responsible for social inclusion (e.g. Ministry of Women, Chidren and Social Welfare, the National Women´s Commission, Ministry of Federal Affairs and General Administration (MoFAGA) and its Dalit and Adivasi/Janajati coordination committees; National Commissions for Women, Dalits, Indigenous Nationalities, Madheshis, Muslims, Tharus; and the National Inclusion Commission; National Foundation for the Development of Indigenous Nationalities; and the Ministry of Women, Children and Senior Citizens (MoWCSC).

52. The PPMUs will be hosted in the provincial Ministries of Industry, Tourism, Forests and Environment (MoITFE), but will remain accountable to the PMU under MoFE at the federal level, and operate according to the regulations and guidance set out in the PIM and PRG. PPMUs will be responsible for coordinating the development of provincial work plans, in consultation with the Provincial Coordination Units (see below), for delivery and oversight of project activities at the province and local level, for development of quarterly progress reports and their submission to the PMU.

53. In addition to the above project coordination and management structures, FAO will establish a Technical Capacity Development Team to support effective and technically sound delivery of the BRCRN project. The **FAO Technical Capacity Development Team** will serve as a Co-Executing Entity delivering targeted technical assistance and maintaining responsibility and/or controls over international tenders and (non-expendable) procurement requiring expert/requiring technical oversight. This team will function independently of the FAO-GCF project supervision team (described above) to ensure FAO's Accredited Entity and Executing Entity functions are kept separate from one another. Detailed information on the specific

activities and budget items for which the FAO Technical Capacity Development Team will be responsible is included in the detailed budget in Annex 3 – Integrated Financial Model.

Multi-stakeholder Coordination Units

54. Provincial Coordination Units (PCUs) will be established in each of the three provinces, and will be chaired by the Secretary of the provincial MoITFE. Each PCU will include representative members (Under Secretary level) from other relevant provincial ministries,42 departments, CSOs (including women´s organizations, indigenous people's federations and representatives, and Dalit organizations, among others) and private sector representatives, with the coordinator of the PPMU acting as PCU Secretary. PCUs will serve as multi-sectoral and multi-stakeholder committees to develop proposals for provincial work plans, with guidance from the PMU and PPMU and according to the PIM and PRG. The PCU will convene on a quarterly basis to review project progress against provincial targets, to ensure coordination of project activities with those of provincial institutions and with provincial policy and legislative priorities, and to communicate provincial-level concerns and issues to the PMU. The PCUs are a key part of the project's exit strategy. During the second half of the project timeframe, and based on the recommendations of the independent mid-term evaluation, the PPMUs will work together with provincial stakeholders towards handover of project technical and operational support structures to the PCUs.

The following is a brief overview of key actors and entities for project management:

55. **FAO** will be the accredited entity for the project. FAO will provide oversight to the GCF project and channel the resources to the Federal Ministry of Finance (MoF). FAO will maintain close contact with MoFE, PSC and PCU members and federal and provincial PMUs, while also supporting monitoring, evaluation and reporting of project activities.
56. The **Ministry of Forests and Environment (MoFE)**[43] will be the co-Executing Entity for the proposed project from the government side. MoFE is responsible for the conservation, development, use, and sustainable management of forests (which is the predominant land use in the Churia). The Ministry is also in charge of REDD+ in Nepal, and hosts the REDD+ Implementation Centre (RIC). In addition, MoFE has experience and expertise in successfully implementing projects related to the main thematic areas of intervention under this project, for example, SNRM and ecosystem restoration in the Churia region. MoFE is thus well placed to play a central role in the delivery of the proposed project. Through the Project Steering Committee (PSC), the ministry will coordinate with other relevant sector Ministries to ensure synergies for transformational change.
57. The **Ministry of Finance (MoF)** is the National Designated Authority (NDA) for the GCF in Nepal. They will channel project finance to the executing entity (MoFE) for project imple-

[42] The Ministry of Social development will support coordination and steering on topics related to GESI within the project areas.
[43] Formerly the Ministry of Forests and Soil Conservation

mentation, facilitate coordination with the GCF, and provide oversight to the implementation and management of the project as the NDA to the GCF. The Ministry has long-standing experience managing project finance from international development projects.

58. The **Ministry of Agriculture, Land Management and Cooperatives (MoALMC)** will play an important role supporting interventions targeted at the agricultural sector. It is the Ministry that oversees agricultural land management, the establishment of cooperatives and agricultural extension, which will have an important role in planning processes for climate-resilient SNRM, the implementation of climate resilient land use practices in the agricultural sector, and in supporting the activities within Output 3. The Ministry has successfully implemented several large projects with funding from international donors and technical assistance from FAO, such as the Nepal component of the Global Agriculture and Food Security Project (GAFSP) and the Climate Change Adaptation in Agriculture Project funded through the Least Developed Countries Fund (LDCF) window of the GEF. Together with FAO and other development partners, the Ministry has also developed and implemented Nepal's Agriculture Development Strategy (ADS), and the Food and Nutrition Security Plan of Action (FNSP). Other emblematic programs of the ministry include the High Value Agricultural Project In Hill and Mountains (HVAP), the Decentralized Science, Technology and Education Program, the Value Chain Development Program, and the Innovation and Agro-entrepreneurship Program.
59. The **Ministry of Energy, Water Resources and Irrigation (MoEWRI)**[44] will support interventions related to sustainable water resource management and alternative renewable energy (biogas). In terms of watershed management, the Ministry has implemented several successful projects including the Kulekhani, Fewa and Begnastal/Rupatal (BTRT) watershed management projects, among others.
60. In terms of energy, the MoEWRI promotes the adoption of sustainable renewable energies in Nepal. In 2016, the Ministry developed a subsidy scheme for renewable energy technology based on the ´Renewable Energy Subsidy Policy´. The Ministry also coordinates with the **Alternative Energy Promotion Centre (AEPC)**. Since 1996, AEPC promotes renewable energy technologies in Nepal and aims to make such technologies more accessible to the population of Nepal. AEPC has developed guidelines to support the planning and adoption of renewable energy in rural communities,[45] as well as guidelines to support business development in local communities related to sustainable energy technologies.
61. The **Ministry of Federal Affairs and General Administration** (MoFAGA) will contribute to improving coordination between national ministries and local and provincial governments, especially ensuring alignment with the BRCRN and provincial level policies and decision-making.
62. The **Ministry of Home Affairs (MoHA)** is responsible for disaster risk reduction planning and will therefore provide a source of advice and support for DRR-related activities within Out-

[44] Formerly the Ministry of Energy and the Ministry of Water Supply & Sanitation
[45] Guidelines can be found at: http://www.aepc.gov.np/?option=resource&page=resgfm&sub_id=24

put 3 of the project. MoHA led the elaboration of the national policy for disaster risk management in Nepal, and is highly experienced in local level DRR planning. Before the transition to a federal structure, MoHA supported the elaboration of district DRR plans, including in Arghakhanchi and Udayapur districts together with FAO and the MoALMC, as well as guidance for local level planning.[46] The ministry also elaborates and publishes annual reports on disasters and disaster risk reduction, including guidance on policies, practices and lessons learned. Such insight will also be important to ensure that key knowledge is integrated within the CKC, as well as in guidelines and educational materials developed under Output 3.

Other institutions who will be engaged in project implementation include:

63. **Provincial governments: Provincial governments from Provinces 1, 2 and 3** will have an important role in the BRCRN project, as described above, as hosts of the PPMUs and chairs of the PCUs, and will further be the recipients of institutional capacity building efforts at the provincial level, contributing to the sustainability of project outcomes and impact.
64. **Local governments:** Local governments (i.e. rural municipalities) along with provincial ministries and entities, will be the direct recipients and beneficiaries of capacity building interventions of the project, in order to develop their competence in planning and implementation of climate-resilient SNRM and DRR. They will further provide support as necessary to the PPMU for coordination of project activities at the local level, and facilitate alignment of project activities with local development plans and budgets.
65. **Community-based organizations (CBOs):** Many local groups such as Community Forest Users Groups (CFUGs), Collaborative Forest User Groups, Pro-Poor Leasehold Forest User Groups, Public Land Forest User Groups, Indigenous Peoples' Organisations, Soil Conservation User Groups, Farmer Groups are the primary stakeholders in the Churia region and will play important roles in managing natural resources in the Churia region. CBOs and their members will serve as a main beneficiaries of the project.
66. **Private forest owners:** Private forest owners will be engaged in Activity 1.14, with a focus on trainings and capacity building on climate-resilient forestry practices.
67. **CSOs:** Support with measures aimed to strengthen and empower communities and community-based user groups on topics related to SNRM and climate change, providing extension services to local communities, supporting institutional strengthening and acting as key actors to support knowledge dissemination. Examples of CSOs to engage include NEFIN, forest user group federations (e.g. FECOFUN, ACOFUN), pro-poor leasehold forest user groups, women's organizations (e.g. HIMAWANTI, NIWF) and organizations representing ethnic minorities and marginalized groups (e.g. DANAR, FEDO), among others. The project will also the establishment of networks at the river system level for community-based forest users (CFUG) and Private Forest Owners' (Activity 2.11).

[46] MoAC and FAO 2011

68. **Research and Academic Entities:** To be engaged in various project activities to help generate and disseminate relevan**t knowledge and research outcomes** on climate change, climate-resilient land use and DRR in the Churia Region.

Fund Mobilization procedure

69. Every year the PMU will prepare the annual work plan and budget, including a procurement plan, which will be approved by the PSC. The work plan and budget will draw on the discussions at provincial level and proposals of the PCUs, as communicated to the PMU by the PPMUs. Based on the approval of this plan, FAO will transfer funds according to its covenants, rules and standards, to MoF. MoF will confirm these funds in the 'Red Book' system of budget management and transfer to MoFE accordingly.
70. According to FAO internal procedures and the OPA negotiated with MoFE, FAO will maintain controls over any funds related to international tenders, provision of expert advisory services, and goods or equipment for which technical specifications or quality assurance is required. Such procurement will be conducted or technically overseen by the FAO Technical Capacity Development team directly as part of the TA services to the project.
71. GCF grant finance allocated to the PMU within MoFE according to annual 'Red Book' Government accounts, will be the responsibility of the NPD and PMU staff. As part of MoFE and the PMU structure, PPMUs will have access to funds for implementation of provincial and local-level interventions according to provincial work plans. These funds will be mobilized directly by PPMUs, in their capacity as outposted units of MoFE, and will not be transferred for any purposes to other government or non-government entities at provincial or local levels.
72. Additional information on the project´s institutional arrangements is provided n the Feasibility Study, including a detailed description of staff for the PMU.

3 ENVIRONMENTAL AND SOCIO-ECONOMIC BASELINE CONDITIONS

3.1 Environmental conditions

73. As previously stated, the project area is located in 26 of the most vulnerable river systems in the Churia region, originating in the central and eastern Churia (Figure 7).

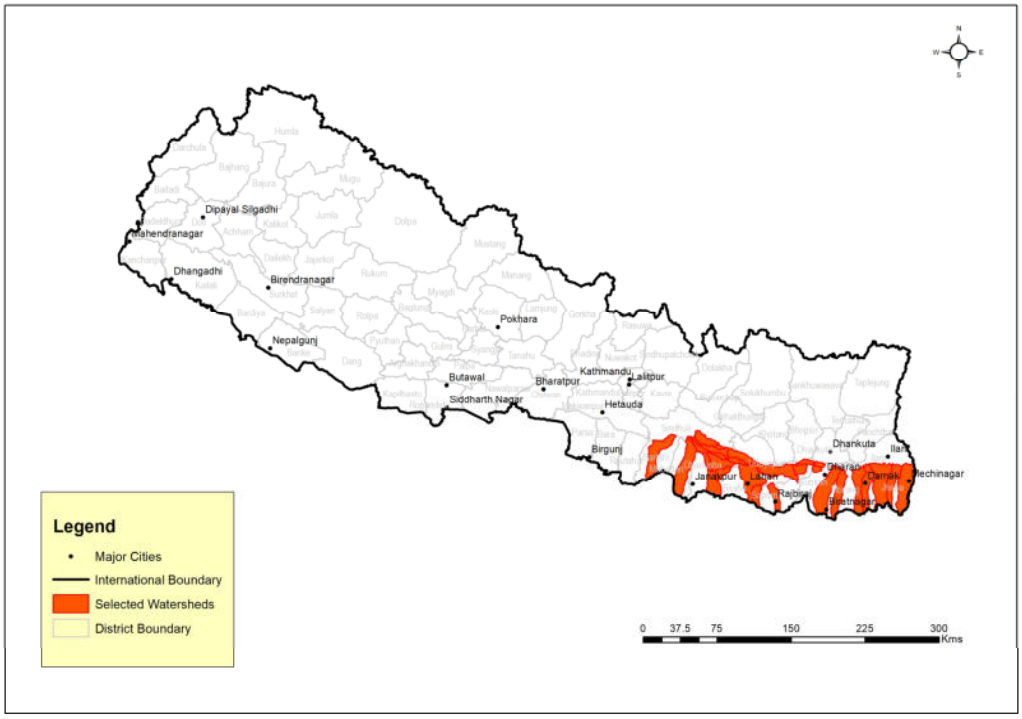

Figure 7: Location of BRCRN prioritized river systems.

3.1.1 Climate

74. The Churia region has a sub-tropical to warm climate, and is characterized by hot and sub-humid summers, intense monsoon rains and cold and dry winters.[47] There are four distinct seasons: pre-monsoon (March-May), monsoon (June-September), post-monsoon (October-November), and winter (December-February).[48]

Temperature

[47]MoFSC 2014a; MoFSC 2014b
[48] MoPE 2016

75. The average maximum temperature in Churia is within the range of 28.2° and 31.8° Celsius and the average minimum temperatures is between 15.8° and 20.4° Celsius (Figure 8Figure 8:).[49] Average maximum and minimum temperatures are slightly lower in the Churia Hill and Dun Valley areas than the Terai areas. Temperatures are lowest during winter months (December-January) and increase during spring and summer. However, the arrival of the monsoon keeps temperatures from further increasing, making the hottest months May and early June. The temperature range is directly related to altitude; during the winter months the Terai region reaches an average minimum temperature of 16-20˚C while norther high altitudes reach less than -8˚C and, similarly, during the summer months the Terai region reaches a mean maximum of over 30˚C, while the mid-hills reach 12-16˚C and the Himalaya range can still be below zero.[50]

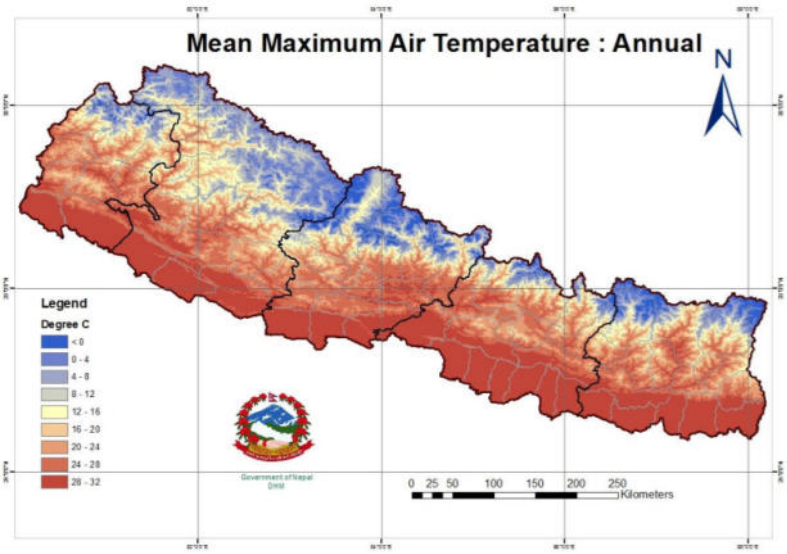

Figure 8: Mean annual air temperature in Nepal

Source: MoSTE 2015

76. Heat waves resulting in maximum temperatures of up to 44.5°C have been recorded during the summer, while cold waves resulting in minimum temperatures of 0° have been recorded during the winter.[51] When temperatures fall to the freezing-point, fog develops and leads to cold-waves in the Terai-Madhesh region. Cold waves are having adverse effects on wintercrops, and livelihoods within the region. The prevalence of cold waves has been found to be increasing in the past 5-10 years, with cold-waves starting earlier in the year and lasting longer.

[49] PCTMCDB 2017
[50] MoSTE 2015
[51] Ibid.

Precipitation

77. Precipitation patterns within the Churia region vary from east to west, with the eastern and central regions experiencing higher annual rainfall than the western and far west regions. The western region experiences an average annual total rainfall of 1,138mm and the eastern region experiences an average annual total rainfall of 2,671mm (Figure 9).[52] Nearly 84% of total annual rainfall occurs during the rainy season (July-September).[53] Nation-wide rainfall trends based on data since 1960, shows mean national rainfall to be decreasing at an average rate of 3.7mm (-3.2%) a month per decade.[54] This is a significant decrease and this decrease is particularly evident during the monsoon season.

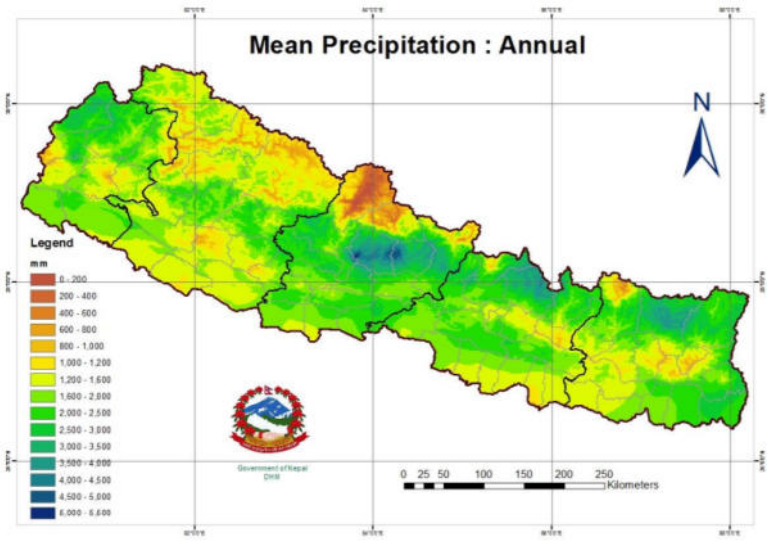

Figure 9: Mean annual precipitation in Nepal

Source: MoSTE 2015

78. The monsoon season is when Nepal receives the majority of its rainfall. The Churia Terai-Madhesh region experiences between 800mm-1,200 mm on average throughout the region (Figure 10). Precipitation levels during the monsoon season also play a significant role in the country's hydropower potential. Around 68% of the current hydropower generated is the result of monsoon rains, with the remaining 32% resulting from glacial melt.[55] During the monsoon season, Churia is often exposed to extreme precipitation events, landslides and flooding. Many parts of Churia experience intensive precipitation during the monsoon season, where areas within the Churia region can receive over 400mm within 24 hours (Figure 11). Each year flash flooding impacts the Churia Terai-Madhesh region of Nepal, with manifold impacts on the environment, economy and local livelihoods (cf. Section 2.1.5 for a more detailed description of floods).

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[52] Khadka et al. 2016
[53] PCTMCDB 2017
[54] World Bank 2012
[55] World Bank 2012

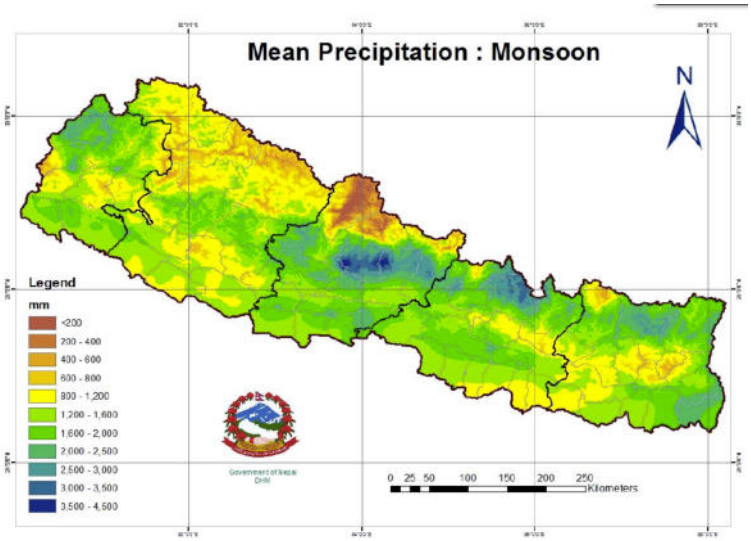

Figure 10: Mean precipitation during the monsoon season

Source: MoSTE 2015

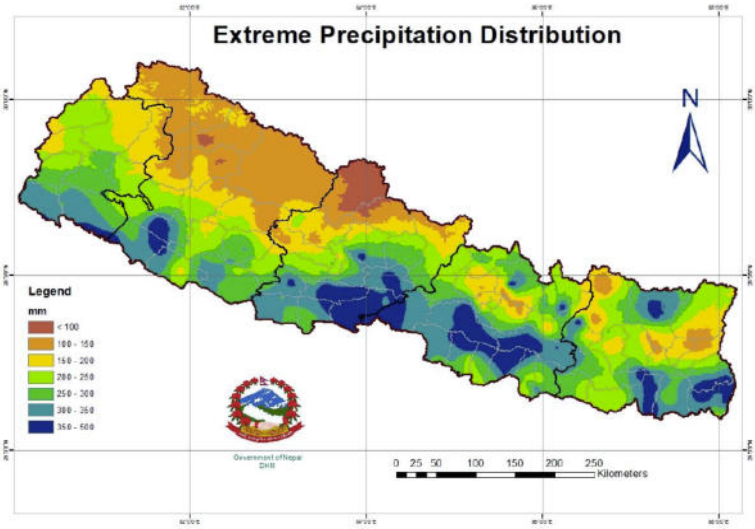

Figure 11: Extreme precipitation (maximum rainfall within 24 hours) distribution in Nepal

Source: MoSTE 2015

79. During the winter season (December to February), the Churia and Terai-Madhesh region experiences extremely limited precipitation, especially in the central and eastern areas where precipitation may be less than 40mm during the entire winter season (Figure 12). Future projections show that winters may become drier and monsoon seasons wetter, with some predictions expecting up to a threefold increase in monsoon rains. However, large uncertainties within precipitation models make clear precipitation estimates difficult to achieve. Uncertainties in precipitation and monsoon patterns, along with projected reduced

glacial runoff resulting from glacial recession, are expected to increase drought risk and occurrence. Although improved crop varieties and agricultural management practices are being implemented, the increasing population and water needs of inhabitants in the Churia and Tera-Madhesh region culminate in increased drought vulnerability, and with drought comes decreased crop productivity and overall nutrition and health.[56]

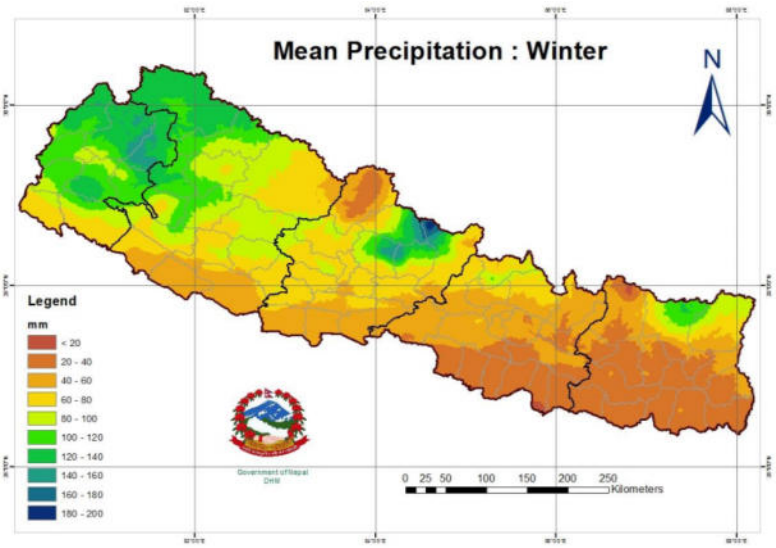

Figure 12: Mean precipitation variation in Nepal in winter

Source: MoSTE 2015

3.1.2 Biophysical zones, soils and geology

Biophysical Zones

80. Within each of the river systems in the BRCRN project there are four distinct bio-physical zones, with shared land use characteristics, land use changes and socio-economic activities (Figure 13):
    - Churia Hills (33% of project area)
    - Bhavar (18% of project area)
    - Dun Valleys (Inner-Terai; 3% of project area)
    - Terai (46% of project area).
81. The following sub-sections provide further information on soils, land use water, vegetation and biodiversity.

[56] MoHA 2015

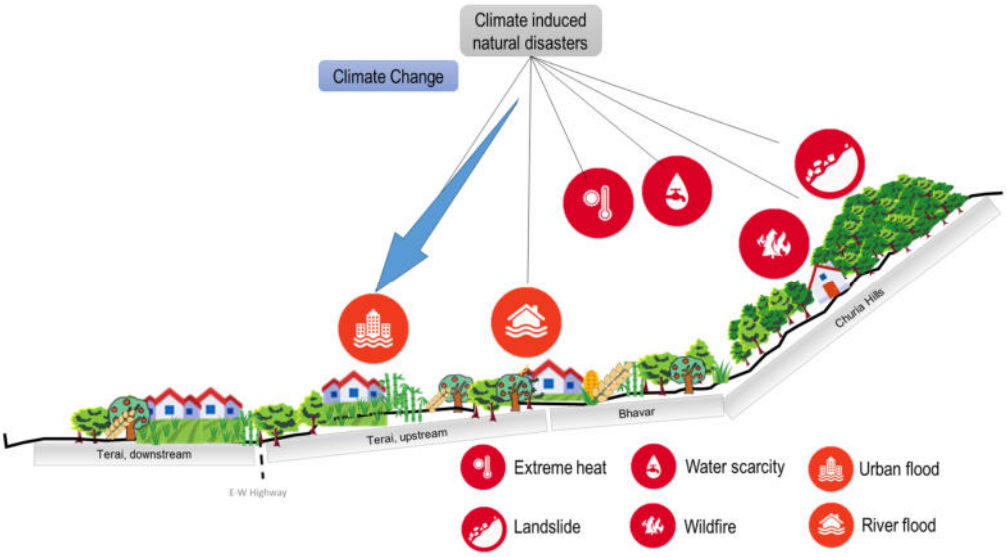

Figure 13: Schematic outline of physiographic intervention zones within a river system, and main climate-related hazards

Soils and Geology

82. Soil characteristics in the Churia valley vary between the Churia Hills, Dun Valley, Bhavar Region, and Terai Madesh. The Churia Hills are the youngest mountain range in the Himalayas and the soils originate from soft rock.[57] Mostly sandstone, mudstone and conglomerate are found in the region, with smaller quantities of shale, marl and clay-stone. The lower Churia Hills zone is composed mostly of fine-grained sediments (e.g. variegated mudstone, siltstone and shale), while the middle Churia Hills has thick beds of multi-storied sandstone and subordinate beds of mudstone. The gently sloping forest lands are full of Paheozems, which are dark soils rich in organic matter. On the other hand, loose boulder conglomerates and other coarse sediments characterize the upper Churia Hills. Regosols, weakly developed soils in unconsolidated areas found generally on eroding lands and gravelly areas, are common on the steep hills of upper Churia. The soils here are shallow, droughty soils with low surface-infiltration and percolation rates.[58] Soils of the Dun Valley, a depositional basin, are mostly composed of Gleysols. The main soils of the Churia Hills and Dun Valley regions are depicted in the Figure below.

[57] MoFSC 2014a
[58] Ibid.

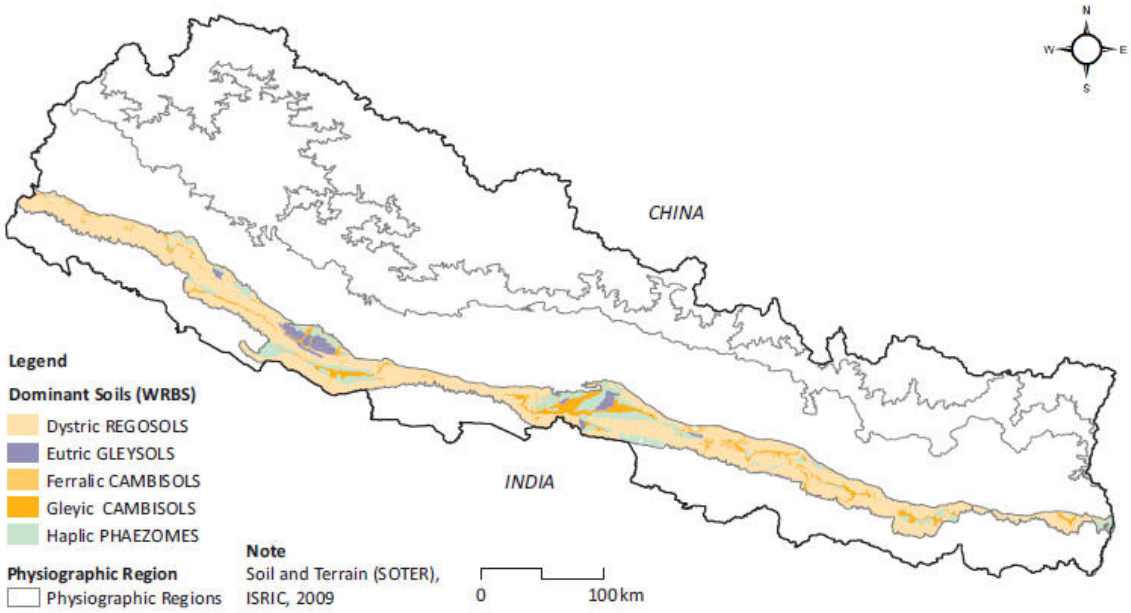

Figure 14: Distribution of main soil types in Churia Hill and Dunn Valley regions

Source: MoFSC 2014a

83. The Terai region soils are mostly alluvial deposits, which are unconsolidated materials deposited by rivers. The texture of alluvial deposits depends on its origins and can range from clay to sand. The Bhavar region consists mostly of coarse sand, gravels and boulders. The Terai region soils can be broadly classified into the three categories of Calcari Fuvisol, Gleysols and Phaeozems. [59] Calcari Fuvisols are found near rivers, while Gleysols are in areas where there is moisture near the surface and Phaeozems are found in the upper Terai and are characterized as loamy textured, with dark topsoil rich in organic matter, calcareous, and drought-prone.[60] The following Figure shows the distribution of different soil types throughout the Terai and Bhavar regions.

[59]Ibid.
[60]Ibid.

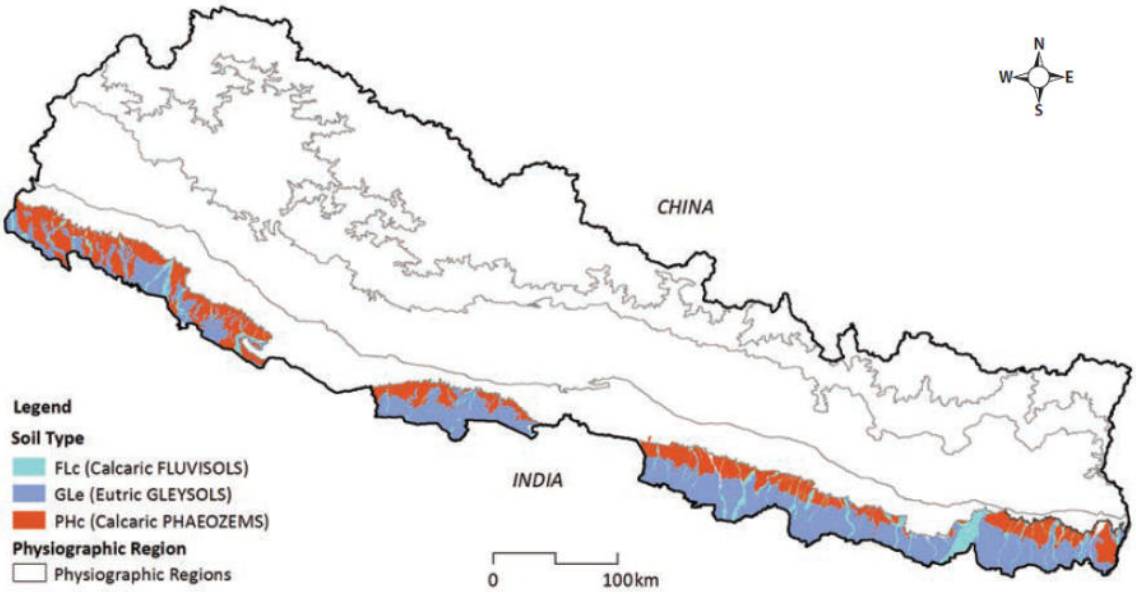

Figure 15: Distribution of main soil types in Bhavar and Terai regions

Source: MoFSC 2014b

3.1.3 Land use

84. Within the BRCRN project area, cultivated land covers around 390,000 ha, followed by forests with 227,276 ha (Figure 16). Roughly 50,000 ha is considered as degraded or marginal land. More than 35,000 ha of open riverbeds in these river systems underpin the dramatic changes, and loss of productive land due to sedimentation and widening of river beds.

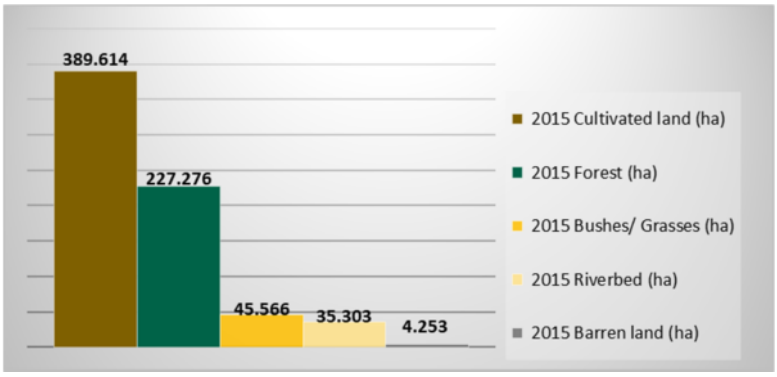

Figure 16. Total land use areas of the selected 26 river systems excluding settlement areas and water bodies in 2015

85. The following Table provides a summary of land use practices in each of the four BRCRN biophysical zones:

Table 3. Overview of the four main biophysical zones in the project area

Zone	Description of Terrain	Agriculture	Forests	Land Use and its Impact on Vulnerability
Churia Hills (33% of project area)	▪ Hilly terrain with steep slopes, typically located at higher altitudes. ▪ Made of coarse-grained, soft conglomerates that are very prone to erosion ▪ Communities are highly dependent on forests for their livelihoods (for subsistence and income) ▪ Within the Churia hills, forests play an essential role in preventing land erosion, with estimates showing that in the absence of forest cover, around 13% of the total Siwalik range would be converted into desert within a year.[61] Top soil loss from the mountainous regions has led to an estimated annual rate of 15-30cm riverbed rise in the Terai region, leading to increasing exposure and impact to floods, and damage to infrastructure (e.g. irrigation canals, dams/ hydropower sites), and land (e.g. erosion, reduced soil fertility). On average, soil loss in well managed forest areas is estimated to be about 10t/ha/year and in fragile areas 30t/ha/yr.[62] ▪ Main hazards exposed to: landslides, wildfires, water scarcity, extreme heat	▪ 13% cultivated land ▪ Majority of terrain unsuitable for agriculture, nonetheless many poor households cultivate on steep slopes for subsistence. ▪ Agricultural production is characterized by rain-fed, primarily low-yield fallow agriculture with different crops including upland rice, maize, vegetables and mustard, among other crops.[63] ▪ Many households have small-livestock, especially goats/sheep/rams, pigs, and some households have buffalos who are often raised for subsistence using traditional practices, including free-grazing in forested areas (contributing to forest degradation). Such systems have low-productivity. ▪ Erosion is a major challenge for agricultural activities, and many households apply unsuitable agricultural practices (i.e. do not apply soil or water conservation measures).	▪ 76% forest cover ▪ Majority of households use fuelwood for household energy needs. Forests provide not only fuelwood, but also fodder, forage, timber and non-timber forest products for forest-dependent households in the Churia. ▪ 75% of deforestation and forest degradation in the BRCRN area occurred in the Churia hills. ▪ Drivers of deforestation and forest degradation include encroachment, uncontrolled grazing, agricultural expansion, unsustainable harvesting of forest products.	▪ Deforestation and degradation as well as inappropriate agricultural (incl. livestock) practices increase the risk of wildfires and landslides in the Churia Hills. ▪ Such activities further increase sedimentation and erosion that reduce agricultural productivity in the Churia hills, and ultimately increase the vulnerability of downstream communities to flooding. ▪ Increased sedimentation and erosion will also contribute to declining agricultural productivity and increased land degradation, which could accelerate deforestation and forest degradation. ▪ Alarming trend of decreasing soil fertility due to low input (organic matter) farming practices

[61] MoPE 2000
[62] Ibid.
[63] MoFSC 2014

Zone	Description of Terrain	Agriculture	Forests	Land Use and its Impact on Vulnerability
Bhavar Zone (18% of project area)	▪ **A**n intermediate or transition zone between the Churia and Terai. ▪ This zone has its own distinct geo-morphology, and is characterized by the deposition of primarily rough sediments. ▪ The Bhavar region is an important zone for ground water recharge given its unique geological characteristics and soils. ▪ The Bhavar zone ischaracterized by the low availability of drinking and irrigation water ▪ Land use in the Bhavar region includes a mixture of forest and agriculture activities, ▪ Main hazards exposed to: flooding, landslides, wildfires, water scarcity and extreme heat. ▪	▪ 35% cultivated land, agricultural production is limited due to the unsteady supply of water, traditionally, the bhavar is mainly forest land and is thought to be relatively unsuitable for agricultural practices ▪ In the Bhavar region, surface water is declining due to the deposition of sediments on the river-beds. This limits agricultural production in the region. ▪ Many households have small-livestock, especially goats/sheep/rams, pigs, and some households have buffalos who are often raised for subsistence using traditional practices, including free-grazing in forested areas.	▪ 49% forest cover ▪ Majority of households use fuelwood for household energy needs. Forests provide not only fuelwood, but also fodder, forage, timber and non-timber forest products for forest-dependent households in the Bhavar region. ▪ Drivers of deforestation and forest degradation include encroachment, uncontrolled grazing, agricultural expansion, unsustainable harvesting of forest products.	▪ Deforestation and degradation increase the risk of wildfires and landslides in the Bhavar region, as well as increased sedimentation and erosion that reduce agricultural productivity in the Bhavar region. Such land use trends further increase the vulnerability of downstream communities to flooding through accelerated sedimentation and erosion. ▪ Gully erosion leads to significant loss of land ▪ Reduced vegetation cover (from deforestation and inappropriate agricultural practices) further limit ground water recharge, increasing the vulnerability of downstream communities to extreme heat and water scarcity.
Dun Valleys (3% of project area)	▪ The Dun valleys, also known as the ´inner Terai´, are valleys surrounded by the Churia hills. ▪ Among the most fertile and productive lands in Nepal with steady groundwater supply ▪ Settlements are often found in these valleys. ▪ Main hazards exposed to: wildfires, flooding, extreme heat, water scarcity and silt accumulation in farmlands	▪ 40% cultivated land ▪ Major areas for the production of staple foods such as paddy, cereals, pulses, and oilseeds ▪ Many households have small-livestock, especially goats/sheep/rams, pigs, and some households have buffalos who are often raised for subsistence using traditional practices, including free-grazing in forested areas.	▪ 37% forest cover ▪ Drivers of deforestation and forest degradation include encroachment, uncontrolled grazing, agricultural expansion, unsustainable harvesting of forest products.	▪ Deforestation within the Dun Valley, as well as in the Churia hills, increases the vulnerability of local communities and ecosystems to extreme flooding events. ▪ Deforestation and erosion in the Bhavar region further limits water infiltration/ groundwater recharge, increasing the vulner-

Zone	Description of Terrain	Agriculture	Forests	Land Use and its Impact on Vulnerability
				ability of communities and ecosystems to extreme heat and water scarcity.
Terai-Madhesh (46% of project area)	▪ The Terai-Madhesh are the low-lying plains that cover the south of the country. ▪ This region was created due to the deposition of fine sediments, and has a high suitability for agricultural activities. ▪ Cow dung is main source of energy in Terai, although some households still use fuelwood. ▪ The Terai is more heavily populated than the other three regions. Population growth occurs in the region, which puts increased pressure on agricultural lands and forests in the Terai, as well as in other bio-physical regions. ▪ Many households experience seasonal food and water insecurity. ▪ Declining soil fertility has been reported in the Terai, attributed to: soil erosion, organic matter depletion, acidification, forest degradation and marginal land, among other factors.[64] ▪ Main hazards exposed to: flooding, extreme heat, water scarcity	▪ 83% cultivated land ▪ The Terai is known as the ´*Rice bowl*´ of Nepal, where farmers in the Terai produce majority of the country´s grains (wheat, maize, rice, among other crops) ▪ 40% of agricultural land in Terai can be irrigated throughout the year. [65] ▪ Constraints in dry season are often water availability and soil fertility. ▪ Many households have small-livestock, especially goats/sheep/rams, pigs, and some households have buffalos who are often raised for subsistence using traditional practices, including free-grazing in forested areas ▪ Commercial livestock production often includes stall feeding, and attention to animal nutrition and feed. ▪ Commercial agricultural practices in the Terai increasingly use mechanization. ▪ Relatively low-adoption of soil and water conservation practices.	▪ Forest cover (3%) ▪ With limited forest resources, many people in the Terai are dependent on the Churia for forest products (fodder, NTFPs, timber), as they lack local alternatives. ▪ Many inhabitants of the Terai are considered ´distant forest users´ due to their reliance on the Churia forests. Distant users are associated with deforestation, as there is limited incentive for such communities to benefit from the sustainable management of these resources.	▪ Distant-forest users from the Terai contribute to deforestation and forest degradation upstream, with impacts described in the rows above. ▪ Inappropriate agricultural practices do not apply soil or water conservation practices that leave areas vulnerable to soil erosion, flooding, extreme heat and water-scarcity. ▪ Combined factors from upstream deforestation and forest degradation, as well as the continued use of practices contributing to soil degradation and water-scarcity will lead to further constraints in dry-season crop production in the Terai within the context of climate change.

[64] Shrestha et al. 2013
[65] http://ibn.gov.np/agriculture

3.1.4 Biodiversity and forests:

86. The project region is critical in terms of ecosystem and biodiversity. Of the 188 ecosystems of Nepal, 14 are found within the Churia hills and another 12 are founding within the Tarai Madhesh region. In terms of biodiversity, of the total 1,988 species of flora and fauna in Nepal, 1,308 are found within the Churia-Terai Madhesh landscape.[66] Flagship species, including tigers, elephants, rhinos and wild-buffalo, are also found within these habitats, as well as 321 or the Nepal's 493 endangered species of flora and fauna.[67]

Protected Areas

87. Compared to higher altitudes, the lower altitude areas of the Terai have disproportionately fewer protected areas, causing many of the large fauna, especially large mammals, to live in densely human-populated areas.[68]The inhabitants' close dependence on forests and environmental resources adds to the increasing risk of human-wildlife conflict.

88. Currently there are seven protected areas established in the entire Churia-Tarai Madhesh region in Nepal spanning a total of 5,886km^2. Eleven ecosystems still remain outside of these protected areas and call for protection.[69] In addition, the trans-boundary nature of mega-fauna species, as well as the ecosystem themselves, require ecosystem connectivity between critical habitats.Establishing corridors between habitats is not only essential for the long-term protection of many species, but is also considered a preventative step to limiting human wildlife conflicts.[70] This is especially important in the Terai landscape where human wildlife conflicts are reported to be increasing, with hundreds of tons of crops being damaged and occasionally human lives being lost.[71]

89. One protected areapartially overlaps[72] with one of the 26 BRCRN prioritized river systems (Adherei Khola, Baruwa Khola and Duar Khola River System): the Koshi Tappu Wilfdlife Reserve (Figure 17). The Wildlife Reserve was designated a Ramsar site in 1987, and is home to diverse wildlife including 485 species of birds, 31 species of mammals, among other flora and fauna.[73] While no direct project interventions are planned for the protected area buffer zone or core-intervention area, a biodiversity management framework has been developed to ensure the project causes no harm and promotes positive environmental impacts within the reserve (Section 9).

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[66] Ibid.
[67] Ibid.
[68] Acharya 2016
[69] PCTMCDB 2017
[70] World Bank 2016
[71] MoPE 2016
[72]In total, 31 ha of the wildlife reserve, and 471 ha of the bufferzone overlap with the project area.
[73]https://www.nepjol.info/index.php/INIT/article/view/2513

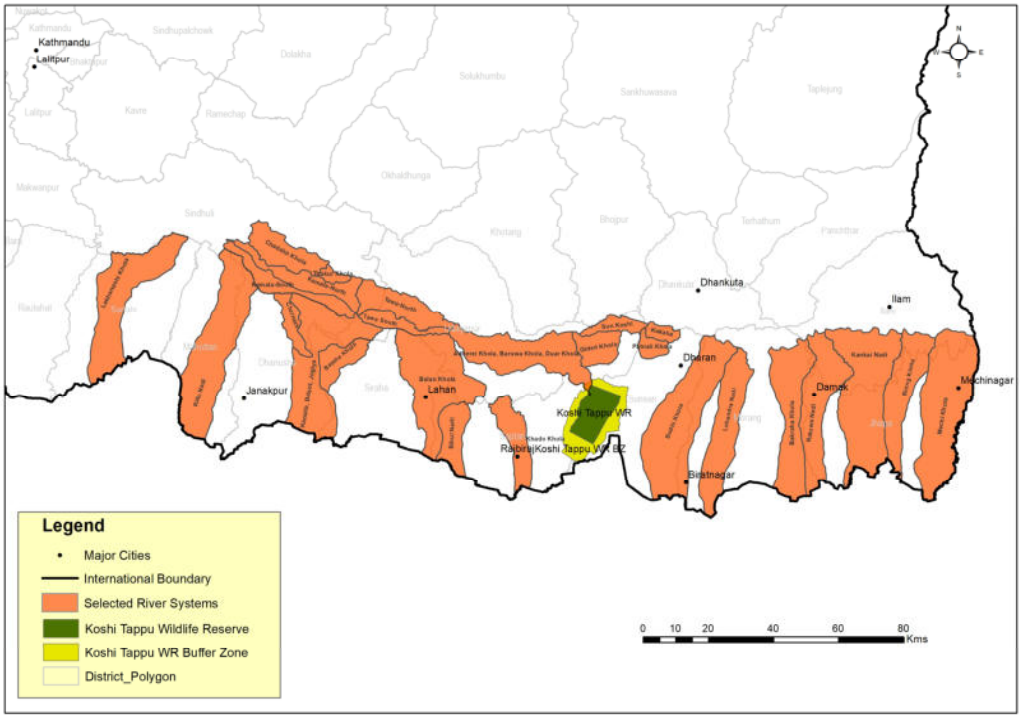

Figure 17: Overview of protected areas within the BRCRN project area.

Forest Resources and Biodiversity

90. Forests cover 32% of the project area, the majority of which are found in the Churia hills and Bhavar regions.[74]Nine types of forests (including Khair-Sissoo Forest, Sal Forest, Terai Mixed Hardwood Forest, Lower Mixed Broadleaf Forest and Pine Forest) are found within the Churia hills region and four types of forests (Sal Forest, Khair-Sissoo Forest, Sal-Terai Mixed Hardwood Forest and Terai Mixed Hardwood Forest) are found in the Terai-Madhesh and Bhavar regions.[75] A 2015 report on the State of Nepal's forests showed the Churia region to be home to 281 tree species, 186 shrub species and 322 species of herbaceous plants (including flowering plants and pteridophyte).[76] Non-timber forest products (NTFPs) found within this landscape include a total of 666 species of flora (240 trees, 144 shrubs, 187 herbs, 70 climbers, 22 ferns and 3 epiphytes) and 74 species of animal derivatives.[77]

91. When analysing the land use change and in particular the loss of forests within this project area for the assessment period of 2000 to 2015, the following findings and trends can be drawn:[78]

[74] DFRS/FRA 2014; DFRS/FRA 2015
[75] Ibid.
[76] Ibid.
[77] Ibid.
[78] Ibid.

- Forest area declined from 275,867 ha in 2000 to 271,340 ha in 2010 (-4,527 ha in total). This represents an annual deforestation rate of 0.16% for this 10-year period. This rate is coinciding with the deforestation rate derived for the national REDD+ process to establish the National Forest Reference Level (FRL) for the Churia region for the same assessment period;
- However, using the latest forest loss assessment during 2010 and 2015, a dramatic increase of deforestation can be perceived. Forest areas has decreased to 227,276 ha which represents an annual deforestation rate of 3.2%; over the whole historical assessment period of 15 years, the average deforestation rate is 1.2%;
- Based on the spatial analysis the following patterns of deforestation could be observed: 75% of this loss was located in the Churia hill zone, and 20% in the Bhavar zone; 54% of the forest loss was located on slopes ranging from 10-30°; 68% of the loss appeared in a distance of 0-0.5 km to roads; 62% of this loss was located in distances of 2-5 km from the grid; and almost 100% of the forest loss appeared in a distance of 2-5 km from settlements.

92. Direct, or proximate, drivers of deforestation within the Churia region include the over-utilization and exploitation of resources (fuelwood collection, uncontrolled grazing, NTFP collection, illegal logging), agricultural expansion and degradation, development or expansion of infrastructure and the need for building materials and national land use change and biophysical conditions (Figure 18Figure 18:).[79] Underlying drivers of deforestation arise from the interlinkage of economic/financial factors, policy, institutional and governance-related factors, socio-political factors, demographic factors and technological factors.[80] A more detailed description of the specific drivers and underlying causes is available in the Feasibility study.

[79] UN-REDD 2014; Community consultations for the BRCRN project
[80] Ibid.

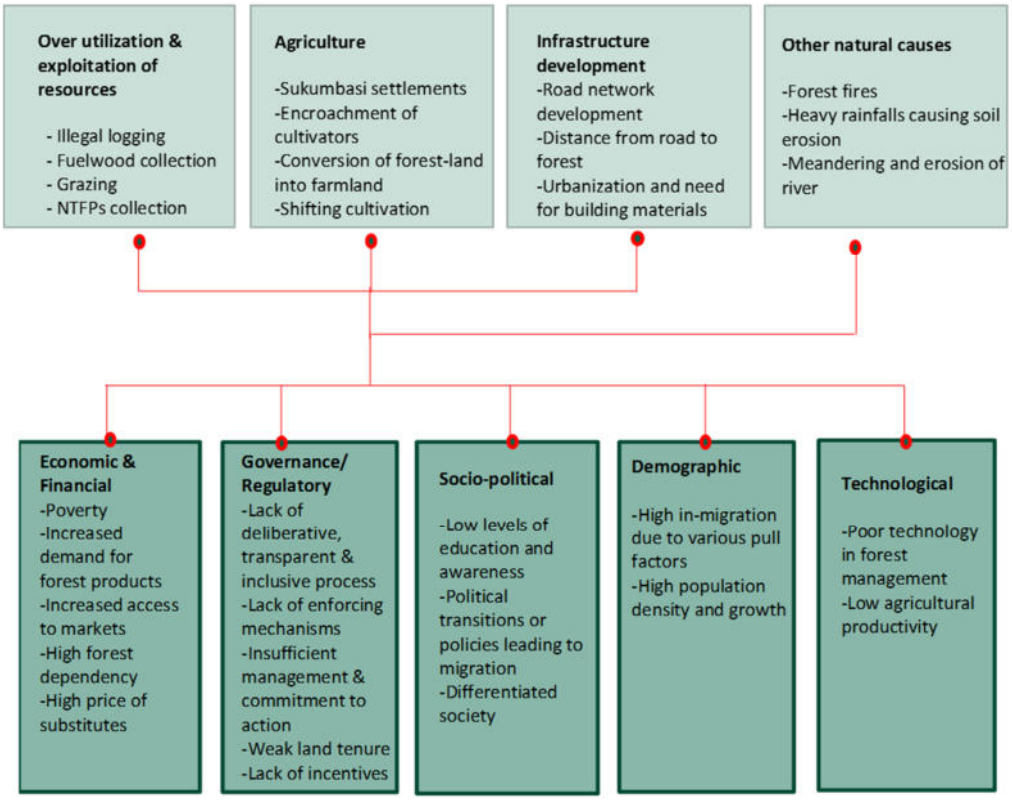

Figure 18: Proximate (top row) and underlying drivers (bottom row) of land use change in the Churia region

Source: Adapted from UN-REDD 2014

3.1.5 Water resources

Surface Water

93. The Churia region is composed of a multitude of river systems. A total of 164 river systems have been identified to cross through the entire Churia region in Nepal. Of these, 27 rivers originate from the Himalayas and flow throughout the year, 76 originate from the Middle Hills and flow throughout the year, 48 originate from the Churia region and flow only during the rainy season, and the remaining 13 originate from the Terai-Madhesh region and flow throughout the year.[81]

94. The impacts of climate change on Nepal water sources are difficult to predict and are under debate. Glacier melt is an essential renewable water source that feeds into all of the country's rivers. An increase in temperature will lead to glacier retreat and some estimates show

[81] PCTMCDB 2017

that around 20% of glacier mass could be lost with just a 1˚C increase in temperature.[82] Higher winter temperatures also mean that more precipitation will come in the form of rain, rather than snow, further accelerating deglaciation and contributing to earlier snowmelt and increased rate of glacial melt.[83] This, along with the reduction in both glacier cover and winter snows will lead to reduced snowmelt during spring and summer, posing a serious threat to water security during the dry season. In addition, higher rates of glacial melt increase the risk of Glacier Lake Outburst Floods.[84] Although in the short term the increased rate of glacial melt will increase glacier-fed river flows, in the long term, this will decrease Nepal's water supply, making the country's irrigated lands vulnerable and effecting downstream livelihoods and ecosystems.

95. Water resources are under stress in the project area due to climate change and unsustainable land use practices. Issues faced in the mid-hill and Churia region regions include:[85]
    - Deforestation and forest degradation, vegetation loss
    - Unsustainable/ unsuitable land use practices
    - Soil erosion and land degradation
    - Land abandonment and encroachment leading to accelerated runoff
    - Spatial and temporal variability in precipitation
    - Deteriorating water quality and water-related diseases
    - Limited meteorological data and monitoring
    - Exposure to water-related natural disasters (flooding, landslides, droughts).
96. Flooding and landslides are a major challenge for Nepal during the monsoon period, especially in the Churia region of Nepal (Figure 19). In 2017, flooding in Nepal from January to September resulted in the destruction of 43,400 houses, 191,700 partially damaged houses, the displacement of 20,900 families, and the death of at least 160 people (Figure 20).[86] In addition, the loss to agriculture production due to floods in 2017 was estimated at over US$5.74 million, which has a major impact only rural livelihoods and food security.[87]

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[82]

[83]

[84]

[85] Bricket et al. 2014; PCTMCDB 2017

[86] UN Office of the Resident Coordinator Nepal 2017

[87] Ibid.

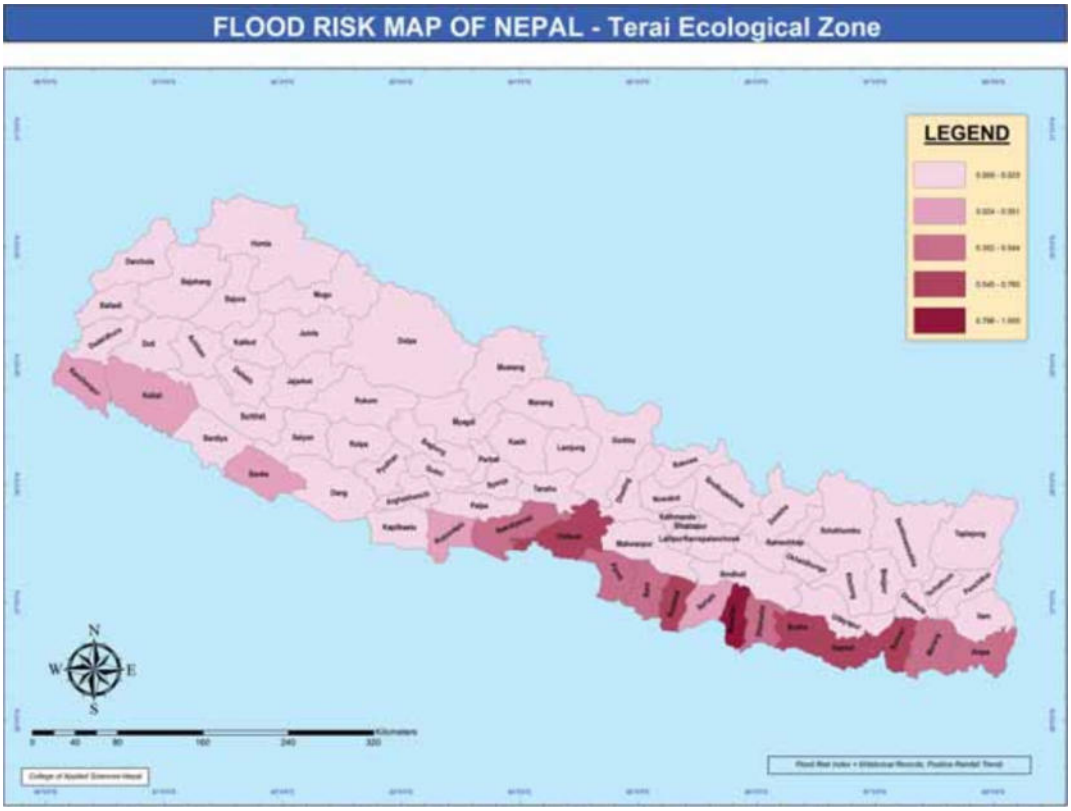

Figure 19: Map demonstrating areas at high risk for floods

Source: MoPE 2010a

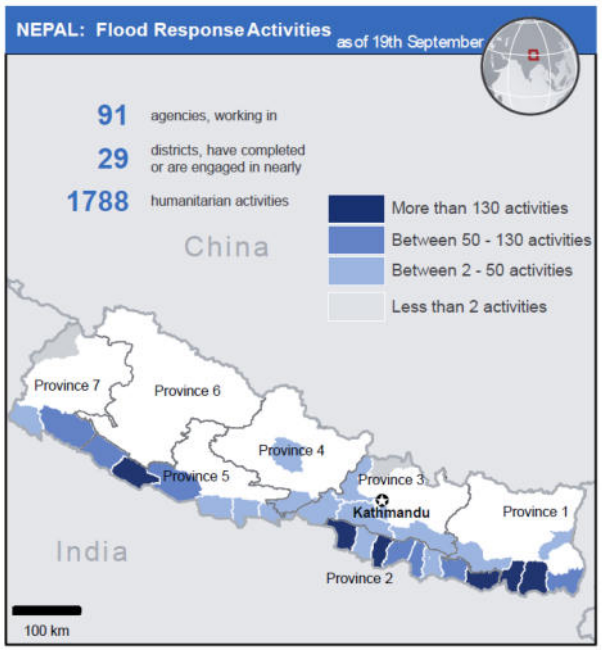

Figure 20: Overview of flood response activities in Nepal as of September 19, 2017

Source: United Nations Office of the Resident Coordinator Nepal 2017

97. Within the project area one river system originates from the Himalayas, five from the mid-mountains and the remaining originate in the Churia hills. Within the 26 vulnerable river systems, 96,000 ha are considered susceptible to flooding, where at least 700,000 people are settled (Figure 21). Around 150,000 ha are considered as *´high´* to *´medium´* risk areas in terms of slope instability that is susceptible to landslides and erosion, with over 94,000 people settled in such areas. Increasing exposure to extreme precipitation events with climate change, further exacerbated by unsustainable land management and the lack of sufficient climate-change adaptation measures, will continue to negatively impact the region's economy, environment and livelihoods of the people not only living within the region, but will also have a transboundary impact in neighboring India.

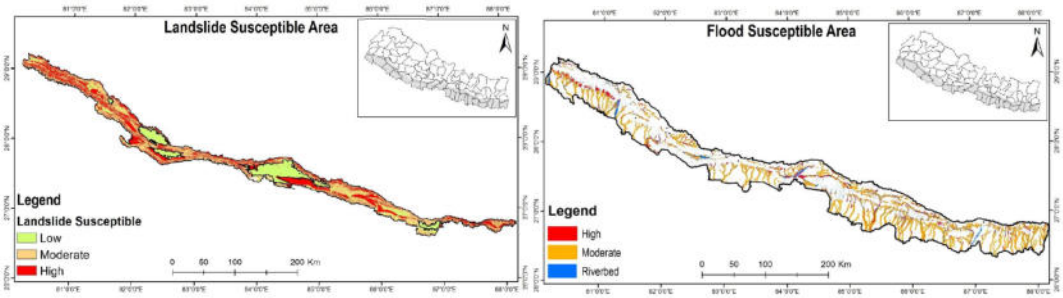

Figure 21: Overview of a) landslide susceptible areas and b) flood susceptible areas in the Churia region of Nepal

Source: PCTMCDB 2017

Groundwater

98. Especially in the Terai-Madhesh region, groundwater remains one of the most important resources, contributing significantly to household consumption and irrigation.[88] The groundwater present in the Terai-Madhesh region comes from the infiltration of rainwater in the Churia hills and Bhavar zones. In turn, the rise and fall of groundwater levels in the Terai-Madhesh is determined by the Churia Hills and Bhavar regional rainfall levels and management practices.

99. This close relationship between downstream groundwater availability and upstream rainwater infiltration, precipitation, ground absorption power and aquifer quality, stresses the importance of upstream-downstream integrated management systems. The soft soils of the Bhavar region allow for rapid recharging of groundwater from rainfall. However, as forests are degraded and cleared and infrastructure construction continues in the Bhavar region, the natural recharge capacity decreases.

[88] PCTMCDB 2017

100. Groundwater recharge is also not uniform from east to west due to differing rainfall patterns and soil properties. Seasonal differences in precipitation also have a strong impact on groundwater recharge, where recharge rates drastically decline during the dry season.

101. Although Nepal is rich in water resources, poor and inadequate water management systems have led to reduced water quality.[89]Local reports reveal a decreasing trend of groundwater levels across the Bhavar and mid-Terai-Madhesh regions, affected by reduced groundwater recharging, increasing population and intensifying water extraction activities.[90]Current challenges with water stress and security will only be exacerbated under the effects of climate change, requiring adaptation strategies for the water resources.

3.2 Socio-economic conditions

Poverty

102. Nepal is a low-income economy with a per capita income of $766.91 In 2014, Nepal achieved a score of 0.116 according to the multidimensional poverty index[92] (MPI), with an estimated 26.9% of the country´s population affected by multidimensional poverty, equivalent to around 7.5 million people.[93] Focusing on income-related poverty, approximately 15% of the population is considered to be living below the poverty line of $1.99 per day.[94]

103. The country has experienced rapid development in the last two decades and the government has made substantial progress in working toward its goal to graduate to a lower-middle-income country by 2022. The government is committed to tackling poverty, and has been committed to the implementation of measures to meet the Sustainable Development Goals (SDGs), in addition to national targets. Nepal has made large strides in addressing poverty at the national level; the country´s Human Development Index (HDI)[95] value has improved from 0.476 to 0.558 from 2005 to 2015.[96]

104. While Nepal has made substantial efforts to advance gender equality and social inclusion in the country, it is still a major challenge for the country to eradicate poverty and promote equality and inclusive development. Women´s HDI values (0.538) continue to lag behind men's (0.582)[97]. Janajatis (0.482), Dalits (0.434), and Muslims (0.422) experienced lower HDI values in comparison to other high castes such as Brahmans (0.538) and Chhetris (0.538).[98]

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[89] World Bank 2012
[90] Ibid.
[91] MoF 2016
[92] MPI considers three core dimensions as a measure of poverty: i) health (nutrition, child mortality), ii) education (years of schooling, children enrolled) and iii) standard of living (e.g. cooking fuel, toilet, water, electricity, floor, assets). Additional information can be found at: http://hdr.undp.org/en/content/multidimensional-poverty-index-mpi
[93]UNDP 2016
[94]Ibid.
[95]HDI takes into account three dimensions to provide an estimation of to assess the development of a country. It is based on three dimensions: long and healthy life (life expectancy at birth, knowledge (expected ears of schooling, mean years of schooling), a decent standard of living (GINI per capita). Additional information can be found at: http://hdr.undp.org/en/content/human-development-index-hdi
[96] UNDP 2014
[97] UNDP 2016
[98] UNDP 2014; UNDP 2016

While the general trend of inequality is decreasing in the country, it remains a major challenge that will be continually addressed in the coming years.

105. The livelihoods of the people living in the Churia Terai-Madhesh region of Nepal are heavily dependent on natural resources. Many households depend on subsistence and commercial agriculture for their livelihoods, and many households directly depend on forests for a variety of resources including fuelwood, timber, fodder and other NTFPs.

Agricultural Land

106. The agricultural sector in Nepal was responsible for approximately one third of the country´s gross domestic product (GDP) in 2016.[99] Half of the agricultural GDP comes from crop production, followed by livestock (25%), vegetable production (10%), forest products (8%), and other products (7%).[100] Farming systems in the project area are characterized by integrated crop and livestock subsistence farming. Livestock production includes goats (50% of livestock population in Nepal), cattle (29%), buffalo (14%) and other species (7%).[101] Production of cash crops (especially maize, barley, sugarcane and vegetables) occur, especially in the Terai region.

107. Agriculture is the main source of livelihoods in this region, where 74% of the female labor force and 51% of the male labor force were primarily employed in the sector (62% average).[102] The proportion of women´s employment in the agricultural sector has grown since 2011, due to the closing of other industries that employed women (especially carpet and garment industry), and due to the migration of male household members to urban centers or to other countries for labor.[103] This trend is referred to as the ´feminization´ of agriculture, which represents a major barrier to women as the sector offers ´low-return employment´, and is relatively labor intensive which has helped contribute to growing time-poverty for women. The abandonment of agricultural land has also grown as a result, where communities are no longer able to manage the same amount of agricultural land as before due to migration and related trends.

108. The following Table 4 provides a summary of common agricultural land use and challenges for the sector within the BRCRN project area.

109. Effects of climate change are projected to have significant impacts on farming systems, with planting and harvesting seasons slowly shifting, crop yields decreasing, water availability and rainfall patters changing, pests and diseases in both crops and livestock appearing, and the occurrence of natural disasters increasing.[104]

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[99] World Bank Indicator Database; https://data.worldbank.org/indicator
[100] Adhikary 2017
[101] CBS 2014 in Adhikary 2017
[102] UN Women 2016
[103] Ibid.
[104] IFAD 2010; World Bank 2011; World Bank Think Hazard Tool http://thinkhazard.org/en/

Table 4: Overview of agricultural activities within the project area, and promoted climate-resilient practices

	Churia Hills	Bhavar	Dun Valley and Terai Plains
Agricultural Land Use	▪ 13% cultivated land, majority of terrain unsuitable for agriculture ▪ Rain-fed low-yield fallow agriculture, with different crops including maize, upland rice, vegetables and mustard, among other crops[105] ▪ Some production in upland terraces. ▪ Some cultivation also occurs on sloping land that is unsuitable for agriculture leading to accelerated erosion and sedimentation. ▪ Low-adoption of soil and water conservation practices ▪ Inappropriate agricultural practices accelerate erosion and sedimentation, which lead to productivity losses and increase the vulnerability of down steam communities to climate change	▪ 35% cultivated land ▪ Maize, millet, grains, potato, ginger, cardamom, and temperate fruits, particularly citrus, are the main crops grown. ▪ Agricultural production is limited due to unsteady supply of water (primarily rain-fed), and increasing soil degradation. ▪ Soil fertility declining due to soil erosion, organic matter depletion, acidification, forest degradation and cultivation on marginal land. ▪ Surface water availability declining due to deposition of boulders and sediments on riverbeds. ▪ Low-adoption of soil and water conservation practices. ▪ Inappropriate agricultural practices accelerate erosion and sedimentation, which lead to productivity losses and increase the vulnerability of down steam communities to climate change.	▪ 40% of Dun Valley and 83% of Terai cultivated within BRCRN area ▪ Rice bowl of Nepal, is the center of grain production in Nepal, and a key contributing area to the agricultural GDP of Nepal. ▪ Highly fertile soils allow for the cultivation of rice, wheat, chickpeas, lentil, oilseeds, sugarcane, among other crops. . Lentil and mustard are the main crops cultivated in the winter season[8] and a key income source in the Terai region, along with sugarcane. ▪ Constraints in dry season are water availability and soil fertility. Declining soil fertility is attributed to: soil erosion, organic matter depletion, acidification, forest degradation and cultivation on marginal land among other factors.[106] ▪ 40% of agriculture in the Terai can be irrigated throughout the year ▪ Commercial agricultural practices in the Terai increasingly use mechanization ▪ Low-adoption of soil and water conservation practices
Livestock	▪ Many households have small livestock (goats, sheep, rams or pigs), some families have buffalos. Majority of production is for household sub-	▪ Many households have small livestock (goats, sheep, rams or pigs), some families have buffalos. Majority of production is for household sub-	▪ Many households have small livestock (goats, sheep, rams or pigs), some families have buffalos. Majority of production is for household subsist-

[105]MoFSC 2014
[106]Shrestha et al. 2013

	Churia Hills	Bhavar	Dun Valley and Terai Plains
	sistence using low-yield traditional practices, including free-grazing in forested areas (contributing to forest degradation and erosion)	sistence using low-yield traditional practices, including free-grazing in forested areas (contributing to forest degradation and erosion)	ence using low-yield traditional practices, including free-grazing in forested areas (contributing to forest degradation and erosion) ▪ Some commercial production occurs that includes stall feeding and attention to animal nutrition and feed.
Climate-induced hazards	▪ Landslides, wildfires, water-scarcity, extreme heat	▪ Flooding, landslides, wildfires, water scarcity and extreme heat	▪ Wildfires, flooding, extreme heat, water scarcity, silt accumulation on agricultural land
Focus of climate resilient agriculture practices within the BRCRN project	▪ Green-manure/ cover-crops ▪ Mulching ▪ Composting (in areas with severe nutrient deficiency) ▪ Terracing ▪ Contour bunds ▪ Rainwater harvesting ▪ Conservation agriculture (maize) ▪ Agroforestry – shade cropping and intercropping ▪ Improved livestock management	▪ Green-manure/ cover-crops ▪ Mulching ▪ Composting (in areas with severe nutrient deficiency) ▪ Terracing ▪ Contour bunds ▪ Rainwater harvesting ▪ Intercropping ▪ Conservation agriculture (maize, wheat) ▪ Agroforestry – alley cropping, shade cropping and intercropping ▪ Improved livestock management	▪ Green-manure/ cover-crops ▪ Mulching ▪ Composting (in areas with severe nutrient deficiency) ▪ Rainwater harvesting ▪ Intercropping, relay-cropping ▪ Conservation agriculture (maize, wheat) ▪ Agroforestry – alley cropping, shade cropping and intercropping ▪ Improved livestock management

Forests

110. Inhabitants of the BRCRN project area are heavily dependent on forests for diverse products and socio-cultural services. Forests provide communities with timber for construction, fuelwood, livestock fodder, along with other various NTFPs. Many poor households sell firewood and other forest products in order to supplement their income from other sources for meeting their subsistence requirements – thus serving as a safety net for many families. Forests further serve as an area for recreation and eco-tourism (e.g. picnic spots, walking trails). Many communities, especially indigenous communities, have a strong cultural link to the natural environment.

111. This dependence on natural resources makes these populations highly vulnerable to the effects of climate change, especially considering the exposure of such communities to climate-induced natural disasters including floods, landslides and droughts. Such hazards are expected to increase in frequency and impact due to the catalyzing role of unsustainable natural resource management compounded by climate change.

112. Despite being located primarily in the Churia hills and Bhavar regions, these forests are also used by mid- and distant users from the Terai region – given the lack of forest resources in the Terai region and communities´ continued resilience on forest resources for their livelihoods.[107]

Land Tenure

113. Land rights and land tenure are a politically sensitive agenda in Nepal. There is an issue of access to land in rural areas.

114. At present, all land in Nepal is considered as the property of the state. But before 1950 there were two types of land tenure systems namely- Raikar as the land owned by the state, and Kipat as the land owned by certain ethnic communities.[108] After 1950, the Raikar land was allocated to individuals with all rights from use to sell the land, however, the owner of such land had to pay taxes to the government. The Raikar land tenure was further divided into four categories with specific features of tenure arrangements. After 1964 most of the customary land tenure systems have been abolished. Some of the remaining tenures were abolished during systematic and compulsory cadastral surveying and preparation of basic land records or land register. The present land tenure systems are as follows (Figure 22):

- Private land with absolute ownership- where land can be hold by the owner or may lease or mortgage or sell.
- Public and government- where the land belongs to the government but is used by public or community, but the government land is handled by itself.
- Trust land or Guthi land- land allocated to the trust or Guthis.

[107] Satyal Pravat and Humphreys 2013
[108] Regmi 1978

Land tenure type	Land tenure system					
	Registered (Statutory)		Religious	Customary	Non-registered	
	Raikar	Private	Does not exist	Does not exist	Non-formal	Socially accepted Legally recognized Unregistered
	State	Government			Informal	Socially accepted Legally not recognized Unregistered
		Public				
	Guthi	4 types (Guthi, Birta, Jagir, Raiya)			Encroachment	Socially not accepted Legally not recognized Unregistered

Figure 22: Current land tenure system in Nepal

Source: Dahal 2018

Table 5: Land tenure categories and their features

Categories of land tenure	Special features
Raikar- state ownership	
▪ Guthi	Government granted land to certain communities for religious and social uses or to charitable institutions.
▪ Birta	During Rana and Saha regime, government granted land to their loyal servicemen such as upper class armies, priest, teachers and other individual those having remarkable achievements.
▪ Jagir	Government granted land to their servicemen instead of paying them cash salary
▪ Rajya	The land given to the defeated rulers in the battle during the unification of the country with aim to ensure that the defeated rulers will extend support to the state.
Kipat Communal ownership	Under this land tenure, certain areas of land were owned by ethnic communities mainly Limbu in the east of Nepal. There is no authority of the state over such land. This was abolished by the second land act amendment of 1966 which required registration of land.
Khaikar	Land registered under the name of a person and divided and cultivated by other individuals by paying the tax to the owner. This system was ended when cultivators became owners of the land with full tenancy rights.
Rakam	This is a system of land tenure where government assigned land as jagir and guthi under Raikar categories and given to cultivators providing unpaid labor to government on a compulsory basis to meet government requirement.

Source: Dahal 2018

Agricultural land

115. If we compare the economy and land tenure situation with agriculture sector, there is only 21 percent of the land under farming, where approximately 66 percent of the population

are involved, and majority of them are functionally landless.[109] About 3 percent of the owners control about 15 percent of the total cultivated lands.[110] The absentee landlordism and land abandonment have been the result of increasing number of youth migration, declining agricultural productivity and prevalence of high unemployment and underemployment at local level.[111] This has also resulted in the encroachment of forest land (0.1 million) in Terai.

116. There is no hard and fast rule in sharing benefits between landowner and tenant of share cropped lands. In some places, they share crop yield in fifty-fifty basis, while in some cases, it is 40% and 60% sharing mechanisms between landowner and tenant based on mutual agreement between the parties respectively. Basically, the benefit sharing arrangements are also guided by the contribution of major production inputs by the parties. Farmers in Nepal have traditionally integrated forestry and agricultural practices on their registered land, and have done so for generations for income and employment generation and livelihood improvement. Farmers are interested to plant trees only on land which is legally registered in the name of cultivator and their family members as private agricultural land. Small forest plots on the edges of farm lands have provided fuel wood, timber and fodder, and the standing trees help in conserving biodiversity, controlling soil erosion and sequestrating carbon. Private forest covers an area of about 54,900 ha and MOFE is targeting 200,000 ha private forest covers by the year 2025.[112]

117. Tree ownership and land holdings are closely correlated with larger holdings practice extensive tree farming and fruit gardening for making profit, whereas small holders have hesitation in growing trees due to the shading effects of trees on understory crops. Tenants pay their rents in grain or cash. There is no provision to pay rent with trees or tree products. Therefore, they do not like to plant trees in rented lands and shared cropped lands. There are no rules in Nepali law for dealing with the adverse effect of the tree shade from one farmer's fields on his neighbor’s crops. This problem is now becoming the cause of conflict between neighboring farmers. Landowners face certain difficulties in turning their lands over to tenant farmers. The lack of clarity and frequent changes in the land laws enacted during the past few decades (particularly land reform) have created a situation of insecurity and mistrust between land owners and tenants. This coupled with labor scarcity in villages has led to increased private tree farming rather than agroforestry practices. In rural areas of Nepal, there are some lands not having land ownership certificate but claim as private land. Such lands are not planted with trees due to the land and tree tenure problems. There is no policy provision for growing fruit trees and some other cash crops in community forests and other national forests, and community level government lands. Dual ownership of trees in resettled areas, and conflict between forest rules and regulations and Local government act in paying tax of tree products and other forest resources have created major problem in land use and management.

Forest tenure

[109] Kanel 2010
[110] Pandit and Bevilacqua 2011; Kanel 2010
[111] Pandit and Kumar 2010
[112] MoFSC 2016

118. Forest tenure is divided into public and private forests (Table 6). The forest management system under public tenure category is also diversified. The table below presents an overview of the various tenure categories of forest management and their status.

Table 6: Forest areas (in ha) 2004 to 2015 under various forest tenure regimes

	2004	2008	2010	2015	%
National forests					
Government forests				3,480,000	57.0
Community forests	1,153,848	1,229,669	1,381,736	1,898,917	31.1
Leasehold forests	1,677	6,483	8,014	42,835	0.7
Collaborative forests	6,670	3,944	22,929	61,709	1.0
Protected forests				416,675	6.8
Buffer zone CF				198,550	3.3
Private forest				**2056**	**0.03**
Total				**5,800,000**	**100**

Source: *DoF 2015*

119. **Government Managed Forests:** By and large, government forests over which local people have limited rights are distant from settlements. More than two thirds of the total forest area (85%) is still managed by Department of Forest as national forests. Of this, 61% is managed by government and the rest fall under community and leasehold forest management regimes. Of the government managed forests, almost 10% has been traditionally managed by local people and de facto, local people have continued to access over these forest resources. However, the Department of Forests as mentioned above is the caretaker and manager of these forests.

120. The management objectives are oriented towards protection and extraction of timber, whereas NTFPs are often less focused on within the management plan. As in most other parts of Nepal, due to the remote location of these forests and shortage of adequate tools at its disposal, the DOF has not been able to successfully manage and protect these forests and therefore many parts of these forests are degraded and turn into abandoned land. So far, the main work of the District Forest Office (DFO), has been the issuance of licenses to private contractors for timber cutting and for NTFP collection. The licenses issued by the DFO for timber cutting and NTFP collection are available in the respective district, but their data at national level has not been integrated.

121. **Community forestry:** A part of the national forests is allocated to the local forest user groups (FUG) as community forestry. Community forestry is the largest community-based tenure regime in Nepal. Based on the Forest Act 1993, local people form a community forest user group (CFUG) and request the District Forest Office to hand over an identified patch of forest as community forest. Initially community forestry was initiated to restore the degraded middle hills and to supply basic forest products to rural people. As of September 2015, 18,961 FUGs have been established managing around 1.89 million ha of forest which is 31% of Nepal´s forests. The rights CFUGs enjoy are mainly operational (access and use); and collective choice (management and exclusion). Since the CFUGs do not have alienation rights, security of their tenure is an issue. Though there is no defined period or legal guarantee of continuity, the management plans are to be renewed within a five to 10 years' period and are renewable indefinitely.

122. Despite insecurity of tenure, community forestry has significantly contributed to the protection of forests in the middle hills of Nepal.[113] Most of the CFUGs are able to manage forests and generate a group fund. Such funds are being used for local community development activities such as school building construction, road and trail maintenance and construction; provide irrigation facilities, constructing community buildings, etc.[114] CFUGs have developed policies to support poor and disadvantaged members in a community in a variety of ways. For example: special preferential quota for membership of the executive committee and benefit sharing for Dalits and poor, obligatory 50% women participation in all executive committee, and providing funds to support income generating activities. In some cases, CFUGs have funded poor students for their education and health.

123. **Leasehold Forests:** The government allocates patches of forest land for 40 years lease to a group of ten households those identified as poor. These group will protect, manage, develop and restore forest, and use products from the forestland. This specifically targets the poorest among the poor within the community with aim to improve livelihoods and eventually to alleviate the poverty of those identified poor households living adjacent to degraded forests. Despite its limited coverage, leasehold forestry has become popular amongst poor households because it has helped to improve forest condition and contributed to the livelihoods of the members. However, due to procedural complexities and limited ability of leasehold groups to access financial and technical assistance from the involved organizations the progress in terms of scaling up of this model has so far been relatively slow compared to the expansion of community forestry. Furthermore, the progress is constrained as most of the forests allocated to leasehold groups are degraded and demand intensive and costly restoration efforts.

124. **Collaborative forestry:** After the revision of the Forest Policy in 2000, the government of Nepal developed a new regime under community based forest tenure specifically to manage large block forest in the Terai region, calling it collaborative forestry. This production model includes a benefit sharing scheme between the District Forest Office (DFO), local government (District Development Committee) and local forest users. Unlike community forestry, the rights of users are limited as only the 50 % of benefits from timber harvesting and sale will go to community group and the decisions are collectively made by the collaborators. The key objectives of collaborative forestry are to meet local demand of users and demand for commercial use of forest products, and to reduce poverty by creating employment while enhancing biodiversity. Local residents living within 5 km from the forest are considered as primary users of collaborative forestry. Collaborative forestry also follows the principles of participatory forest management and has been trying to maintain equity by providing preferential treatment to poor households (discounted price on timber purchase etc.), and encouraging women to participate in decision making.

125. **Private forestry:** The scale of private forests in Nepal is insignificant so far, making up only 0.01% of total forest area, but slowly people are being encouraged toward establishing registered private forests as per Forest Act 1993. Some have started doing agro forestry within

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[113]Kanel and Dahal 2008

[114]Dahal and Chapagain 2008

their private agriculture land or renting other people's land for private forestry with an arrangement of having tree tenure. In any case, private forests provide direct economic benefits to the individual as 100% benefit goes to the private owner. These days' farmers with abandoned agricultural land are shifting their priority from agriculture farming to tree farming due to a shortage of labor for farming and better income from trees.[115] However, there are some legal restrictions on growing and selling certain species on private land, and also VAT is imposed on commercial sale of the forest products. Registration of private forestry is a legal requirement to have rights to harvest timber and to sell timber commercially. The complicated process of private forest registration at District Forest Office at times demotivates private landholders from growing forest trees in their farm land. Nevertheless, increasing interest from people indicates that private forests are perceived to contribute to livelihoods and income through employment generation and sale of forest products. In addition, private forests could help in maintaining local environmental conditions and reducing pressure on native forests.

3.3 Potential future changes foreseen as a result of the planned activities

126. The overarching future change expected from this project is the reduced climate vulnerability of forest-dependent rural communities throughout the Churia region. The majority of the proposed activities are cross-cutting in nature, with adaptation and mitigation benefits, supporting both climate-resilient and low-emission development pathways.

127. The project aims to:

- Increase awareness of risks from climate change and unsustainable natural resource management in the project area, as well as risk-reduction measures and climate-resilient SNRM;
- Build the capacities of local and provincial governments to effectively carry out climate-resilient landuse planning and management, and support the mainstreaming of such topics into provincial and local strategies and plans;
- Develop at least 10 courses/ modules for extension services on climate-resilient land use practices, integrating in local and indigenous knowledge, experiences from piloted projects in Nepal, as well as international best practices that are well adapted for the project area
- Strengthen policies for climate responsive planning and development, through the development of3 climate-resilient provincial strategies and 26 action plans that will indirectly benefit all 3.2 million people living within the project area;
- Increase the adaptive capacities of members of 750 community-based organizations (including at least200,000 households and 960,000 people), through trainings on climate-risks and climate-resilient land use and through technical support to implement such measures;

[115] Gimlour 2016

- Implement climate-resilient agriculture practices on at least 60,965 ha of agricultural land to enhance land productivity and food security, reduce soil erosion, sedimentation and land degradation, and will enhance soil carbon;
- Restore at least 206,227 ha of critical forest, wetland and grassland ecosystems;
- Support the adoption of soil and water conservation practices to reduce erosion and sedimentation, improve water security, and to enhance groundwater recharge;
- Establish gully stabilization measures on 8,689 ha, and river bank stabilization measureson 8,098 ha (~800km in total) to reduce exposure to climate-induced risks such as flooding and landslides;
- Provide technical assistance to implement afforestation and reforestation measures on 22,598 ha of private and public lands for distant forest users, especially in the Terai, to reduce pressure on natural forests for fuelwood, timber, NTFPs and forage;
- Establish the Churia Knowledge Centre, with an online database and 3 provincial hubs (anchored in Provincial Ministry (Watershed Management Section), to enhance monitoring, knowledge sharing and information dissemination;
- Increase the generation and use of climate information in decision making processes through the demonstration/ scaling up of proven climate-resilient activities, supporting information consolidation and dissemination, enhancing extension, building capacities and improving monitoring and knowledge sharing systems;
- Ensure gender equality and social inclusion by promoting proportional representation, and providing a differentiated approach that aims to empower disadvantaged groups who have experienced inter-generational discrimination and those groups who are highly vulnerable to climate-change.

3.3.1 Projected impacts of changes introduced through the BRCRN project

128. By implementing climate-resilient SNRM measures at scale, manifold additional benefits will be generated by the project, to both rural and urban populations,through strengthening communities´ and ecosystems´ resilience to climate change including increasing temperatures, changes in seasonal precipitation (e.g. arrival of monsoon, intensity of monsoons). It will further increase the resilience of communities´ and ecosystems to climate change trends (increasing temperature and precipitation), includingclimate change hazards that the region is particularly vulnerable to: in particular extreme heat, water scarcity, wild fires, flooding and landslides. Sedimentation and flooding is a major issue that is not only experienced downstream in the Terai region of Nepal, but also in northern India which experiences high sediment loading and riverbed aggradation from the Churia region in Nepal. Thus, the project will help reduce the risk and severity of water-induced disasters and river bank erosion downstream, through reduced erosion and sedimentation as a result of SNRM.

129. Fewer incidences of livelihood loss and death resulting from flash floods will be seen, as water recharge systems will be improved and soil and water ecosystem services become more robust. The adoption of climate-resilient land use practices in targeted areas, e.g. river bank restoration and critical ecosystems, will help improve the resilience of ecosystems to

climate-related hazards. Targeted measures, taking into account the differentiated vulnerabilities of different beneficiaries, will help ensure the most vulnerable people are reached within the project area and that their adaptive capacities are built.

130. On a landscape level, this project will reduce the alarming rate of land degradation that is currently converting downstream farmland into infertile sandy riverbeds. Through improving overall management of watershed areas and supporting the restoration of 206,227 ha of degraded forests, wetlands and grasslands, this project will create significant visible environmental benefits throughout the river system. The current soil erosion and top soil loss resulting from forest degradation upstream and leading to rising and widening of riverbeds and accumulation of silt loads down-stream will be reduced. The declining carrying capacity of rivers, currently causing riverbed rising, river bank cutting, flash flooding, siltation of reservoirs and barrages and desertification of agricultural lands, will be addressed. Forestry management practices, connecting critical catchments and improving soil and water conservation will manifest as increased productivity and resilience of down-stream communities. Gully and riverbank stabilization measures, along with implementation of emergency warning systems, will further contribute to improve river bank health and increased resilience of both up-stream and down-stream communities.

131. By maintaining functional wildlife corridors to connect protected areas throughout the Terai region, an increase in native flora and fauna populations is foreseen. Given the large proportion of Nepal's total biodiversity and ecosystems found in the Churia landscape and the importance of corridors for the continuation of viable populations, the establishment and protection of these corridors will lead to greater protection of Nepal's critical species and ecosystems. The establishment of viable wildlife corridors will also help reduce the occurrence of human-wildlife conflict. Although the development of wildlife corridors alone is not sufficient to curtail human-wildlife conflict, along with other interventions, such as installing proper fencing, holding training on animal behavior, and incorporating wildlife into early warning systems, corridors play a crucial role in protecting both wildlife and humans.[116] The establishment of corridors along the Churia foothills of Kokrha, Patnali, Gideri, duar khola and Sunkoshi riversystems will improve the connectivity with the Koshi Tappu Wildlife Reserve. Such corridors can also help relieve the wild buffalo-induced conflicts seen in Saptari and Sunsari areas. In these areas wild buffalo and boar take a large toll on wheat, potato and paddy crops, and occasionally cause human injury and even death.[117]BRCRN conservation efforts can contribute to alleviate the crop loss experienced around Koshi Tappu Reserve, along with reducing human-human and human-institution conflicts that arise with human-wildlife conflicts. These corridors will also address the increasing number of wild elephant related incidents, and corresponding high human fatality rates, experienced as these elephants move from India through Nepal.[118]

132. Along with restoring ecosystem services and rehabilitating degraded forests and lands, the Outputs of this project are expected to lead to a reduction of over 17.78 million tCO_2eq over

[116] Acharya 2016
[117] Limbu and Karki 2003
[118] Acharya 2016

a 20-year period. The adoption of sustainable climate smart land use practices such as climate resilient agriculture, agroforestry and tree planting, improved livestock management, restoration and sustainable management of forests and the plantation of commercial timber species will increase carbon sequestration capacities. The volume of carbon sequestered will continue to grow with time and as project Outputs are replicated and scaled up throughout the country.

133. The adaptation benefits of this project strengthen the institutional backbone of communities and government institutions to deal with climate change. Provincial and local government authorities will be trained on climate-resilient land use, improving institutional capacities on climate risks, as well as low-carbon and climate-resilient land use planning. Such measures will be further mainstreamed into provincial strategies (Provincial Climate-Resilient Land Use Strategy and Provincial Disaster Risk Reduction Plans), and river system level action plans.

134. Capacities of CSOs will further be strengthened, particularly at the local and provincial level, where many capacity gaps exist due to the ongoing political transition and subsequent restructuring. Vertical and horizontal multi-stakeholder coordination and communication regarding climate change, SNRM and climate risks will be improved, promoting coordination across sectors and among diverse stakeholders. Multi-stakeholder and improved coordination platforms will also be established to support project implementation, ensuring such organizations develop a sense of ownership and to improve coordination for project implementation. Resulting strategies and action plans for climate-resilient land use planning and SNRM in the region will provide a roadmap and allow for mainstreaming sustainable and resilient future planning and development.

135. Measures will target the most vulnerable areas, especially areas that are highly susceptible to flooding and landslides, as well as other critical areas identified at the sub-river system level. Activities will further target the most vulnerable people living within these vulnerable river systems, including poor households, indigenous peoples and Dalits. Additional measures will be further targeted to overcome barriers to participation for marginalized groups, including trainings to enhance leadership and empower such groups).

136. Project activities will enhance the adaptive capacities of members of 750 community-based organizations. A participatory and inclusive approach will be utilized that aims to empower community-based organizations to improve their awareness of climate change and associated risks, and to support them to map out the adaptation needs of their members to build resilience at the local level. Such an approach will allow differentiated priorities, contexts and vulnerabilities within and among community-based organizations to be considered, where communities are able to identify and prioritize measures that are well suited to their context.

3.3.2 Theory of change- how the project supports adaptation and mitigation

137. As a result of this project, an enabling environment to support transformative change toward low-carbon and climate-resilient development pathways will be established and provide the foundation for the improvement and strengthening of disaster preparedness and adaptive management throughout the country. Through mainstreaming SNRM and climate

change in planning processes and enhancing institutional learning within both government and local community-based user groups, as well as supporting investments to scale up climate-resilient practices, increased resilience and low-emission development is expected to be seen, with overall improvements in livelihood resilience, health, water and energy security, and engagement and empowerment of women and vulnerable groups throughout Nepal.

138. The following figure depicts the project´s theory of change (Figure 23).

Figure 23: Theory of change for the BRCRN project

4 LEGAL AND INSTITUTIONAL FRAMEWORK

Policy Alignment

139. The Government of Nepal is committed to addressing issues of climate change mitigation and adaptation, especially in line with livelihood improvement, as testified by the country's ratification of the United Nations Framework Convention on Climate Change (UNFCCC) in 1994. Nepal endorsed the Kyoto Protocol (2002), the Paris Agreement (2016), and submitted the 1st and 2nd National Communication Report of GHG (2004 and 2014) and Nationally Determined Contributions (NDC) to United Nations Framework Convention on Climate Change (UNFCCC). Within the country´s NDC, measures to support climate change mitigation and adaptation are described, including efforts to support institutional strengthening, policy mainstreaming, knowledge management, as well as mitigation and adaptation-specific actions. Nepal´s NDC however notes that while it is one of the most vulnerable countries to climate change, that given its LDC status and ongoing recovery from the devastating 2015 Earthquake, the country requires additional bilateral and multilateral grant support to meet its climate change targets and commitments. The BRCRN project is closely aligned with the country´s NDC, specifically targets b, e, j and k, and represents an important cross-cutting approach within one of the most vulnerable areas in Nepal.[119]

140. There are further synergies between the project and other international conventions to which Nepal is a signatory member, including the Convention of Biological Diversity (CBD), United Nations Convention to Combat Desertification (UNCCD), and the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW). Nepal also voted in favor of the United Nations Declaration on the Rights of Indigenous Peoples.In addition, Nepal has taken proactive steps toward achieving the global Sustainable Development Goals since their development in 2016 through forming three high-level committees to steer, coordinate and implement relevant national programs, with the aim of becoming a middle income country by 2022.[120]The BRCRN project is also directly correlated with the SDG goals related to climate action, life on land, reduced inequalities and gender equality, along with indirectly contributing to several other goal areas.

141. Nationally, Nepal has initiated various national strategies, policies and plans to support climate change mitigation and adaptation, including the elaboration of its Climate Policy (2011) and the mainstreaming of such topics across sectors through sector strategies and development plans. Nepal's Thirteenth and Fourteenth Development Plans recognize the role of forests in contributing to both climate adaptation and mitigation efforts, and calls for the conservation, sustainable management and use of forests and watersheds, along with emphasizing the development and dissemination of environmental friendly agricultural technologies and agro-biodiversity conservation and promotion. Nepal's Forestry Sector Strategy (2016-2025) aims to, among other things, supports the adaptive capacity of local communities and forest ecosystems, and promotes biomass-based renewable energy. Nepal's Forest Sector Policy (2015) envisions contributing to local and national development

[119] http://www4.unfccc.int/ndcregistry/PublishedDocuments/Nepal%20First/Nepal%20First%20NDC.pdf
[120] National Planning Commission 2017

(improved livelihood opportunities) through sustainable management of forests, biodiversity, as well as watersheds. Nepal's Forest Act (1993) and Forest Regulation (1995) serve as the core legislative instruments to regulate forest tenure and management, and empower communities to sustainably manage their resources. Additional legislations and associated policies are also in place to address forest degradation, and within the Churia region, the President Chure-Tarai Madhesh Conservation and Management Master Plan is the main guiding document for conservation efforts (including areas of climate change, forestry management, watershed conservation etc.).BRCRN activities also align with Nepal's National REDD+ Strategy which aims to reduce emissions from deforestation and forest degradation. Substantial research and consultations have been conducted within the framework of REDD+, which have been taken into consideration in this report and have informed the design of the BRCRN project. The development of REDD+ has also provided key lessons learned and generated substantial knowledge on sustainable forest management and SNRM, including developing a framework foundation and promoting interventions that facilitate gender equality and social inclusion (GESI).

142. BRCRN´s activities will thus strengthen and reinforce Nepal's regulatory and legal frameworks, promote the development of additional low-emission policies, and improve climate-responsive planning and development in the region. The BRCRN project is well-aligned with the various national public policies that support sustainable development in the Churia region of Nepal.

Social and Environmental Policies

143. To support project implementation, it is necessary that a comprehensive set of social and environmental policies are in place to ensure that livelihoods and the environment are safeguarded from potential negative impacts. A summary of the existing relevant laws, policies and strategies that will help safeguard local people and the environment is provided in Table 7.[121] More detailed information on international conventions, policies and legislation related to indigenous peoples and social inclusion is provided in Chapter 8. Greater detail related to gender is provided in the Gender Assessment and GAP prepared for the project.

Table 7: Major policies, strategies, plans and acts that are aligned with the BRCRN project

Relevant policies, strategies, plans & acts	Key features
14th Development Plan of Nepal	▪ Country´s development plan to support sustainable development in Nepal

[121]It should be noted that with the political and institutional transitions ongoing in Nepal due to the 2017 elections, many national policies, strategies and acts will need to be revised and adjusted in accordance with the new political and governance system. The project has been designed in accordance with the Local Government Operation Act (2017), the act providing the overview for governance, including institutional arrangements, roles and responsibilities at the local level. The overarching framework developed by the national development agenda and international agreements will remain.

Relevant policies, strategies, plans & acts	Key features
	▪ Promotes gender equality and social inclusion across sectors, promoting inclusive and equitable development ▪ References key challenges in the Churia region including upstream downstream connections, and the risks to downstream communities due to the fragile, unsustainable development of the Churia region, and the need to improve access to benefits from forest, and to control deforestation and forest degradation. Further stresses the need to support climate change mitigation and adaptation to reduce deforestation, enhance livelihoods and support disaster risk reduction. ▪ Promotes the implementation of integrated conservation activities within river systems, with an emphasis on upstream and downstream impacts/ planning
Local Government Operation Act (2017)	▪ Provides detailed information on the roles, responsibilities and coordination mechanisms. Rural municipalities and municipalities shall make rules required under its defined domains or jurisdictions to operate the given responsibilities and regulate procedures, while complying with provincial and national laws. ▪ Local Governments in charge of natural resource management at the local (rural municipality) level (Article 18) ▪ Local government can implement climate change mainstreaming into local plans, including GESI, and building institutional capacities through making operational guidelines, procedures and criteria.
President Chure-Tarai Madhesh Conservation and Management Master Plan (2017)	▪ Provides strategic direction for the conservation of the Churia area ▪ Promotes the integrated management of upstream and downstream land use activities and an integrated landscape approach ▪ Includes measures to strengthen the participation of women, Dalits, indigenous groups and marginalized communities including skill (e.g. skill oriented capacity building, participation in community-based organizations, etc.) ▪ Supports poverty reduction in pursuit of the national goal of *'Prosperous Nepal*' through conservation and sustainable management of resources and ecosystem services
Nepal's Nationally Determined Contributions (2016)	▪ Provides impacts of climate change across sectors including water resource management (stressing reduced water availability and increased droughts and floods), agriculture, food security and renewable energy ▪ Prioritizes climate-resilient sustainable land and forest management, ecosystem rehabilitation and restoration, strengthening community-based NRM, and improving agricultural techniques ▪ References the legitimate rights of all Nepali people, including disadvantaged social groups over biological resources
Forest Policy 2015, National Forest Strategy (2016)	▪ Focuses on forest productivity and the sustainable provision of forest products and services, while improving biodiversity, watershed and ecosystem services, entrusting forestry sector organizations, ensuring climate resilience, and improving livelihoods ▪ Provides system for equitable distribution of timber and firewood from government and community managed forests, particularly to forest-dependent poor households, socially marginalized groups and families affected by natural disaster

Relevant policies, strategies, plans & acts	Key features
	▪ Measures to enhance participation and capacities of women, Dalits, ethnic minorities and indigenous peoples (promoting proportionate representation, improved representation in leadership positions within forest institutions, etc.), ultimately promoting gender equity, inclusive development and socio-economic development, particularly for poor households, women, Dalits, indigenous persons, and other marginalized groups.
Constitution of Nepal (2015)	▪ Guarantees people's welfare and all-round-progress through economic, social and cultural transformation, while defending and strengthening political achievements and their development ▪ Maintains the rule of law by protecting and practicing human rights and implements international treaties and agreements ▪ Ensures the right to equity, where there shall be no discrimination in the application of general laws (Article 18) ▪ Guarantees good governance by ensuring equal access to services provided by the State and making public administration clean, competent, impartial, transparent, accountable and participatory ▪ Expands and develops the means, administration and responsibilities if federal units for the management of resources ▪ Requires maintenance of national forest area goals and incorporation of state policies to control forest encroachment
Community Forestry Guidelines (2015)	▪ Details requirements for Community Forestry User Groups, including the mandatory provision of 50% representation of women in the executive committee, and guarantee of at least 1 major position (president or secretary) filled by a woman.
Revised Land Use Policy (2015)	▪ Re-categorizes the country into various land use zone and devises Federal, Provincial, & Local-level land use plans ▪ Ensures the use of land and land resources follow guidelines set in land use plans to mitigate natural and human created disastrous hazards ▪ Applies minimum property valuation and progressive tax system
Agriculture Development Strategy (2015-2035)	▪ Sets forth priorities to move toward self- reliant, sustainable, competitive, and inclusive agriculture sector that drives economic growth and contributes to improving livelihood, food and nutrition security leading to food sovereignty ▪ Includes strategies for poverty reduction, agricultural trade competitiveness, and establishing higher and more equitable income and rights for farmers ▪ Includes various measures targeted at the most disadvantaged rural population including poor households, women, indigenous peoples, Dalits and other marginalized communities, especially with a focus on improved food security.
Churia declared as Environment Conservation Area (2014)	▪ Based on the stipulation in the Environment Protection Act (1997) 10 (1), declares Churia area as a conservation area due to the area's geological fragility and sensitivity, rich biodiversity, watershed conservation needs and importance to several endangered species
Climate Change Policy (2011)	▪ Promotes clean energy and sustainable natural resource management to improve livelihoods by mitigating climate change impacts, adapting a

Relevant policies, strategies, plans & acts	Key features
	low-carbon economy development strategy and reducing greenhouse gas emissions ▪ Includes measures aimed to promote gender equality and social inclusion, including ensuring the participation of poor people Dalits, marginalized indigenous communities, women, children and youth in the implementation of climate change-related programs.
President Churia Conservation Program (2011)	▪ Integrates land, water, and forest management to ensure ecological balance ▪ Includes provision of livelihood support for people through appropriate management of resources, promoting social harmonization and the strengthening of local people engagement in resource management and building upstream-downstream linkages
Forest Encroachment Control Strategy (2011)	▪ Prohibits the conversion of forests into other land-use systems, with the exception of forests utilized for nationally prioritized projects ▪ Provides strategies to control forest encroachment
Nepal National Adaptation Programme of Action (2010)	▪ Promotes community-based adaptation through integrated management of agriculture, water, forests and biodiversity; building and enhancing adaptive capacity of vulnerable communities; community-based disaster management for facilitating climate adaptation; and empowering vulnerable communities through sustainable management of water resource and clean energy supply ▪ Specifically sets priority actions for reducing land degradation through sustainable land and forest management, improved agricultural value chains, restoring degraded areas and promoting climate related research, information and awareness
Churia Area Program Strategy (2008)	▪ Establishes local ownership over non-biological natural resources (water, sand, boulders) with negotiated rights & responsibilities to ensure effective resource management ▪ Promotes people-led biodiversity conservation by involving rural households and their CBOs to strengthen the tie between conservation and sustainable livelihood opportunities
Ministry of Forest and Soil Conservation (MoFSC) Gender Equality and Social Inclusion (GESI) strategy (2008)	▪ Aims to assist government, non-government, donor and private sector bodies working in the forestry sector to institutionalize gender and social inclusion within their organizations, projects and programs. Guides organizations working in the forestry sector to be responsive and inclusive through identifying and addressing four key thematic areas including: i) GESI sensitive policies and strategies, ii) good governance and inclusive institutional development, iii) GESI-sensitive budgeting, programming and monitoring, and iv) equitable access to resources and benefits.
Irrigation Policy (2003)	▪ Details the requirements for Water User Associations, including the provision that at least 33% of WUA must be women.
Water Resource Strategy (2002)	▪ Recognizes the connection between human activities, natural factors, and risks of severe flooding and environmental deterioration, economic loss, and displacement of people and that this calls for improved holistic watershed management

Relevant policies, strategies, plans & acts	Key features
	▪ Provides roadmap to strengthen institutional capacities, implement watershed and aquatic ecosystem programs, and meet long-term requirements for social and ecological sustainability
Land Use Policy (2002)	▪ Establishes zone divisions for agriculture farm, forest, pasture, settlement, urban development, industrial state, wasteland, wetland, herbal production area etc. and provides land use plans based on zonation
National Foundation for Development of Indigenous Nationalities Act (2002)	▪ Established the National Foundation for Development of Indigenous Nationalities (NFDIN), an independent organization that works as the link between the Government and indigenous peoples with the mandate to implement programs that support the development of all indigenous peoples and to recommend to the government strategies to improve the social, economic and cultural development of indigenous peoples. ▪ Defines indigenous peoples (*Adivasi/Janajati*) and promotes the overall development of indigenous peoples, preservation and promotion of traditional knowledge, skill and technology, inclusion of indigenous peoples in decision processes and building of an equitable society.
Buffer Zone Management Guidelines (1999)	▪ Clarifies the the roles, functions, duties and responsibilities of community institutions (user groups, functional groups, user committees, sub-committees and buffer zone development committees) related to community and forest development.
Local Self-Governance Act (1999)	▪ Requiresa minimum 20% representation of women on village and ward-level development committees. It is considered the first step in which women's representation was formally recognized by the government. Currently, this number stands at 25% at ward levels, and at least one position (mayor and deputy-mayor) must be filled by a woman.
Environment Protection Act (1997), Environment Protection Regulation (1997)	▪ Makes compulsory to produce Environment Impact Assessment (EIA) and Initial Environment Examination (IEE) for any proposed projects/ interventions to ensure no significant adverse impacts and that potential impacts are controlled ▪ Related activities that would require an IEE (related to BRCRN project): i) monoculture plantations in block (within Terai 50-500 ha; Churia hills 25-100ha); ii) Management plan preparation for protected watersheds; iii) pro-poor leasehold forests covering more than 50 ha; iv) forest handover to community as community forests (within the range of 500-750 ha); v) river control measures on a continuous length spanning over 10km. All project activities will comply with the Environment Protection Act and Environmental regulation, however is unlikely that project activities will trigger IEE as the project will focus on smaller-scale interventions.
Buffer Zone Management Regulation (1996)	▪ Ensures that the rights of local people over their land and resources are respected during the establishment of buffer zone areas. User committees can be formed to manage and use certain forest products in buffer zone areas and Buffer Zone CFUGs and Buffer Zone Religious Forest User Groups (RFUGs) are allowed to manage allocated forest lands based on an approved management plan.
Forest Act (1993), Forest Regulations (1995)	▪ Serves as the core regulations that guide forest tenure and forest management

Relevant policies, strategies, plans & acts	Key features
	▪ Designates prohibited activities in all types of forests and gives Community Forest Users groups the authority to control illegal harvest of timber in community forests ▪ Gives the government ability to declare any part of national forest as community forests or protected forest given 'special environmental, scientific &/or cultural importance' ▪ 2016 amendment of Forest Act states that management, utilization and benefit sharing of environmental services (including carbon services) will be prescribed in the 6th amendment of the Forest Regulation
National Environment Policy & Action Plan (1993)	▪ Stipulates Churia hills as a fragile and sensitive region that should be conserved and designated as a Protection Forest
Fourth Amendment of National Parks and Wildlife Conservation Act (1992)	▪ Established the provision of Buffer Zones in order to address local livelihood needs and involve local communities in national park conservation activities.
Wildlife Reserve Rules (1977)	▪ Determines the access and activities allowed within reserves. Without written permission from designated authorities, building any infrastructure, occupying any land, grazing, cutting or obstructing any trees, plants, or bushes, retrieving any meat and mining or disturbing any stones, sand, mineral, river or water body is considered illegal. Other rules related to fines, vehicle use, permits and waste are also laid out.
National Parks and Wildlife Conservation Regulations (1974)	▪ Sets forth the services that are allowed to be operated in national parks or reserves, who can be granted access to the parks, provisions on hunting and required related licenses and the fees and procedures related to the above activities.
National Parks and Wildlife Conservation Act (1973)	▪ Defines four categories of protected areas: national parks, strictly controlled nature reserves, hunting reserves and conservation areas. ▪ Within these areas, activities including hunting, building of houses or any structure, clearing or cultivating any and or harvesting any crops, pasturing or watering any domesticated animal or bird, cutting, burning or damaging trees, bushes, or other forest products and mining are prohibited without the permission of an authorized officer.

5 APPLICABLE SAFEGUARD POLICIES

144. This ESMF has been prepared to support the proposed project ´*Building a Resilient Churia Region in Nepal*´ (BRCRN), developed by the Government of Nepal and submitted to the GCF. The project is further supported by the Food and Agriculture Organization of the United Nations (FAO), in their role as the GCF Accredited Entity. Thus, the project has been screened against FAO´s Environmental and Social Safeguard Policy, as well as the GCF Environmental and Social Safeguards.

5.1 FAO environmental and social standards

145. FAO has nine Environmental and Social Standards (ESS) that have been established to help manage and improve FAO environmental and social performance through a risk and outcome based approach (Table 8):

Table 8: Overview of Environmental and Social Standards of the FAO

Standard	Description
ESS 1: Natural Resource Management	Impact of the proposed project on the degradation of natural resources, and loss of ecosystem services resulting from the escalating competition over natural resources (including land, water, biodiversity, landscapes, and water bodies). ESS1 focuses on the abiotic environment (e.g. soils, land, water, security of tenure and climate).
ESS 2: Biodiversity, ecosystems and natural habitats	Risks associated with the variety and variability of animals, plants and microorganisms at the genetic, species and ecosystem levels that are essential to support the structure and function of productive ecosystems.
ESS 3:Plant Genetic Resources for Food and Agriculture	Prevention of genetic diversity loss and unintended environmental and social consequences through promoting sustainable crop improvements and production. ESS3 calls for the assurance that transfer of Plant Genetic Resources for Food and Agriculture (PGRFA) respects farmers' rights and equal access to benefit sharing.
ESS 4: Animal – Livestock and Aquatic- Genetic Resources for Food and Agriculture	Risks associated with the sustainable management of animal and aquatic resources, including loss of genetic diversity and unintended environmental and social consequences. Animal Genetic for Food and Agriculture (AnGR) includes any animal species that are used or may be used for the production of food and agriculture.
ESS 5: Pest and Pesticide Management	Risks regarding adverse impacts of pesticides on the health and safety of communities, consumers, and the environment. ESS5 encourages Integrated Pest Management (IPM) and recognizes the contribution of pesticides to effective crop and food production but promotes the reduction of pesticides reliance.
ESS 6: Involuntary Resettlement and Displacement	Protection of households from forced eviction and minimization of any social and economic impacts from land restriction or resources use restrictions that may arise. ESS6 encourages the inclusion of measures to improve/restore living conditions, productive assets, and tenure security of any persons displaced, either physically or economically.

Standard	Description
ESS 7: Decent Work	Recognition of the need for full and productive employment to reach food security and poverty reduction. In order to fulfill ESS7 this project must promote access to rural employment, ensure fair non-discriminatory and equal opportunities, support workers including disadvantaged and vulnerable categories of workers, and apply the international labor standards, including the prevention and elimination of child labor.
ESS 8: Gender Equality	Proposed project impact on gender roles and opportunities and gender mainstreaming, along with project contribution to achieve gender equality for sustainable interventions in the agriculture and rural sectors.
ESS 9: Indigenous People and Cultural Heritage	Risks to indigenous knowledge, cultures and traditional practices, right to self-determination and tangible and intangible cultural heritage for current and future generations. ESS9 ensure the project follows Free, Prior and Informed Consent (FPIC).

Source: FAO 2015

5.2 Project risk classification

146. The FAO Project Environmental and Social Screening Checklist was prepared (Annex 4), and the project was identified as a Category B (*moderate risk*) project, where:[122]

147. **There are identified potential diverse environmental and social impacts**

- Potential risks of environmental contamination based on the inappropriate disposal of alternative renewable energy technologies, especially solar PV systems with lead-batteries
- Changes in land use due to the mainstreaming of climate-resilient SNRM practices and promotion of improved livelihood practices could discriminate against some members of society, especially poor and marginalized communities (e.g. if they are no longer able to freely graze in forested areas).
- Potential for site-specific impacts due to the establishment of small-scale infrastructure such as check dams, stone bunds, and the conservation of conservations ponds (removal of soil could lead to increased sedimentation if not properly managed)
- Activities on private land can only be implemented on areas with clear land tenure, although this could be a barrier to engage poor and marginalized households, who may not have secure land tenure. Nonetheless, this represents only a small proportion of project activities, and further activities will be targeted to ensure the empowerment and engagement of poor and marginalized households within the project (e.g. targeted measures, and supporting the establishment of at least 40 public forest user groups that are primarily comprised of marginalized households)
- Women, indigenous peoples, and marginalized minority groups (including Dalits, among other groups), often experience discrimination and may face additional barriers to their participation and engagement
- Timber harvesting and forest management without sufficient protective equipment or with inappropriate practices could lead to personal injuries.

[122] FAO 2015

148. **Potential impacts are not unprecedented in the project area**

- Proposed activities have been piloted in the Churia area by diverse stakeholders and have demonstrated proof of concept (cf. Feasibility Study for additional information)
- Knowledge-focused activities (Output3) aim to enhance knowledge, information and communication to support the implementation of good practices, integrating experiences from piloted projects, international best practices, and local and indigenous knowledge. Such practices will ensure that good practices are applied, and where possible risk avoidance and mitigation measures are further integrated where necessary. Institutional strengthening as well as trainings and extension support on climate-resilient practices will help ensure that good practices are applied, and that risk-mitigation or avoidance measures are also disseminated and applied.

149. **Potential impacts are limited to the project´s footprint**

- Verification of project impacts will focus on the BRCRN project area.

150. **Potential impacts are neither irreversible or cumulative**

- Potential adverse impacts from the project are reversible and non-cumulative, as long as beneficiaries correctly apply the proposed practices within the BRCRN project
- Participatory climate-resilient land use planning, based on operational guidelines from local community-based organizations/ user groups, with support from government authorities will help ensure that the implementation of activities for Output1 are well planned and effectively monitored. Output3 will further strengthen the quality of information available on climate-resilient practices, as well as knowledge dissemination practices for both government officials, CSOs and local people that will help to mitigate risks. Strengthening networks at the local and provincial level will further ensure that clear support pathways are established to manage potential risks or adverse impacts. Technical assistance and the assignment of local resource persons, will ensure technical support is available to local community-based organizations, and that clear and effective communication pathways with the project management team are established. Given this structure, it ensures that potential adverse impacts can be either avoided or effectively mitigated in a timely fashion.

151. **Potential adverse impacts can be addressed by the use of recognized good management or pollution abatement practices, and there is a demonstrated record of their successful use in the project area (upstream and downstream).**

- The use of participatory climate-resilient land use planning, promotion of good practices, provision of ongoing technical support, and establishment of clear and effective communication to strengthen vertical and horizontal coordination will help effectively and efficiently mitigate potential adverse impacts. Proposed activities have been successfully implemented and have a clear proof of concept, which have demonstrated the successful application of activities based on good practices, as well as the successful implementation of mitigation measures.

152. An exclusion list of the activities the project will not finance can be found in Annex 2.

5.3 Green Climate Fund safeguards

153. The GCF has provisionally adopted the Performance Standards and directives of implementation of the International Financial Corporation (IFC).[123]There are eightIFC Performance Standards that include the main environmental and social considerations that must be takeninto account when designing and implementing a project. The IFC standards are congruent with the FAO Environmental and Social Standards (Table 9).

Table 9: Alignment of IFC Performance Standards and FAO Environmental and Social Standards

IFC Performance Standards (PS)	FAO Environmental and Social Standards (ESS)
PS 1. Assessment and management of environmental and social risks and impacts	ESS 1. Natural resource management ESS 8. Gender equality
PS 2. Labour and working conditions	ESS 7. Decent work
PS 3. Resource efficiency and pollution prevention	ESS 5: Pests and pesticide management
PS 4. Community health, safety and security	ESS 7. Decent work (partially)
PS 5. Land acquisition and involuntary resettlement	ESS 6. Involuntary resettlement and displacement
PS 6. Biodiversity conservation and sustainable management of living natural resources	ESS 2. Biodiversity, ecosystems and natural habitats ESS 3. Plant genetic resources for food and agriculture ESS 4. Animal – livestock and aquatic – genetic resources for food and agriculture
PS 7. Indigenous peoples	ESS 9. Indigenous peoples and cultural heritage
PS 8. Cultural heritage	

Sources: GCF/B.07/11; FAO 2015

5.4 FAO applicable safeguards

154. Table 10 provides an overview of the FAO safeguards triggered within the FAO Environmental and Social Screening Checklist:

Table 10: FAO safeguards triggered for the BRCRN project

FAO Safeguard	Safeguard Triggered?	Justification
ESS1: Natural Resource Management	No	The project will support the adoption of proven climate-resilient and sustainable land management practices, and thus will generate positive environmental benefits in terms of natural resource management.

[123] GCF/B.07/11

FAO Safeguard	Safeguard Triggered?	Justification
		With the management of water resources, contour bunds, stone walls, and check dams (under 5 m in height) will be implemented for disaster risk reduction and to enhance water management. In Section 6 there is additional information included on how potential small-scale site-specific impacts and risks will be avoided and/or mitigated. The project will not result in a negative change to existing legitimate tenure rights. The main beneficiary is local community-based organizations/ user groups, which represent an important form of tenure that has provided improved tenure rights to local peoples. The exclusion list in Annex 2 further ensures the project will not finance activities deemed ´*high risk*´.
ESS2: Biodiversity, Ecosystems and Natural Habitats	Yes	One of the project´s 26 prioritized river systems (core intervention area), specifically Adherei Khola, Baruwa Khola and Duar Khola River System, slightly overlaps with the Koshi Tappu Wildlife Reserve. The project will not support interventions within the wildlife reserve or its buffer zone. All project activities will abideby Nepal´s legal framework, specifically the Buffer Zone Management Regulations (1996) and Buffer Zone Management Guidelines (1999, e.g. supporting sustainable management, restoration activities and ecotourism via community-forest user groups). Project activities are anticipated to have a positive impact on the protected area, especially considering studies have found that sedimentation due to deforestation and unsustainable land use upstream have had negative impacts within the reserve.[124] A biodiversity management framework has been developed to ensure that project activities do not result in any negative impacts to the protected area (Section 9). The project will not support the conversion of natural ecosystems to another land use, but will instead promote the restoration of ecosystems. All project activities are targeted for different land uses (e.g. climate-resilient agriculture to be implemented on agricultural lands, restoration activities for degraded ecosystems, etc.). The project will not increase the current impact on the environment, as it will promote sustainable land use practices which will generate more environmental benefits than business-as-usual practices. Within Activities1.9, 1.10 and 1.11 forest plantations will be established on non-forested land (abandoned, unproductive or under-utilized agricultural land or degraded land) to reduce wood consumption from native forests. Theseare seen as low risk activities as the species include native species, and non-native species that are locally adapted and do not pose a risk for invasion. Site-species matching will ensure that appropriate species are established given the site-specific conditions. More information on risk mitigation and this measure can be found in Section 6.

[124] Chettri et al. 2016

FAO Safeguard	Safeguard Triggered?	Justification
ESS 3: Plant Genetic Resources for Food and Agriculture	Yes	The project will not introduce crops and varieties that are previously not grown in the project area. The project will support the establishment of forest plantations (horticulture, commercial timber, fodder banks), and agroforestry activities on 23,800 ha. Plantations and agroforestry systems will be established using species already used, adapted and grown in the region. No seeds or planting material will be imported for this project. The project will support the establishment and management of planted forests, which is seen as a moderate risk. The project is however aligned with the Government of Nepal´s Land Use Policy, Environmental Protection Act and Environmental Protection Regulations, and the Forest Act and Forest Regulations, among other national legislation (cf. Section 4), and will adhere to the national forest sector strategy and relevant policies (incl. CFUG Operational Guidelines).
ESS 4: Animal-Livestock and Aquatic – Genetic Resources for Food and Agriculture	No	The project will not introduce non-native or non-locally adapted species, breeds, genotypes or other genetic material to the project area. Promotion of more sustainable practices (reduced free grazing, in place for stall-feeding or managed pastures), will reduce forest degradation and result in positive environmental impacts.
ESS 5: Pest and Pesticide Management	No	The project will not result in the procurement or direct supply of pesticides or agrochemicals.
ESS 6: Involuntary Resettlement and Displacement	No	The project will not allow any involuntary resettlement or displacement. Project activities are unlikely to influence local people's access to forest resources on private land. For all interventions on private land, proof of legality of land tenure or use rights must be demonstrated. The location of the site must also be known with GPS coordinates. Investments on private land will focus on primarily the implementation of agriculture investments, and technical support for forestry activities (i.e. activities on non-forested land, and forestry activities limited to technical support instead of direct investments). Direct investments in public land forests (on either non-forested land or highly degraded forested land) will focus on supporting public land forest users to benefit from sustainable management of their forest resources. In instances where it is highly degraded, plantations for fuelwood, fodder materials, horticulture and timber will be supported (based on community-consultations and priorities) by direct investments for public land forest users groups, comprised of highly vulnerable and households. Measures will be decided based on participatory processes together with community-based organizations, and participation in the project is voluntary and based on FPIC. Interventions will not focus on strict law enforcement, and will instead focus on sustainable alternative land use

FAO Safeguard	Safeguard Triggered?	Justification
		practices that promote sustainable climate-resilient SNRM. If communities decide to implement protective measures in highly sensitive or degraded areas, it will only be implemented based on consultation with community-based organizations and where necessary alternative land use targeting especially highly vulnerable and marginalized households will be jointly developed.
ESS 7: Decent Work	No	The project will not result in the direct employment of staff. Employment opportunities will likely be generated as a byproduct of the project, but not directly. Occupational health and safety (OHS) activities will be taken seriously for the implementation of the project activities. While majority of project activities are low risk, forestry activities in Output 1 could be seen as a moderate risk. Safety equipment and OHS trainings will be conducted. Risk control measures are described in Section 6.
ESS 8: Gender Equality	No	The project will support gender empowerment and equality, and has been designed to take into account the specific needs and priorities of women and girls. A gender assessment and Gender Action Plan have been developed for the BRCRN project.
ESS 9: Indigenous peoples and cultural heritage	Yes	Indigenous peoples comprise 31% of the population in the BRCRN project area, and will be included as direct beneficiaries within the BRCRN project. An Indigenous peoples and social inclusion planning Framework has been established within the context of the BRCRN project, in consultation with diverse indigenous peoples, as well as representatives from indigenous federations and organizations in Nepal, to ensure the project causes no harm to indigenous peoples (Section 8). The planning framework further ensures that efforts will be made to respect, include and promote indigenous peoples issues during project implementation, including their right to Free, Prior and Informed Consent (FPIC). The project anticipates to generate numerous additional benefits to indigenous peoples, and the project has been designed to take into account the different contexts, priorities and vulnerabilities of indigenous peoples living within the project area.

6 ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT

155. The following Figure provides an overview of FAO´s environmental and social risk management approach:

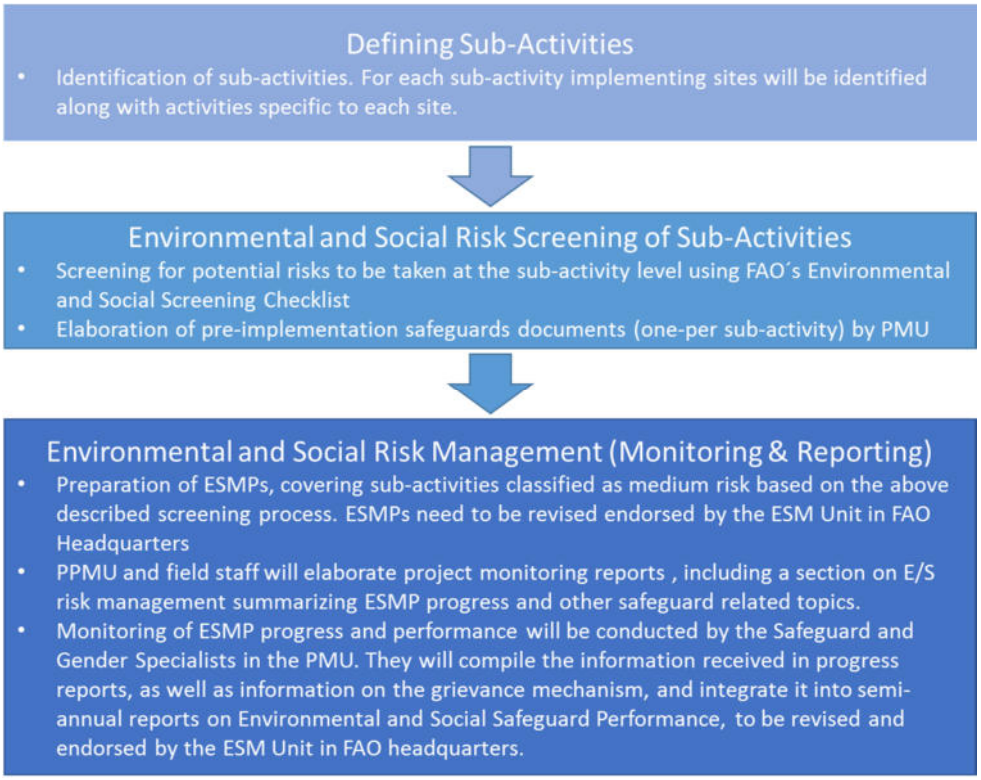

Figure 24: Overview of FAO´s environmental and social (E&S) risk management approach

6.1 Step 1: Defining Sub-Activities

156. The BRCRN project is expected to have far greater environmental and social benefits than adverse impacts. The potential adverse impacts from the project are likely to be small and site-specific. However, it is key that such impacts are identified early during the planning cycle and mitigation measures integrated into project planning and implementation. It is recommended that screening for risks are undertaken at the sub-activity level. Specific interventions will be identified during the implementation of Component 2, where specific sites, beneficiaries and sub-activities will be identified. In this context, sub-activities will be identified during years 1 and 2 (through the implementation of Sub-Components 2.1 and 2.2). For each sub-activity, implementing sites will be identified along with activities, including capacity building, training, and stakeholder engagement information specific to each site.

6.2 Step 2: Environmental and Social Risk Screening of Sub-Activities

157. Eachactivity will be screened using FAO´s environmental and social screening checklist (included in Annex 4). Once the implementation sites, beneficiaries and sub-activities are identified (step 1), a screening checklist will be completed per activity and signed off by the Safeguards and Gender Specialists within the Project Management Unit (PMU).It is important to note that ESMP screening will begin especially in year 2, and it will be a gradual and ongoing process in year 2 and perhaps part of year 3, as different CBOs are consulted and engaged in the planning process. The results of the screening checklists will be aggregated by the safeguards specialist. This will be sent to the FAO ESM Unit for endorsement. Screening will ensure that:
    - The activity is permissible and in line with Nepal´s legal framework and regulatory requirements of the project
    - An appropriate level of environmental assessment is conducted, based on the level of expected impacts.
158. While the nature, magnitude, reversibility and location of impacts are main elements in the screening of sub-activities, expert judgment will be a central factor in deciding whether a sub-activity should be included in the environmental and social management plan (see following Sub-section).
159. The environmental and social screening checklist cross-checked by Safeguard and Gender Specialists (as necessary) will result in the following screening outcomes: (i) determination of the category for further assessment; and (ii) determination of which environmental assessment instrument should be applied.
160. Pre-implementation safeguards documents (one per sub-activity) will be prepared by the Safeguards and Gender Specialists within the PMU prior to the implementation of activities within Component 1. The following documents and information will be provided for the specific project interventions:
    - Description of activities to be carried out in all sites
    - Description of each implementing site:
        - Geography and specificities in terms of activities
        - Beneficiaries and stakeholders
        - GPS coordinates and map of the site
    - For all interventions in the Adherei Khola, Baruwa Khola, Duar Kholariver system, coordinates of beneficiary intervention sites will be assessed prior to the implementation of investments to assure there is no overlap with the Koshi Tappu Wildlife Reserve nor its buffer zone (see Chapter 9 for more information on the project´s Biodiversity Management Framework).
    - Description of the stakeholder engagement process that was carried out in the inception phase and the stakeholder engagement plan to be carried out during implementation
    - Breakdown of information by site about the grievance mechanism and disclosure

6.3 Aggregated results of the environmental and social screening checklists per sub-activity, approved and signed by the ESM Unit in FAO Headquarters. Step 3: Environmental and Social Management Plans, Monitoring and Reporting

161. Sub-components where possible environmental and social risks have been identified will develop environmental and social management plans (ESMP) that include information on the mitigation measures, indicators, responsibilities and timeframe where the completion of such measures are expected. An ESMP will be developed for sub-activity, which will be informed by the described activity screening process.

162. While the nature, magnitude, reversibility and location of impacts are main elements in the screening of sub-activities, expert judgement will be a main factor in deciding whether an ESMP is required for an Activity or not.

163. The ESMP should include:

- **Mitigation measures:** Based on the environmental and social impacts identified from the checklist, the ESMP should describe with technical details, each mitigation measure, together with designs, equipment descriptions and operating procedures as appropriate.
- **Monitoring:** Environmental and social monitoring during the implementation of the activities, in order to measure the success of mitigation measures. Specifically, the monitoring section of the ESMP provides:

  A specific description and technical details of monitoring measures that include the parameters to be measured, the methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions.

  Monitoring and reporting procedures to ensure early detection of impacts that necessitate particular mitigation measures and to provide information on the progress and results of mitigation (e.g. by annual audits and surveys to monitor overall effectiveness of this ESMF.
- **Institutional Arrangements for M&E:** The ESMP should also provide a specific description of institutional arrangements, i.e. who is responsible for carrying out mitigation and monitoring measures for operation, supervision, enforcement, monitoring of implementation, remedial actions, financing, reporting and staff training). Additionally, the ESMP should include an estimate of the costs of the measures and activities recommended so that necessary funds are included. The mitigation and monitoring measures recommended in the ESMP should be developed in consultation with all affected groups to incorporate their concerns and views in the design of the ESMP.

164. Once the pre-implementation documents with ESMPs are endorsed by the ESM unit in FAO, the safeguard specialist will ensure ESMPs are included and reported upon, along with stakeholder engagement in the context of the monitoring plan.In this context, field staff (PMU staff in coordination with provincial and local authorities and extension agents) will be responsible for monitoring the progress as relevant in the monitoring plan, as well as to iden-

tify any potential risks that may emerge through the implementation phase. This information will be compiled in progress reports and templates, including a section on environmental and social risk management.

165. Information from progress reports will be received by the safeguard and gender specialist in the PMU who will compile the information received in the progress reports, as well as information related to grievances in a semi-annual report on the Environmental and Social Safeguards Performance to be endorsed by the ESM Unit in FAO.

6.4 Potential environmental and social risk mitigation measures

166. Potential negative impacts and proposed mitigation measures have been identified for each of the three project Componentsand will serve as a basis to prepare the ESMPs:

Table 11: Potential adverse impacts and proposed mitigation measures for Output 1

Potential Adverse Impacts	Mitigation Measure(s)
▪ Changes in land use activities or regulations in communal lands could have disproportionate impacts on some community members	▪ Decision-making processes will be based off of the organization/ user group´s operational guidelines and protocols. Community-forest user groups (CFUGs) have operational guidelines (2014) that state that at least 50% of the management committee must be women, and proportionate representation from poor, lower-caste groups, minority ethnic groups and indigenous peoples. Either the chairperson or the secretary of the committee must be a woman. GESI considerations and pro-poor measures have been integrated operational guidelines and laws, which will help ensure the integration and participation of diverse people, including women, indigenous peoples, and marginalized minority groups. ▪ All community-based organizations will be required to register with local authorities in order to participate in project, and local authorities will assess to what extent they meet the respective operational guidelines in terms of GESI and representation of women, poor families, indigenous groups, lower-castes and ethnic minorities. Registration will also serve as a safeguard to ensure that the land use rights are secured for the CBOs, as well as private forest users, as formal government certificates will be provided. The registration process is supported within Component 2 (see the note on land registration below). ▪ Land use planning and capacity building processes will be participatory, and will ensure proportional representation of such groups in project workshops and capacity building sessions/ trainings. ▪ In addition, additional trainings will be developed and targeted for women, indigenous peoples and marginalized minority groups to help overcome barriers that may be specific to their group (e.g. leadership trainings, business literacy trainings). This will make sure that such communities are aware of the benefits of sustainable natural resource options, and that revised management plans are able to account for any potential negative impacts that these groups may experience (e.g. providing additional support to such households to benefit from agroforestry systems, etc.). ▪ Interventions will not focus on strict law-enforcement. Where communities decide that additional protection measures are needed (e.g. in an area of highly degraded forest, or in areas with high susceptibility to landslides), based on community-based organization consultation processes, the risk of current measures will be discussed with all members of the organization, and further support will be provided to find alternatives that are accessible to all members of community-based organizations, including where necessary the provision of additional support for highly vulnerable and/or marginalized households (e.g. developing fodder banks). ▪ In the instance where any household feels discriminated against or has a problem with the project, they are able to access the programs grievance redress mechanism. The project´s grievance redress mechanism will be clearly explained to project beneficiaries. Also, local resource persons and partner organizations will also be made aware of the mechanism, and can further provide support to local people to make complaints if necessary.
▪ Site-specific impacts due to the construction of small-scale infrastructure such as contour bunds, stone walls, and check dams (under 5 m	▪ Small-scale site-specific impacts could arise due to the project´s activities, especially the construction of small-scale infrastructure such as contour bunds, stone walls, check dams,[125] and water retention ponds/ conservation ponds. ▪ The construction of small-scale infrastructure for watershed management (contour bunds, stone walls, and check dams) will only be conducted in areas identified in action plans (Activity 1.1.4), or in existing integrated watershed management (IWM) plans or river system management plans. This

[125] The project will only support the establishment of check dams under 5m in height.

Potential Adverse Impacts	Mitigation Measure(s)
in height), as well as conservation/ water retention ponds. This will particularly include small-scale soil loss and potential sedimentation in bodies of water due to construction activities. ▪ Maintenance costs and management ▪ All activities will be screened against the regulations in the Environmental Protection Act and Environmental Protection Regulations to ensure compliance.	will ensure that such infrastructure is planned in an integrated manner and has the most effective impact, and to ensure that DRR/ land use management/ engineers and/or watershed planning experts have been engaged in the design of these measures. These measures will be reviewed considering normal flows, and potential risks, including extreme weather events. ▪ Conservation ponds will be designed by local authorities in cooperation with local communities. Plans for conservation ponds will be revised and approved by local government authorities to ensure that ponds are appropriately planned. Technical assistance will be provided to community-based organizations during the construction process, and local resource persons will be trained on appropriate maintenance and reporting to local authorities. ▪ Local authorities will oversee construction plans, implementation of construction and post-construction monitoring. Regular inspection and maintenance will be conducted by local resource persons (trained by local authorities) and local government authorities. Annual reporting on the maintenance and monitoring of these measures will be done local authorities, and reported to the PMU M&E specialist. ▪ All construction activities will take place during the dry season, to limit damage due to monsoon rains and to limit soil erosion and sedimentation. The removal of soils (e.g. with the construction of conservation ponds) will be stored in areas away from river banks and bodies of water, and will be reused in the form of compost returned to community-based user groups to use for agricultural purposes. An EMP will be developed to ensure appropriate monitoring is in place. ▪ Maintenance costs for soil and water conservation measures will be clearly communicated prior to implementation/ construction. An operational management plan will be developed for all community-based organizations who adopt such practices, which will clearly communicate management needs and maintenance requirements, and establish a plan for financing future maintenance costs based on operational guidelines and procedures of the respective community-based organization. Local resource persons and local government officials will be trained on monitoring, management and maintenance of such investments to lower costs.
▪ Site-specific impacts due to the inappropriate planting of tree species based on site conditions. ▪ Exotic tree species could lead to biodiversity loss and non-locally adapted species could be invasive.	▪ Guidance on site-species matching will be developed for the BRCRN area (Activities 2.1.2,; Activity 3.2.1), providing information on key tree species that are adapted to the area and their ideal site-conditions. It will further identify areas where certain tree species should not be planted based on site-conditions. In addition to native species, the project will only promote tree species which are already locally adapted and do not pose a risk to the local biodiversity. It will ensure compliance with Nepal´s Forestry Policy (2015). ▪ When non-native tree species are to be used as pioneer species to restore highly degraded forests, all activities will be reviewed by the relevant local forest authority and will require approval prior to implementation. ▪ Investments in establishing plantations will only occur for public land forest user groups, comprised of primarily marginalized households, primarily in the upstream-Terai (focus on distant forest users). Plantations will be less than 25 ha in size in the Churia hills and less than 50 ha in size in the Terai. Management plans for such user groups will be developed in a participatory manner with such user groups, combined with ongoing extension support and trainings, and will be submitted to the relevant local authority for approval prior to plantation establishment. Such investments may include locally adapted exotic species in addition to native species, however where possible measures will focus on native species. Forest management plans will be designed by a forestry expert, based on site-species matching to reduce risks of negative impacts and ensure that the plantation is appropriate for the site conditions and beneficiary context. Management plans will comply with national Forest Policy (2015), as well as the Environmental Protection Act and Regulations – including screening to see if activities trigger an IEE or an EIA. An IEE will be required if monoculture plantations are within the range of 25-100 ha in the Churia hills or within the range of 50-500 ha in the Terai, however planned activities for Activity

Potential Adverse Impacts	Mitigation Measure(s)
	1.1.3 are not expected to exceed 25 ha in the Churia or 50 ha in the Terai, but instead will focus on smaller scale plantations to reduce the collection of fuelwood and fodder from natural forests by distant forest users. All plans will be revised and approved by the PMSU and relevant local government officials before interventions are implemented. ▪ The establishment of small-scale community-based nurseries will comply with relevant national legislation (Forest Policy, Environmental Protection Act), and will promote equitable hiring policies ensuring equitable employment opportunities for women, indigenous peoples, Dalits and other marginalized households. ▪ All activities will comply with Nepal´s legal framework, as described in Section 4 (e.g. Forest Policy, Environmental Protection Act and Environmental Protection Regulations, among others). ▪ Technicians from local forest authority who will support the implementation of Activities1.2.1 – 1.3.4 will be trained in sustainable forest planning and management, including site-species matching and risk mitigation. Technical assistance will be provided for the preparation of plans, and once approved further assistance will be provided to support community-based organizations with the implementation of these plans. Local resource persons will be provided trainings in good practices, and will maintain communication with local authorities. ▪ The project will not permit the clearing forests, wetlands or other critical ecosystems for plantation establishment. Site-visits will be conducted by local authorities during the management plan preparation process to ensure that the site is adequate, and to collect information to support monitoring activities (GPS coordinates, baseline data, etc.). Tree-planting activities will be permitted based on approved plans (CBFM plans will be approved by the local forest authority of the respective Province, whereas plans for public land forests will be approved by the forest authority of the local government).
▪ Human-wildlife conflicts could occur due to extended forest cover nearby the farmlands and improved habitat. On the other hand such conflicts could be reduced due to improved habitat and connectivity.	▪ Integrated strategic planning for climate-resilient land use at the provincial and river system level will take into account habitat connectivity and aim to enhance wildlife corridors with the potential to limit human wildlife conflicts. ▪ Local government officials will be trained on human-wildlife conflict management within training activities for Activity 2.2.2, and appropriate trainings (e.g. training to reduce crop depredation through changed cropping pattern and innovative technology) can be provided to local resource persons and community-based organizations as needed. Trainings will likely be particularly relevant for communities within the Adherei Khola, Baruwa Khola, Duar Khola river system, due to the proximity to the Koshi-Tappu Wildlife Reserve.
▪ Occupational health risks (injuries) due to the use of inappropriate forest management practices without appropriate safety equipment	▪ Trainers/ extension staff supporting the implementation of activities related to forest management will be trained on OHS good practices, protocols and equipment, who will then train project beneficiaries involved with the establishment of forest plantations, agroforestry systems, and sustainable forest management. ▪ The project will support the procurement of safety equipment including cut-resistant pants and protective goggles that should be used by beneficiaries to reduce risk. Beneficiaries will receive training on the use of appropriate forest management practices and on protective equipment and risk mitigation practices.

Potential Adverse Impacts	Mitigation Measure(s)
▪ Forest fires in both natural forests and planted forests	▪ Trainings on proactive ´fire-smart´ management practices (e.g. appropriate design of fire lines, how to detect risky practices/ climatic conditions), will help local people and community-based organizations to proactively monitor, avoid or mitigate forest fire risks in forested areas. It will further provide them with skills for improved fire-fighting practices. ▪ Forest fire risks will be monitored by local resource persons within community-based organizations who will improve awareness within their organization about potential risks ▪ Beneficiaries of Activities1.2.1 – 1.3.4 will be required to develop forest fire protocols, that focus on prevention while also include an emergency protocol for forest fires. ▪ Safety equipment procured for sustainable forest management and forest fire control measures by local users, including firefighting equipment.
▪ Site-specific impacts from biogas plants	▪ Nepal uses primarily fixed dome belowground biogas plants. ▪ Biogas plants when inappropriately managed may lead to potential site specific impacts. The inappropriate use of the biogas digester may lead to sanitation issues with bio-slurry, often applied to farm land. Such actions could lead to contamination of soils and groundwater with pathogens. However, Nepal has been implementing biogas projects since 1955 and has long-standing experiences in supporting the scaling up of this technology. Risks associated with the inappropriate use of the bio-digester or management of the biogas technology can be mitigated by providing trainings as well as information materials to biogas users by AEPC and biogas service providers, as well as through continued monitoring and training after equipment installation. ▪ Trainings of local resource persons will support ongoing information exchange, and the PMSU will oversee ongoing monitoring. ▪ An EMP will ensure that such measures are regularly monitored.
▪ Discrimination of women	▪ At least 50% of project beneficiaries will be women, including proportional representation from indigenous groups and marginalized communities (including Dalits) ▪ Gender Action Plan includes measures to promote women´s empowerment and gender equality within the framework of the BRCRN project.
▪ Discrimination or limited engagement of Indigenous Peoples, Dalits and other marginalized groups	▪ Indigenous peoples and social inclusion planning Framework includes measures to the engagement and participation of indigenous peoples within the framework of the BRCRN project. ▪ Invitation of indigenous federations, Dalit organizations and ethnic minority organizations to participate within the project management platforms (PSC and PCU), as well as in the role of project partners supporting awareness raising, training processes and implementation activities ▪ Targeted measures for social inclusion are cross-cutting and mainstreamed into project activities (e.g. trainings for CSOs representing marginalized groups, targets for trainers to come from marginalized groups, business literacy trainings for members of marginalized or highly vulnerable groups) ▪ Promotion of proportional representation within project beneficiaries of indigenous peoples, Dalits and marginalized communities ▪ Knowledge and communication focused activities (Output3) will include information from national experiences, international best practices as well as local and indigenous knowledge (including Activities3.1.1 and 3.2.2 with a strong focus on improving awareness of local and indigenous knowledge for climate change adaptation). The integration of knowledge from diverse actors into extension and knowledge sharing platforms will promote social inclusion, and also allow diverse groups to build on local experiences and knowledge.

Potential Adverse Impacts	Mitigation Measure(s)
	▪ Training of trainers for the for the implementation of project activities should include men and women from indigenous groups, Dalit communities and other marginalized groups ▪ Investments in forestry within Output 1 will focus on public land forest user groups that are primarily comprised of marginalized households, which will support such groups to overcome financial hurdles to invest in climate-resilient land use practices and reduce their reliance on Churia forests for fuelwood, fodder and forage. ▪ Participatory land use planning in Output2 will help ensure that plans are included that empower and engage highly vulnerable households, including indigenous peoples and Dalits. ▪ Provincial climate-resilient land use plan will include a section highlighting the strategy and key considerations/ measures for gender equality and social inclusion. ▪ LRPs who speak local languages should support trainers as well as awareness raising and information dissemination processes
▪ Anticipated private sector investments may not be realized in a timely manner to support implementation.	▪ Cooperation and coordination with the private sector will begin from project inception, and the project will implement awareness raising programs to help engage private sector actors. ▪ Additional support will be provided to help producers organize, and build their capacities to coordinate and negotiate with the private sector. Business training workshops will be conducted for members of community-based organizations, which will help to build their capacities to interact and coordinate with the private sector, and efforts will support these actors to make professional business plans for climate-resilient investments.
▪ Project activities could have a negative impact on the Koshi Tappu Wildlife Reserve	▪ Biodiversity Management Planning Framework has been elaborated in Section 8 to avoid, mitigate and manage risks. Project activities are expected to have a positive impact on the protected area.

Note on land registration:

- An official certificate demonstrating the registration of CBOs, or private forest land is required for all project beneficiaries prior to the implementation of project activities (CBO management plan development, implementation of climate-resilient SNRM, etc.).Given the context in the Nepal, the project will support the registration of CBOs with the relevant local forest authorities (e.g. District Forest Officers, Chief District Officer). The registration of forest-CBOs and private forests is described in the Forest Act (1993),[126] and water/irrigation user groups and other CBOs under the Association Registration Act (1978).[127] On-the ground activities (besides information dissemination, and FPIC) will not be conducted until official registration certificates are obtained. For public land forest user groups, FPIC principles will be followed prior to showing the registration in most cases, as the project will play a more active role in supporting the establishment and registration of such groups, involving more intense capacity building of marginalized households.

[126] For more information refer to: http://extwprlegs1.fao.org/docs/pdf/nep4527.pdf
[127] For more information refer to: http://www.icnl.org/research/library/files/Nepal/Associations.pdf

- For private forest owners, they will need to provide a "Land Ownership Certificate" from the Nepali Government. Extension agents will support the confirmation and documentation of official documents. When they request application for seedlings and participation in the private forestry sub-activity, they will check the official land ownership documents, and collect a scanned copy or picture. They will further register the landowner(s) in the nursery´s data base (with information on the number of seedlings requested, survival records, area planted, etc.).
- Once the trees are planted (1 year after planting the seedlings), the private land owners will need to register their forest as a private forest. Private forest owners must apply for a "Certificate of Private Forest", which is the official document for private forests (as described in the Forest Act, 1993). [128]They must register their planted forest, and receive a formal certificate in return. The project will require that participating private forest owners provide this certificate as proof of government registration and ownership in order to participate in the project.

[128]To receive the certificate private forest owners have to apply at the district forest office (although the responsible authority may change with the ongoing political transition), providing key information including the area of the land acquired and boundaries, information concerning ownership or possession of the land, among other information (see Sub-section 1 of the Forest Act).

Table 12: Potential adverse impacts and proposed mitigation measures for Output2

Potential Adverse Impacts	Mitigation Measure(s)
▪ Potential conflicts within local community-based user groups over land use boundaries (e.g. grazing areas, NTFP collection, etc.)	▪ Agreements indicating that Free, Prior and Informed Consent has been achieved with each participating community-based organization will be created during the implementation of Activity 2.2.2.. Such agreements will be made prior to the implementation of interventions at the community-based organization level. Such agreements are required for community-based organizations to participate in the project as beneficiaries (see Section 8 for further information on the process). ▪ Local level land use planning based on participatory local-level planning processes based on consultations with members of local community-based organizations/users groups, including women, indigenous peoples and people from marginalized minority groups. Through the application of a local participatory process, climate resilient SNRM and land use planning is integrated based on communities priorities and local context. ▪ Trainers and project management will be trained in GESI, and it local community-based groups will need to demonstrate that women, indigenous peoples and marginalized minorities have been consulted within their organization/ users group. ▪ Awareness raising and capacity building on climate-resilient land use planning and SNRM, based on piloted good practices, will ensure that local communities are aware of climate risks and risk-reduction measures, such as climate resilient SNRM and the diverse co-benefits. ▪ Clear dissemination of land management plans and potential changes to members of community-based organization/ users group through LRPs to ensure community members are aware of potential adjustments ▪ Promotion of proportional representation and targeted measures for marginalized groups will ensure that diverse perspectives are taken into consideration in land use planning, and that beneficiaries from diverse socio-economic and socio-cultural backgrounds participate in the project. ▪ Strong focus on capacity building within all project activities will also help raise awareness of climate risks and the link between climate change and natural disasters with unsustainable natural resource management, as well as the benefits of climate-resilient SNRM. ▪ Technical assistance will support communities to adopt sustainable alternative climate-resilient practices. For instance, if one community decides to restrict grazing in community forests, measures will be developed for sustainable fodder production, ensuring a pro-poor and socially inclusive approach is developed based on participation of diverse members of the users group. ▪ Participatory land use planning processes (Activities2.1.2-2.2.2) will ensure that local people, including marginalized communities, are consulted over potential interventions and intervention sites. ▪ Interventions will not focus on strict law-enforcement. Where communities decide that additional protection measures are needed (e.g. in an area of highly degraded forest, or in areas with high susceptibility to landslides), based on community-based organization consultation processes, the risk of current measures will be discussed with all members of the organization, and further support will be provided to find alternatives, including where necessary additional support for highly vulnerable and/or marginalized households (e.g. developing fodder banks). ▪ In the case where any household/ person feels discriminated against or has a problem with the project, they are able to access the project´s grievance redress mechanism.
▪ Potential conflicts over the selection of priority intervention areas.	▪ Decision making is transparent and supporting studies and information (reports, minutes from consultations and workshops) are made publicly available ▪ Stakeholder consultations on provincial level-strategies and river system level action plans identifying critical ecosystems and priority intervention sites

	▪ Strong focus on capacity building within all project activities will also help raise awareness of climate risks and the link between climate change and natural disasters with unsustainable natural resource management, as well as the benefits of climate-resilient SNRM. ▪ In the case where any household/ person feels discriminated against or has a problem with the project, they are able to access the project´s grievance redress mechanism.
▪ Information dissemination may not reach all people including illiterate people (36% of project inhabitants)	▪ In order to ensure the widest dissemination local and accessible disclosure tools including audiovisual materials as well as flyers, brochures, videos and community radio broadcasts, and publications will be utilized in addition to other tools (produced under Output 3). Furthermore, particular attention will be paid to farmers, indigenous peoples, illiterate or technologically illiterate people, people with hearing or visual disabilities, people with limited or no access to internet and other groups with special needs. ▪ Board/ committee members of community-based organizations and Local Resource Persons will be local focal points who are able to facilitate ongoing communication with project beneficiaries ▪ Local CSOs and project partners will be important to support information dissemination and communications at the local level, using locally accepted practices such as community-meetings, workshops, among other practices
▪ In practice in may be challenging to have equal participation due to gender discrimination, especially against women from indigenous groups and marginalized minority groups	▪ At least 50% of project beneficiaries will be women, promoting proportional representation from indigenous groups, Dalit communities and other marginalized groups ▪ Gender Action Plan includes measures to promote women´s empowerment and gender equality within the framework of the BRCRN project. The plan includes detailed measures that target women and aims to empower them within the project, whilst taking into account their differentiated contexts and vulnerabilities. ▪ PMU M&E specialist and PPMU staff will regularly monitor the implementation of the GAP, and work together with CSOs and other actors to strengthen the engagement of women within the project.
▪ Potential discrimination in participation and engagement of indigenous peoples and marginalized minority groups ▪ Lack of culturally appropriate practices, technical assistance and information dissemination for the implementation of Activity 1.3	▪ Indigenous peoples and social inclusion planning Framework (Section 8) includes measures to the engagement and participation of indigenous peopleswithin the framework of the BRCRN project. ▪ Invitation of indigenous federations, Dalit organizations and other organizations representing marginalized communities, among other CSOs to participate within the project management platforms (PCU and PSC) ▪ Establishment of minimum participation targetsbased on proportional representation of highly vulnerable groups, including indigenous peoples (31%) and Dalits (13%). ▪ Training of trainers for the consultations and workshops, as well as extension support should include men and women from indigenous groups, Dalit communities and other marginalized groups ▪ LRPs who speak local languages should support trainers as well as awareness raising and information dissemination processes. Budget dedicated to support the translation of key documentsinto local languages where necessary. Knowledge and information dissemination processes will also take into account that many beneficiaries are illiterate, and thus diverse dissemination measures and streams will be pursued (radio, community presentations, workshops, networks, among others). ▪ Trainings targeted for highly vulnerable groups included within project activities (including trainings on leadership and skill development)

Table 13: Potential adverse impacts and proposed mitigation measures for Output3

Potential Adverse Impacts	Mitigation Measure(s)
▪ Barriers for local beneficiaries to access information	▪ Information dissemination will occur through a variety of channels and formats to ensure that diverse beneficiaries and stakeholders are able to access such materials. Dissemination will include a variety of formats including audiovisual methods, documents, online resources, provincial information hubs, dissemination through CSOs, community-presentations, among others. ▪ Local resource persons, and where necessary translators, can be used to support the dissemination of information when translation is necessary. Trainers will also include women, indigenous peoples and people from marginalized groups. ▪ Targeted trainings, highlighted in Annex 1, will be conducted to address skill gaps and support the empowerment of marginalized and/or highly vulnerable groups. ▪ Board/ committee from community-based organizations will also be responsible for ensuring and supporting information dissemination within their organization. Communication pathways will be clearly discussed prior to the implementation of community-level activities.
▪ In practice in may be challenging to have equal participation due to gender discrimination, especially against women from indigenous groups and marginalized minority groups	▪ At least 50% of project beneficiaries will be women, including promotion proportional representation from indigenous groups, Dalit communities and other marginalized groups ▪ Gender Action Plan includes measures to promote women´s empowerment and gender equality within the framework of the BRCRN project. ▪ Federal and Provincial PMU M&E specialistwill regularly monitor the implementation of the GAP, and work together with CSOs and other actors to strengthen the engagement of women within the project.
▪ Potential discrimination in participation and engagement of indigenous peoples and marginalized minority groups	▪ Indigenous peoples and social inclusion planning Framework includes measures to the engagement and participation of indigenous peoples within the framework of the BRCRN project (Section 8). ▪ Invitation of indigenous federations, Dalit organizations and ethnic minority organizations to participate within multi-stakeholder coordination entities within the project management structure ▪ Establish targets for proportional representation of highly vulnerable groups, esp. indigenous peoples (31%) and Dalits (13%) ▪ Training of trainers for project consultations, trainings and workshops should include men and women from indigenous groups, Dalit communities and other marginalized groups. All trainers will undergo a training on GESI to ensure gender-sensitive and socially inclusive approaches are applied for extension and trainings. ▪ LRPs who speak local languages should support trainers as well as awareness raising and information dissemination processes ▪ Inclusive planning process, ensuring proportional representation and engagement ▪ Business literacy trainings to be provided to women's groups, as well as indigenous peoples groups and Dalits to enhance their understanding of business and the private sector. Business development support will be available to marginalized groups, ensuring proportional representation, to help such groups develop attractive bankable business plans, improving access to private sector finance. ▪ DRR plans and awareness raising measures will help to raise awareness of climate risks and risk reduction measures, which will help many marginalized communities as they often live in highly vulnerable areas and are often directly dependent on natural resources for their livelihoods.

7 STAKEHOLDER CONSULTATION AND ENGAGEMENT

7.1 Stakeholder identification

167. Stakeholder consultation and engagement is at the core of the project. Close cooperation with project partners and extensive stakeholder consultation during project design has provided valuable feedback and shaped the project into its current form. The continuous engagement of stakeholders in project implementation is also envisioned, as described in Chapter 7.3.

168. Stakeholders are defined as actors within the following groups of actors: government, local communities, community-based organizations, civil society organizations/ NGOs, private sector, international development cooperation and international organizations. Key project stakeholders were initially identified through discussions with the NDA, MoFE and FAO during the initial concept design phase. Additional stakeholders were identified as the project developed, especially once the target districts and river systems were identified. CSOs/NGOs were also asked to identify further key stakeholders. In each project district local consultations were held with a combination of CBOs and local communities, CSOs/NGOs, local government, among other stakeholders. Consultations ensured the participation of diverse stakeholders, including women, indigenous nationalities, Dalit people and other marginalized minority groups. To ensure effective engagement of indigenous peoples, NEFIN provided contacts to local representatives and community leaders in the project area. Summaries of all consultations conducted can be found in Annex 3.

169. The specific CBOs and project beneficiaries are not known, and will be identified through the implementation of sub-component 2.1. Participation in this project is voluntary and based on the principles of FPIC (described in Section 8.5.3). A more detailed baseline of these groups will be collected, including detailed stakeholder identification, and collection of socio-economic information.

7.2 Overview of stakeholder consultation and engagement in project design[129]

170. Throughout the process these diverse stakeholders expressed their views, expectations, concerns and ideas for the BRCRN project. In total, over420 people were consulted during project preparation through various workshops at the national and district level, one-on-one meetings with CSOs (at the national and local level), local community-based organizations and communities. The following paragraphs provide a brief summary of the consultations conducted, however more detailed meeting summaries, photos and attendance sheets are available in Annex 3.

[129] Note: Meeting and workshop agendas, minutes and attendance sheets are available in Annex 3.

National Inception Workshop and Bilateral Meetings with Civil Society Organizations (CSOs)

171. An inception workshop was conducted in Kathmandu on November 21, 2017 where the project concept and proposal development processes, including the plan for stakeholder consultations, was presented to 42 participants, from the government, civil society organizations and the private sector. This first workshop served as an important platform to receive early feedback on the project concept and proposal development process. After the inception workshop, various meetings were conducted in Kathmandu with relevant civil society organizations, including NEFIN, NIWF, FEDO and HIMAWANTI, to receive feedback on the concept note and on planned field consultations.[130]

Technical Committee Meetings and Bilateral Meetings with Government Officials

172. In total, five Technical Committee Meeting (TCMs) were held throughout the project development process to receive cross-sectoral feedback from government officials on project design, the validation of findings and agreements (e.g. vulnerability assessment criteria and project area selection).[131]The third TCM was held with diverse government officials, where the proposed consultation processes and (including which stakeholders to engage) were discussed, among other topics. During the project development process, ongoing bi-lateral meetings were organized with diverse government officials to discuss project-specific topics in addition to regular TCMs.

Local Consultations

Local consultations were held with local communities, local community-based organizations, civil society organizations (NGOs, youth clubs, trader groups) private sector actors and local government representatives from December 21-28, 2017 in the districts of Jhapa, Ilam, Morang, Sunsari, Udayapur, Saptari, Siraha, Dhanusha, Mahottari, Sarlahi and Sindhuli. In total, 268 local community-members were consulted (60% men; 40% women). Among participants, 45% were indigenous peoples (Adivasi/ Janajati), 30% hill origin high caste people, 25% Madheshi, 6% Dalits, and the remaining were from other ethnic groups. Additionally, two regional workshops in Itahari and Lahan districts were conducted to receive feedback on the proposed project, where an additional 74 participants attended. Major focus of the consultations was to confirm the environmental problems and challenges faced by the communities, and to receive feedback on the proposed project activities and to identify potential risks or concerns.

Final Consultation Meetings and Validation Workshop

173. Avalidationwas held in Kathmandu on March 25, 2018 to present the project proposal and ESMF.[132]Participants unanimously validated the proposal and noted its relevance for the Churia region of Nepal, as well as the country´s efforts and commitments to address climate

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[130] Inception workshop agenda and attendance list is included within Annex 3.
[131] Agendas and attendance lists for these meetings are included within Annex 3.
[132] The workshop agenda, minutes and attendance sheets are in Annex 3.

change. Additional bi-lateral meetings with CSOs, and the technical management committee were conducted to provide feedback on the proposed project, ESMF and gender assessment and action plan.

Consultation process with indigenous peoples and marginalized ethnic minorities

174. During the stakeholder engagement process, consultation with indigenous people was held and the process for FPIC was initiated as per FAO´s corporate policy on indigenous peoples (more detailed information is available within the Indigenous peoples and social inclusion planning Framework withinSection 8). Consultations were also conducted with organizations and local peoples from marginalized ethnic groups to receive their feedback, and ensure that the project promotes social inclusion and the empowerment of such groups. Annex 3 provides an overview of all of the consultations conducted along with meeting summaries and attendance sheets.

Consultations on gender in the context of the BRCRN project

175. Nepal strives to work towards equality of women and marginalized minority groups. International and national gender specialists were hired to conduct a gender analysis, and to support the elaboration of a Gender Action Plan to promote the empowerment of women and gender equality within the BRCRN project. Diverse bilateral consultations and local focus groups were held with women and women's organizations, including women from indigenous groups and marginalized minority groups, which contributed to the gender assessment and gender action plan. In addition, a gender workshop was held on February 21, 2018 to validate the gender assessment and GAP. Such groups were also invited to the project validation workshops in March 2018. Additional details on the consultations can be found in Annex 3.

7.3 Stakeholder consultations for project implementation

176. As described above, the BRCRN project has been designed based on extensive consultations with diverse stakeholders at the national, regional and local level. It is anticipated that regular stakeholder consultations will continue during the implementation of the BRCRN project to inform stakeholders of the project´s progress, support capacity building and awareness raising, validate findings and present results, among other topics.

177. FAO and MoFE will provide regular updates, including on their website and through the use of other forms of media including print, radio, reports and presentations. Information will be presented in Nepali, English, as well as local languages where appropriate.

178. A telephone number will also be communicated to project beneficiaries and stakeholder where they are able to discuss inquiries related to the project, raise concerns or file a complaint.

179. At the national level, stakeholders will be invited to participate in PSC meetings, bi-annually, to discuss pertinent topics. Participation will be invitation-based, and with a focus on key discussion topics of the meeting.

180. Stakeholders are invitedto maintain permanent representationwithin the PCUs within each province to support project coordination and the communication of project progress and M&E. PCU meetings will be held quarterly in each province (4 meetings per province per year, in total 12 meetings per year), and will serve as an important platform to disseminate information on project progress, opportunities for coordination and to receive and address feedback from diverse stakeholders. Within the PCU stakeholders will provide technical advice and support the coordination of activities together with the PPMU.

181. Annual project reporting will further provide an overview of consultations and workshops conducted, and provide insight into upcoming events for the following year. A communication and information dissemination plan will be elaborated by the third year of project implementation.

182. Participation within the BRCRN project is voluntary, and FPIC will be a core underlying principle which is applied to all community-based organizations. In order to participate in the project FPIC principles will be followed in consultations with all 750 community-based organizations representing the related local communities, given that many community-based organizations have members from diverse socio-cultural and ethnic backgrounds. It will follow the FAO FPIC Manual for Project Practitioners (see Section 8.5.3 for more detailed information). Once CBOs are identified within Component 2, consultations will occur to inform the CBOs of project activities, as well as the possibility for them to directly participate in the BRCRN project. This process will ensure full information is provided in a timely manner before project implementation, emphasizing that participation in the project is completely voluntary and that in case of non-compliance with the concurred arrangements, indigenous peoples have the right to withdraw their consent following the procedure established and mutually agreed upon according to FPIC principles. Information on the project´s grievance redress mechanism will also be circulated at that time (see Chapter 7.5 and 8.9).

183. Each Activity planned for the BRCRN project further has their own stakeholder engagement events, and activities targeted towards awareness raising. Examples of stakeholder engagement include:

- Consultations and workshops on provincial-level strategies and action plans for climate-resilient land use,
- Consultations and workshops on provincial disaster risk reduction plans
- Consultations and workshops on local traditional knowledge for climate change adaptation
- Meetings with CSOs on proposed training modules, and to discuss lessons learned and experiences on GESI
- Establishment of private forest owner and CFUG networks to improve coordination and communication
- Awareness raising workshops
- FFS, trainings and extension services for climate-resilient land use
- Information dissemination, trainings and workshops on CKC

- Annex 1 provides a more detailed overview of planned stakeholder consultation events and workshops during the ESMF work plan.

7.4 Disclosure

184. Disclosure of relevant project information helps stakeholders effectively participate. The FAO will disclose information in a timely manner, that is accessible and culturally appropriate, placing due attention to the specific needs of community groups which may be affected by project implementation (such as gender, literacy, differences in language or accessibility of technical information or connectivity).

185. For moderate risk projects, the FAO will release the applicable information as early as possible, yet no later than 30 days prior to project approval. The 30 day period commences only when all relevant information requested from the project has been provided and is available to the public.

186. FAO will undertake disclosure for all moderate risk projects. For this, a disclosure portal has been established to publicly disclose projects´ documentation related to environmental and social safeguards (environmental and social analyses, environmental and social impact assessments, Environmental and Social management frameworks, Indigenous peoples and social inclusion plans and other relevant documents). The website is: http://www.fao.org/environmental-social-standards/en/.

187. In order to ensure the widest dissemination and disclosure of project information, including any details related to applicable environmental and social safeguards, local and accessible disclosure tools including audiovisual materials such as flyers, brochures, videos and community radio broadcasts will be utilized in addition to other tools. Furthermore, particular attention will be paid to women, indigenous peoples, marginalized minority groups (including Dalits), illiterate or technologically illiterate people, and people with hearing or visual disabilities, people with limited or no access to internet and other groups with special needs. The dissemination of information among these groups will be carried out with the project counterparts and local actors such as municipalities, producers´ associations, indigenousfederations, organizations representing marginalized minority groups, women's organizations, government and other regional actors.

7.5 Grievance redress mechanism

7.5.1 FAO grievance mechanism

188. The grievance redress mechanism is designed to ensure that no individual or group are financially impacted by making a grievance or complaint. Any cost that may be associated with the preparation or issuance of a legitimate complaint or grievance (e.g. engaging a qualified person to assist the complainant) will be covered by the grievance mechanism. Special efforts will be made to ensure the grievance redress mechanism is available for all people, and that women, indigenous, marginalized and other vulnerable groups have equal access and bear no negative repercussions for filing any complaints or grievances.

189. The FAO is committed to ensuring that its programs are implemented in accordance with the organization´s environmental and social standards. In order to better achieve these goals, and to ensure that beneficiaries of FAO programs have access to an effective and timely mechanism to address their concerns about non-compliance with these obligations, the organization, in order to supplement measures for receiving, reviewing and acting as appropriate on these concerns at the program management level, has entrusted the Office of the Inspector-General (OIG) with the mandate to independently review the complaints that cannot be resolved at that level.

190. The FAO will facilitate the resolution of concerns of beneficiaries of FAO programs regarding alleged or potential violations of FAO´s social and environmental commitments. For this purpose, concerns may be communicated in accordance with the eligibility criteria of the Guidelines for Compliance Reviews Following Complaints Related to the Organization´s Environmental and Social Standards, which applies to all FAO programs and projects (Guidelines for Compliance Reviews Following Complaints Related to the Organization´s Environmental and Social Standards).

191. Concerns must be addressed at the closest appropriate level, i.e. at the project management/ technical level, and if necessary at the Regional Office level. If a concern or grievance cannot be resolved through consultations and measures at the project management level, a complaint requesting a Compliance Review may be filed with the OIG in accordance with the Guidelines. Project managers will have the responsibility to address concerns brought to the attention of the focal point.

192. The principles to be followed during the complaint resolution process include: impartiality, respect for human rights, including those pertaining to indigenous peoples, compliance of national norms, coherence with the norms, equality, transparency, honesty and mutual respect.

7.5.2 Project-level grievance mechanism

193. A grievance mechanism has been devised to acknowledge and address any negative impacts of complaints that arise as a result of the project. Any grievances should be analyzed and mitigated as quickly as possible to avoid any tensions or conflicts. The grievance mechanism proposed here is cost effective as it is integrated into the institutional mechanism of the project.

194. The objectives of the grievance redress mechanism are to:

- Provide affected people an avenue through which they can voice their concerns and dissatisfactions;
- Create a platform in which stakeholders and community members can freely raise concerns and complaints to be effectively addressed;
- Demonstrate to project stakeholders and communities that they play an important role in project design and implementation;
- Follow up and report on efforts to take corrective action.

Grievance Principles

195. The formal legal system in Nepal gives government agencies, the local government, quasi-judicial and juridical agencies and local communities the responsibility to accept feedback and grievances. In this project, the following guiding principles will be applied in the grievance redress mechanism, given the related policies and provisions in Nepal:

Table 14: Grievance principles to be applied in the Grievance Redress Mechanism

Grievance Redress Mechanism Principle	Related Policies and Provisions
Legitimacy	▪ The Forest Act 1993 and Forest Regulation 1995: The District Forest Officer (DFO) holds responsibility to receive feedback and grievances related to forestry sector ▪ Good Governance (Management and Operation) Act, 2008: The ministry, departments and districts/ local agencies have responsibility to receive feedback and grievances and take necessary steps to address feedback and grievances in a given timeframe. ▪ Local Self-Governance Act, 1999: Establishes a Mediation Council for grievance redress at the local government level and interested people or groups can register grievances at these councils
Accessibility	▪ Good Governance (Management and Operation) Act, 2008: Governments are required to post a Citizen Charter in a visible place and all agencies must appoint spokesperson and FGR officer to provide information to stakeholders about GRM ▪ In order to ensure the widest dissemination and disclosure of project information, including the contact details and information on how to file a complaint, local and accessible disclosure tools including audiovisual materials as well as flyers, brochures, videos and community radio broadcasts will be utilized in addition to other tools. Furthermore, particular attention will be paid to farmers, indigenous peoples, illiterate or technologically illiterate people, people with hearing or visual disabilities, people with limited or no access to internet and other groups with special needs. The dissemination of information among these groups will be carried out with the local project counterparts and local actors such as municipalities, community-representatives, community-based organizations, CSOs (including indigenous federations, Dalit organizations, women's organizations, FECOFUN and others) provincial governments, among others.
Predictability	▪ The Forest Act 1993, Forest Regulation 1995, National Parks and Wildlife Reserve Act 1973, Good Governance (Management and Operation) Act 2008, the Local Self-Governance Act 1999, Rights to Information Act 2007, Commission for the Investigation of Abuse of Authority Act 1991 and General Code 1964 all provide clear judicial and quasi-judicial procedures with indicative timeframes for each stage. These pre-determined types of process and means of monitoring implementation must be followed.
Fairness	▪ Legal Aid Act, 1997: Requires the provision of legal aid for those unable to protect their rights due to financial or social reasons ▪ Rights Information Act, 2007: Empowers people to obtain needed information from relevant public agencies, bodies or institutions ▪ Constitution of Nepal, 2015:Ensures that all citizens are equal before the law and that nobody can be denied equal protection of law

Grievance Redress Mechanism Principle	Related Policies and Provisions
Rights Compatibility	▪ The Forest Act 1993, National Parks and Wildlife Reserve Act 1973, Local Self-Governance Act 1999, Land Act 1964, and Land Revenue Act 1978 give quasi-judicial jurisdiction to different agencies for grievance redress and these agencies are required to apply the rule of law and due process of law by the Constitution of Nepal
Transparency	▪ Good Governance (Management and Operation) Act, 2008: Gives responsibility to maintain transparency in grievance mechanism to the ministry, department and district/ local agencies. ▪ Rights to Information Act, 2007 and Constitution of Nepal, 2015: all citizens have right to seek information on any matter concerning him/ her or the public.

Adapted from: FCPF/ MoFSC 2017

Grievance Review Dissemination

196. As the grievance mechanism is instated in order to provide a platform for concerns to be voiced by any party, it is important that the method in which grievances can be made is effectively distributed to all stakeholders and community members within the project area. Information regarding the grievance redress mechanism will be distributed to all stakeholders and communities through:
    - Inception workshop for BRCRN Project at the national level, and in each of the three project provinces.
    - Information sessions and community meetings, including the provision of information both orally and through informative materials
    - Brochures regarding BRCRN grievance redress mechanism (produced in Nepali and local languages), distributed to diverse stakeholders including local and provincial CSOs
    - FAO Nepal webpage
    - Included as part of any other communication material that is designed and distributed during project implementation

Table 15: Overview of grievance review procedure

Steps	Procedures
1. Receive and register	▪ Community organizations, households, individuals or other stakeholders submit their grievances to the PMU safeguard officer and supporting officers within PPMUs. ▪ Safeguard Officerswill receive grievances or feedback through telephone/SMS, email, feedback/complaint box or other written or oral formats.
2. Acknowledge, screen, assess and assign	▪ PMU-M&R specialist will screen each grievance to ensure eligibility and either will assign staff to assess and investigate the grievance or forwards the grievance to higher institutional levels if too complicated to be addressed at the respective level

	▪ Officers responsible for the investigation and addressing the grievance prepares and presents report on grievance with potential resolution options
3. Respond and address	▪ PMU-M&R specialist proposes options to address the grievance to the complainant and any other related parties to reach an agreement
4. Implement and monitor	▪ PMU-M&R specialist requests to implement the agreed upon redress option and, along with input from other PMU officers, assigns a relevant officer to monitor the progress and effectiveness of implementation
5. Report	▪ PMUM&R specialist prepares a report, based on a standardized template, on the status of all grievances. This report is then submitted to the National Project Director (NPD) and the PMU´s Safeguard Officer. ▪ The report will be available on the official website for public access

Grievance Structure

197. The grievance redress mechanism has been designed to address any complains or grievances to the project. The designed structure has the grievance first flow through an internal national process, where most issues are expected to be addressed. Within this internal structure, the grievance will first be filed to the local municipality (as per the LGOA 2017), who will also share the grievance report with the PPMUs. The Chief Administrative Officer will process the grievance and, if not possible to be solved will transfer the grievance to the PPMU. If it is not possible to address the grievance within the local municipality, PMU or PSC level, the grievance will be transferred to the FAO national representative, and can be further transferred to the FAO Regional Representative at the Regional Office for Asia and the Pacific. When considered necessary, the FAO Regional Representative will upscale the case to the Office of the Inspector General.

198. The following Figure provides an overview of the proposed grievance redress mechanism:

Level 1: The complaint should be submitted directly to the Local Municipality (as per LGOA 2017), who will also share with the Provincial PMSU the filed grievance. The Chief Administrative Officer will receive and begin processing the grievance. The complaint can be provided in writing or orally to the representatives directly. At this stage the grievance will be registered by the PPMU and investigated by the Local Municipality.

Local Municipality Level (Chief Administrative Officer)	Should respond in 10 working days upon receiving the reported grievance. *Contact for Local Chief Administrative Officers in project municipalities to be included within 6 months of project inception*

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Level 2: The complaint should be submitted directly to the PPMU. The PPMUwill receive and begin processing the grievance. The complaint can be provided in writing or orally to the representatives directly. At this stage, the grievance will be registered and investigated by the PPMU.

PPMU	Should respond in 10 working days upon receiving the reported grievance. *Contact for PMU Safeguard Officer to be included within 6 months of project inception*

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Level 3: If the grievance cannot be solved at the provincial level, then the PPMU should send the grievance to the PMU. If the grievance is related to inter provincial jurisdiction issues, the PMU Safeguard Officer can send the reported issue directly to the National Project Director and PSC.

Project Coordination Unit (PCU, provincial level)	Should respond in 10 working days after consultation with the PPMU *Contact for PMU Safeguard Officer to be included within 6 months of project inception*

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Level 4: If the grievance cannot be solved at the provincial level (PPMU) or federal level (PMU), then the PMU safeguards officer will send the grievance to the PSC, in coordination with the National Project Director.

Project Steering Committee (PSC)	Should respond in 10working days after consultation with PMU Safeguard Officer. *Contact for PMU Safeguard Officer to be included within 3 months of project inception*

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Level 5: In the instance where national authorities cannot solve or address the reported grievance, the Chair of the PSC will send the grievance to the assigned national FAO Representative

FAO Representative in Nepal	Should respond in 10 working days after consultation with the PMU Safeguard Officer and NPD. FAO Representation in Nepal, PO Box 25, UN House, Pulchowk, Kathmandu; 01 5523200; FAO-NP@fao.org

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Level 6: The national FAO representative can ask for advice or assistance from the FAO Regional Office for Asia and the Pacific (FAO RAP). If the grievance cannot be solved by the Country Office, the reported grievance can be transferred to the regional office.

FAO Regional Representative in Asia and the Pacific	Should respond in 5 working days after consultation with FAO Country Office.

	FAO Regional Office for Asia and the Pacific, Maliwan Mansion, 39 Phra Athit Road, Bangkok 10200, Thailand; +66 2 281 7844

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Level 7: Only in particularly difficult cases will the FAO Regional Office for Asia and the Pacific request the assistance of the FAO Inspector General. If transferred to the Inspector General, the Inspector General will follow its Office´s protocol to address the grievance.[133]	
Office of the Inspector General (OIG)	To report potential fraud and misconduct, contact FAO OIG via the following contact information: Confidential hotline: (+39) 06 570 52333 Confidential Fax: (+39) 06 570 55550 Email: investigations-hotline@fao.org

Informal and Customary Grievance Review

199. Customary practices of different community, ethnic and religious groups to manage conflicts will also be integrated into the formal grievance mechanism. In many instances grievance cases have been addressed in an informal manner by local communities under the direction of community or traditional leaders. For example, in the Tharu community, meetings called ´Bhalvansa´ are held to manage grievances, and thus the M&R specialist will consult Bhalvansa leaders when addressing related grievances. The M&R specialist will consider the opinions or recommendations of leaders from any informal redress mechanisms before making any decisions.

Resolution

200. Once a grievance has been addressed and the party that filed the grievance has accepted the solution, an agreement should be signed by all involved parties. Records of all grievances made and addressed should be preserved in order to ensure continued compliance and a transparent grievance review mechanism.

[133] Additional information on guidelines and protocols of the Inspector General´s Office can be found at the following link: http://www.fao.org/about/who-we-are/departments/office-of-the-inspector-general/en/

8 INDIGENOUS PEOPLES AND SOCIAL INCLUSION PLANNING FRAMEWORKS

8.1 Indigenous Peoples' Planning Framework

201. The Indigenous Peoples' Planning Framework (IPPF) will be applied in all locations within the project area where Indigenous Peoples are the sole beneficiaries.

202. 'Excluded´ or marginalized groups in Nepal are defined as include those who have experienced inter-generational discrimination and have been systematically excluded due to their "*economic [situation], caste, ethnicity, gender, disability, sexual orientation, and geographical reasons*" (GESI Working Group 2017). This includes groups including women, poor people, Dalits, Adivasi/ Janajati, Madheshis, Muslims, people with disabilities, third-gender and people living in remote areas.[134]Initiatives in Nepal which are focused on social inclusion and support to marginalized communities therefore tend to include Dalits along with vulnerable indigenous groups.

203. Within community-based organizations in the project area, many groups are heterogeneous comprising men and women from diverse ethnic and socio-cultural backgrounds, including members from different indigenous groups, Dalits, Madheshis, among others. Thus, social inclusion and safeguarding the rights of indigenous peoples, Dalits and other marginalized/excluded communities must be cross-cutting throughout the project´s activities, and monitored in a responsive and proactive manner.

204. In line with the relevant international legal framework, the FAO Policy on Indigenous and Tribal Peoples, and the FAO Environmental and Social Management Guidelines, the following Indigenous Peoples and Social Inclusion Planning Framework has been developed to ensure that all due efforts will be made to respect, include and promote issues important to Indigenous Peoples, Dalits and other excluded/ marginalized groups during project implementation, including their right to Free, Prior and Informed Consent (FPIC).The framework will constitute the basis for the engagement of Indigenous Peoples, Dalits and other excluded/marginalized groups[135] as project stakeholders, promote ongoing consultations and communication throughout the project´s lifespan, develop a feedback and grievance mechanism, clarify monitoring and evaluation arrangements, promote measures to minimize and mitigate any potential adverse effects and ensure project activities are implemented in a culturally-appropriate manner.

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[134]For more information refer to the note on vulnerability in Section 2.3.

[135]Note: 'Excluded´ or marginalized groups include those who have experienced inter-generational discrimination and have been systematically excluded due to *economic [situation], caste, ethnicity, gender, disability, sexual orientation, and geographical reasons*" (GESI Working Group 2017). This includes groups including women, poor people, Dalits, Adivasi/ Janajati, Madheshis, Muslims, people with disabilities, third-gender and people living in remote areas. For more information refer to the note on vulnerability in Section 2.3.

8.1.1 Baseline information

8.1.1.1 Indigenous Peoples in Nepal

205. In Nepal, indigenous peoples are popularly known as Adivasi or Janajati. The Act to Establish the Foundation for the Development of Indigenous Nationalities (2002) defines Indigenous Nationalities as "…*ethnic groups or communities who have their own mother tongue and traditional customs, different cultural identify, distinct social structure, and written and oral history*".[136] While 59 indigenous nationalities are formally identified within this act, a technical committee established by the Government of Nepal in 2010 identified 81 Adivasi/ Janajati groups in Nepal.[137] There are over 9.5 million indigenous peoples living in Nepal, representing around 35% of its population.[138]

206. The Nepal Federation for Indigenous Nationalities (NEFIN) has categorized the indigenous nationalities of Nepal into four geographical regions (Mountain, Hills, Inner-Terai and Terai), and five categories of developmental status based on their level of socio-economic development (advanced, disadvantaged, marginalized, highly marginalized and endangered; Table 16).[139] Over half of Indigenous Nationalities of Nepal are considered marginalized or highly marginalized. Ten indigenous nationalities are considered endangered, of which 50% are in the hill region and the remaining 50% in the inner-Terai and Terai regions.

Table 16: Classification of Indigenous Nationalities of Nepal based on ecological zones

Ecological zone	Advanced	Disadvantaged	Marginalized	Highly marginalized	Endangered
Mountain (18)	Thakali (1)	Bara Gaunle, Byanshi, Chhairotan, Marpahali-Thakali, Sherpa, Tangbe, Tingaule (7)	Bhote (Bhutia), Dolpo, Larke, Lhopa, Mugali, Topkegola, Walung (7)	Siyar, Lhomi (Shingsawa), Thudam (3)	
Hill (23)	Newar (1)	Chantyal, Gurung, Jhirel, Limbu, Magar, Rai, Yakha, Hyolmo (8)	Bhujel, Dura, Pahari, Phree, Sunuwar, Tamang (6)	Baramu, Thami, Chepang (3)	Bankariya, Hayu, Kushbadiya, Lepcha, Surel (5)
Inner Terai (8)			Darai, Kumal (2)	Bote, Danuwar, Majhi (3)	Raji, Raute, Kusunda (3)

[136] http://www.nfdin.gov.np/
[137] Before, the Government of Nepal listed 59 indigenous nationalities in Nepal.
[138] CBS 2011; Indigenous Peoples´ Network for SDGs 2017
[139] NEFIN 2004

Ecological zone	Advanced	Disadvantaged	Marginalized	Highly marginalized	Endangered
Terai (10)			Dhimal, Gangai, Rajbanshi, Tajpuriya, Tharu (5)	Dhanuk, Jhangad, Satar (3)	Kisan, Meche (2)
Total: 59	**2**	**15**	**20**	**12**	**10**

Source: NEFIN 2004

207. Many indigenous peoples utilize the following strategies to maintain their livelihoods:[140]
    a. Nomads (Rautes)
    b. Foraging and horticulture (Chepang)
    c. Foraging, agriculture, horticulture (Hayu, Raji and Thami)
    d. Horticulture and agriculture (Baramo, Bhujel, Chantyal, Dura, Fri, Lumbu, Lapcha, Magar, Pahari, Rai, Sunuwar, Surel, Tamang and Yakkha)
    e. Pastoralism, agriculture and industrial activities (Bara Gaunle, Takali, Byansi, Chairotan, Gurung, Jirel, Larke, Siyar, Tangbe, Thakali, Tin gaunle)
    f. Agriculture (Bote, Majhi, Danuwar, Darai, Dhanuk, Dhimal, Gangai, Jhangad, Kisan, Kumal, Meche, Rajbanshi, Santhal, Tajpuria, Tharu, Rajbanshi)
    g. Agriculture and industrial activities (Marphalis, Thakali, Newar)
208. Although many indigenous groups have been able to control their traditional way of life in the mountain areas, in the Hills, inner-Terai and Terai regions, indigenous peoples have been gradually losing control due to the cultural, economic and political influence of more dominant groups.[141] The majority of indigenous peoples lost ownership and control of their ancestral lands by the 1960s due to land policies such as *Birta* (feudal rulers allocating land for patronage), *Jagir* (land given in lieu of salary) and the abolition of *Kipat* (communal/collective land ownership) land tenure systems.[142] The establishment of national parks, wildlife reserves andother protected areas has also sometimes clashed with indigenous claims to lands, including forced relocation.[143] As a result of these socio-economic and political factors, many marginalized indigenous communities are located in remote, marginal or hazard-prone areas.
209. This, along with the heavy dependence of indigenous and marginalized communities on natural resources for livelihoods, makes indigenous, Dalit and excluded/marginalized groups disproportionally affected by climate change. Although climate effects are cross sectoral, rural livelihoods are most affected and become increasingly vulnerable as climate variations affect the natural resources base on which these livelihoods and cultures are dependent.

[140] IFAD 2012
[141] IFAD 2012
[142] Gurung 2009
[143] IFAD 2012

210. In terms of poverty, in 2011 indigenous peoples[144] experienced lower Human Development Index (HDI) values in comparison to the national average (0.482 in comparison to 0.558 nationally).[145] Such values are more pronounced when comparing differences between indigenous peoples living in the hill/ mountainous regions and those living in the Terai region, with HDI values of 0.509 and 0.473 respectively.[146] The Nepal Living Standards Survey (2011) further identified that nationally, 28% of Mountain/Hill indigenous peoples and 7% of Inner-Terai/ Terai indigenous peoples live in poverty based on the National Poverty Headcount Ratio (slightly higher than the national average of 25%).[147]

8.1.1.2 Indigenous Peoples within the project area

211. Diverse indigenous nationalities reside in the BRCRN project area, where 31% of inhabitants are indigenous peoples (Adivasi/ Janajati, approximately 997,036 people).[148] People from 55 indigenous nationalities can be found in the project area,[149] although there are certain groups which are more predominant than others. The distribution of such groups depends on the district and region (Churia hills, Bhavar region, inner-Terai, etc.). In the Eastern part of the project region, Rai, Limbu and Dhimal are the predominant indigenous nationalities. In the central part of the BRCRN project area, the Magar, Kumal, Danuwar and Sunuwar. Magar and Tamang nationalities have a more significant presence. The Lepcha nationality[150] is primarily found in the district of Ilam, and to a lesser extent in Jhapa, Morang and Udayapur.

8.1.1.3 Representation of Indigenous Peoples in Nepal

212. Several organizations and networks have been created to promote indigenous and social inclusion priorities within Nepal. At the regional level, the Nepal Federation of Indigenous Nationalities (NEFIN) is affiliated with 56 indigenous peoples' organizations and is linkedto the Asia Indigenous Peoples' Pact.[151] The National Network of Indigenous Women (NNIW) in Nepal is associated with the Asian Indigenous Women's Network and is working to establish a distinct identity and space for indigenous women in the women and gender equality movement within the indigenous peoples' movement.

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[144] Excluding Newars who had a HDI value of 0.565; UNDP 2014
[145] UNDP 2014; HDI takes into account three dimensions to provide an estimation of to assess the development of a country. It is based on three dimensions: long and healthy life (life expectancy at birth, knowledge (expected ears of schooling, mean years of schooling), a decent standard of living (GNI per capita). Additional information can be found at: http://hdr.undp.org/en/content/human-development-index-hdi
[146] UNDP 2014
[147] Ibid.; http://cbs.gov.np/nada/index.php/catalog/37
[148] CBS 2014; Based on VDC level data
[149] Ibid.
[150] Listed as endangered groups in Nepal.
[151] IFAD 2012

213. Nationally, several grass-roots level indigenous peoples' organizations exist. Although many traditional indigenous peoples' organizations have disappeared, some have survived and have served as models for bodies set up by other castes and ethnic groups.[152] Modern indigenous peoples' organizations can be categorized into six main groups: (1) Indigenous peoples' ethnic organizations such as NEFIN; (2) Indigenous peoples' professional and occupational groups such as Lawyers for Human Rights of Nepal's Indigenous Peoples; (3) Indigenous peoples' NGOs such as Non-governmental Organization Federation of Nepal's Indigenous Nationalities; (4) Indigenous peoples' political parties such as the Nepa: *Rastriya* Party and *Sanghiya Lokatantrik Rastriya;* (5) Indigenous peoples' fronts , networks and alliances, such as the Indigenous Peoples Mega Front; (6) Indigenous peoples' independent intellectuals.[153]

8.1.2 National policies and international commitments

214. Historically indigenous peoples have often experienced cultural discrimination, economic exploitation, social exclusion and political oppression. The political consolidation of Nepal under a feudal regime throughout the 19th and 20th centuries discriminated against these groups, as did the Panchayat regime of the 1950s-80s.[154] The creation of national parks in the 1970s also displaced many indigenous peoples from their ancestral lands and led to loss of customary rights of indigenous peoples over land, forest and water resources.[155]

215. Issues of social exclusion and discrimination came to the forefront after the 1990 democratic movement opened the floor for conversation regarding Nepal's Indigenous Peoples.[156] The Constitution of 1990 and Interim Constitution of 2007 recognise the distinct cultures and rights of Indigenous Peoples. The Constitution of Nepal (2015) includes a Right to Equality stating that all citizens should be equal before the law, that they should not be denied equal protection and that nothing should bar the making of special provisions for the protection, empowerment or advancement of those lagging behind, including Indigenous Peoples. A sub-article dealing with social justice and inclusion exists and it supports the securing of rights to Indigenous Peoples to live with their respective identities, be included in decision making processes and have their traditions, culture and social practices preserved and maintained.

216. The first legislation specifically on Indigenous Peoples, The National Foundation for Development of Indigenous Nationalities Act was passed in 2002. The law established the National Foundation for Development of Indigenous Nationalities (NFDIN), an independent organization that works as the link between the Government and Indigenous Peoples with the mandate to implement programs that support the development of all Indigenous Peoples and to recommend to the government strategies to improve the social, economic and cultural development of Indigenous Peoples. This act replaced the previous National Committee for Development of Nationalities with NFDIN, which defines Indigenous Peoples

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[152] IFAD 2012
[153] Ibid.
[154] Gurung 2009
[155] Ibid.
[156] ADB 2010

(*Adivasi/Janajati*) and promotes the overall development of Indigenous Peoples, preservation and promotion of traditional knowledge, skill and technology, inclusion of IPs in decision processes and building of an equitable society.

217. Nepal has also ratified the International Convention on the Elimination of All Forms of Racial Discrimination in 1971 to secure the rights of Indigenous Peoples, Dalits and others who have suffered racial discrimination.[157] The ratification of the International Labour Organization (ILO) Convention 169 in 2007 further represents Nepal's commitments to address the needs of indigenous nationalities.[158] In particular, the ILO Convention states that Indigenous Peoples have the right to self-determination and can freely determine their political, economic, social and cultural status and development. Although there have been many difficulties in the efficient implementation of these treaties and conventions, the ILO Office in Nepal has actively been engaging with the Nepali Government and Indigenous Peoples to support their implementation. Nepal has also made several other international commitments to non-discrimination, gender equality and social justice. These include, among others:
    - Universal Declaration of Human Rights
    - Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities
    - Beijing Declaration and Platform for Action
    - Durban Declaration and Programme of Action
    - International Decades of the World's Indigenous People
    - United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)
218. The constitution of Nepal (2015) states that it is the responsibility of the state to make "special arrangements to ensure the rights of Adivasi Janajatis (indigenous ethnic groups) to lead a dignified life with their respective identifies, ensuring their participate in decision making processes that concern them, and preserving and maintaining the traditional knowledge, skills, experience, culture and social practices of Adivasi Janajatis and local communities" (Article 51, j, 8).

8.1.3 Key findings and analyses of impacts, risks and opportunities

219. As described in Chapter 2.3 of the ESMF, the population in the core BRCRN intervention area (i.e. within 26 river systems) is over 3,216,428 - around 11% of Nepal´s population. Indigenous Peoples (Janajati/ Adivasi) make up 31% of the area's population.
220. Climate change will have a disproportionate adverse impact on Indigenous Peoples. These groups are often more vulnerable to climate change and climate-induced natural disasters due to inter-generational discrimination (social and economic exclusion), they are usually heavily dependent on natural resources to maintain their livelihoods, and they often live in

[157] Ibid.
[158] Ibid.

high risk areas that are often along river beds or in susceptible landslide or erosion areas.Therefore, the project is in their direct interest as it will strengthen the resilience of Indigenous Peoples living in vulnerable river systems.

8.1.3.1 Potential impacts of the BRCRN project on Indigenous Peoples

221. Given the ethnic and socio-cultural diversity within the project area, and often within CBOs, promoting participatory land use planning that takes into account the differentiated vulnerabilities, priorities and contexts within community-based organizations will be important for project implementation. Participation in the project is voluntary, and FPIC will be a cross-cutting principle applied to ensure that free, prior and informed consent is provided prior to the implementation of any activities (cf. Section 8.3).
222. The project will support men and women from indigenous communities living in vulnerable river systems to increase their awareness of climate change and future risks, and to support them to adopt climate-resilient farming practices. Such measures will reduce ecosystem degradation, improve agricultural yields through improved soil fertility and improved access to water sources as well as reduced erosion, and support the sustainable use of forest resources. It will ultimately reduce the vulnerability of Indigenous Peoples and ecosystems to climate-induced hazards and projected impacts.
223. The project is based on a participatory approach in line with the principles of FPIC, so that Indigenous Peoples are able to adopt measures that are well suited to their local context and differentiated vulnerabilities. Various measures aim to strengthen awareness on local indigenous knowledge and practices, and to mainstream such information into trainings. Capacity building will also be provided to train indigenous resource persons and extension agents on climate-resilient land use practices, including indigenous knowledge.
224. The project aims to cause no harm to Indigenous Peoples, including through loss of livelihood or impacts on their cultural identify. Indigenous Peoples consulted identified that the project addresses many issues that affect their livelihoods including climate change, climate-induced natural hazards, and land degradation trends in the area. They noted that water scarcity and extreme heat already impact their agricultural production, and that flooding and landslides further negatively impact Indigenous Peoples within the project area. Forest and land degradation also further negatively impact their livelihoods through reducing the abundance and quality of forest products, including medicinal herbs and NTFPs.
225. Due consideration was given to the following potential impacts and mitigation measures within the context of the project:
    a. Potential displacement of land use activities: It was identified as critical that the project does not result in the displacement of Indigenous Peoples' social and economic activities. While the project aims to support investments in climate-resilient agriculture, ecosystem restoration of forests, wetlands and grasslands, and tree planting in non-forested areas, investments will be made primarily on public land where management by community-based groups is permitted. Participation in the project is voluntary, and the principles of FPIC will be followed in consultations with all participating organizations representing Indigenous Peoples, prior to the implementation of local-level workshops and local interventions (Output 1). In instances where critical ecosystems are jointly

identified by Indigenous Peoples and project staff, alternative land uses will be discussed – taking into consideration the priorities and differentiated vulnerabilities of Indigenous Peoples. Discussed alternative sub-activities will only be implemented based on the full consent of the interested Indigenous Peoples and in close coordination with the competent authority. The project will neither be involved in supporting strict law enforcement, nor in challenging the traditional use of forest, land and water resources by Indigenous Peoples.

Sub-project screening will also ensure that appropriate management plans are adopted and monitored to minimize social and environmental risks and impacts from the project. Project activities will be implemented in line with Acts and Regulations adopted by the Federal, Provincial and Local Government bodies, respecting the customary rights of Indigenous Peoples over land and forest resources. It is anticipated that the project activities will reduce the likelihood of negative or adverse impacts on customary land tenure and livelihoods of Indigenous Peoples.

b. Exclusion or limited influence within community-based organizations: While community-based organizations have integrated social inclusion and policies related to enhancing the engagement of all groups, in practice there are occasionally challenges to fully engage Indigenous Peoples into decision making processes. The project will support full, effective and proportional representation of Indigenous Peoples within the context of project activities, including through the recognition of Indigenous Peoples' Organisations (IPOs) active within the project area as a category of CBOs within the project beneficiaries. It will further promote targeted activities to support Indigenous Peoples to be aware of their rights and opportunities within community-based organization management structures, and to promote leadership and skill development within the framework of the project.

8.1.3.2 Consultations with Indigenous Peoples

226. The project development team ensured that Indigenous Peoples were duly informed, in a transparent and impartial way, about the project activities being proposed. Iterative discussions on the proposed project activities were conducted from November 2017 to May 2018 with the related outcomes being documented and made available to all parties (meeting summaries and attendance sheets available in Annex 3).

227. Representatives from NEFIN and NIWF were present at the Project Inception Workshop on November 21, 2017. Consultations with NEFIN and NIWF occurred in December to discuss the proposed project and the planned field consultations. The concept note was shared with NEFIN as well as the tentative project target districts, and NEFIN provided a list of contacts within the proposed project districts whom they recommended to contact for local consultations. NEFIN also provided information from consultations with the Govern-

ment on the Government´s proposed REDD+ Emissions Reduction Program and Forest Investment Program, where extensive consultations were conducted, of which many comments were relevant for the BRCRN project.[159]

228. At the local level, consultations were held with diverse communities and community-based organizations, as well as local trader groups and youth clubs. In total, 10 local consultations were conducted specifically with indigenous communities, in addition to numerous other consultations with local community-based organizations with mixed-membership. Of the 268 people consulted at the local level, 45% were indigenous peoples. Additional regional workshops were held in Lahan and Itahari, where NEFIN representatives were invited among other stakeholders.

229. Consulted communities were in favor of the project, noting that climate change, climate-induced hazards and land degradation have a negative impact on their livelihoods, many of which are dependent on agriculture and forests, and some groups also livestock.Table 17 below provides a summary of the consultation meetings and recommendations from communities. More detailed summaries are available in Annex 3.

230. In February 2018, a targeted Gender Workshop was held in Kathmandu to present the draft Gender Assessment and Action Plan. Half of the participants in the workshop were indigenous women, who provided valuable insight into how to empower women, including women from diverse socio-cultural and ethnic backgrounds, within the context of the BRCRN project (more information is provided in Section 8.6 below for further information).

231. Due to scheduling conflicts, attempts to meet NEFIN and other indigenous organizations in March to present the consultation results and proposed recommendations, communication pathways and grievance mechanism were unsuccessful. Representatives from NEFIN were also unable to attend the project validation workshop on March 25, 2018. In the validation workshop, the refined project concept was presented along with the proposed monitoring framework, gender action plan and safeguard approach. While safeguard considerations were presented, it was clearly noted that additional consultations with NEFIN and other indigenous organizations would be required to present the findings of the field consultations, refined concept and proposed safeguard framework.

232. Follow up discussions were held with NEFIN and representatives from the Center for Indigenous People´s Research and Development on the Indigenous Peoples and Social Inclusion Planning Framework, as well as the project proposal in September 2018.

[159] Documents provided included the Report of the Consultation Workshop on Nepal´s ER-PD (2016), the Recommendations of Indigenous Peoples of Nepal on Forest Investment Program (FIP) and Dedicated Grant Mechanism (2017), Position Statement of Indigenous Peoples on Emissions Reduction Program of Nepal (2016).

Table 17: Overview of consultations with a focus on indigenous peoples in the context of the BRCRN project and the main topics addressed/ recommendations*

Date and Location	Entities Consulted	Main topics addressed and recommendations
December 4, 2017, 10:30-12:00, NEFIN CCPP Office, Kathmandu, Nepal	Nepal Federation of Indigenous Nationalities (NEFIN)	**Agenda**: Presentation of project proposal to be submitted to GCF, and discussion on perspectives on the project and recommendations for its feasibility **Feedback/ Recommendations**: ▪ A tentative list of areas in the Churia-Terai region was identified as potential target sites: Ilam, Jhapa, Morang, Sunsari, Udayapur, Saptari, Siraha, Dhanusha, Mahottari, Sindhuli, and Sarlahi. Contacts for the project area were shared by NEFIN and contacted for the identification of stakeholders to consult with during the local consultations. ▪ The importance of knowledge and learning-oriented interventions, particularly incorporating the knowledge of indigenous peoples, was emphasized and will be considered in designing the project measures and full and effective participation of indigenous peoples in institutional set-up. ▪ Relocating people in the upstream forested areas (which often have major environmental, cultural, political and socio-economic impacts) was deemed unsustainable; instead best practices, capacity building and incentives for sustainable land management were discussed e.g. agroforestry. It was emphasized that relocation is not permitted within the framework of the BRCRN project. The concept of sustainable land management should include all aspects of sustainability (i.e. cultural, social, economic, political and environmental meanings and values of land). For indigenous peoples, land carries multiple meanings and values. ▪ The importance of interventions on sustainable land use management was also emphasized, along with the need to account for regional differences when planning the value chain and NTFP project components. Cultural values of NTFPs should be taken into account ▪ NEFIN's caution of interventions promoting strict law enforcement and land tenure was made clear (this so is because the existing forest act of Nepal disrespects the rights of indigenous peoples over natural resources. Indigenous peoples have been fighting to secure their rights over land and natural resources including forest. It was emphasized that the project will not focus on strict law enforcement, and will instead focus on incentives for sustainable land management and sustainable alternatives. ▪ NEFIN's priority of ensuring equitable and fair benefit sharing for IPs, their adequate participation in the program and do-no-harm policy was also noted and it was agreed that the program will take into account international conventions, agreements and commitments made by Nepal, especially in regards to IPs. NEFIN agreed to provide further information on their stance on REDD+ and the FIP, which are as follows: ▪ Key points: 1. Criminalization of indigenous peoples for using their land/forest for their livelihood and cultural needs is always a threat. 2. Militarization against indigenous peoples' access to land and forest has often been experienced. ▪ Ensure: 3. **Institutional architecture** with full and effective participation of the representative organizations of indigenous peoples and of the customary institution of IPs. 4. **Governance structure:** indigenous peoples' access to, and participation in, decision-making structures. 5. **Intervention activities/project activities** need to be economically, socially, culturally and environmentally viable and valuable. 6. **Benefits:** Balance monetary value with social, cultural and environmental benefits 7. **Implementation approach and methods of the Project activities** should be based on human rights-based approach and contributing to climate change adaptation and mitigation at large. 8. **Development, implementation and monitoring of Indigenous Peoples Plan (IPP)** should be by and for indigenous peoples.

Date and Location	Entities Consulted	Main topics addressed and recommendations
		9. **Land tenure**: respect customary land use and ownership of indigenous peoples 10. Paradigm shift from 'do –no-harm' to 'do-good'. 11. The framework,'Indigenous Peoples Planning Framework" must be specific to indigenous peoples only. It is good to link with other plans and frameworks such as Gender Action Plan and the Environmental and Social Framework. But also, it is important to keep the framework exclusive to IPs so that it can guide the future Indigenous Peoples' Plan (IPP). 12. Consistency in the terminologies. We recommendto use the terms such as "indigenous peoples", "the knowledge of indigenous peoples", "customary institutions", "customary law", "Indigenous People Organization (IPOs)" 13. Better not to use the term interchangeably, for example: Indigenous Peoples Organizations (IPOs) are not the same as CBOs representing local and other marginalized communities …
December 13, 2017, 13:45-14:45, NIWF Office, Kathmandu, Nepal	National Indigenous Women´s Federation (NWIF)	**Agenda**: Presentation of project proposal to be submitted to GCF, and presentation of NIWF and perspectives on the project. **Feedback/ Recommendations:** ▪ An overview on Nepal's indigenous peoples, their traditions, local produce and connection to natural resources was presented. ▪ The disadvantaged faced by IPs, including government-imposed restrictions on NR use, displacement as an effect of globalization and economic forces, access to modern seeds and displacement of native plants were discussed. The causes of deforestation, from the perspective of NIWF, were presented. ▪ Indigenous men and women are differently affected by climate change; women have a higher dependence on natural resources (some groups even more than others). Many IPs, especially women, are also unaware of future climate change risks and ways to cope with its challenges, mitigation activities, government policies and related training efforts. ▪ Given that IPs, especially women, possess knowledge on functional natural resource management practices, and engage in some malfunctional practices as well, there is a great need for information sharing between groups.
Local Consultations		
December 21, 2017, 09:00-11:00, Shree Antu, Ilam	Lepcha/ Rong Community in Shree Antu, Illam	**Indigenous Nationalities: Lepcha/Rong** **Agenda:** Discussion on climate change and drivers of land use change, presentation of GCF project proposal, followed by discussion, feedback and recommendations on the proposal. **Feedback/ Recommendations:** ▪ The Lepcha community is especially vulnerable to climate change impacts due to their high dependence on forests and agriculture, small land holdings, semi-literacy, vulnerability to landslides, and reduced production of major cash crop (tea) due to rainfall variations. The community reports increased temperature and changes in rainfall patterns that have allowed them to start growing other crops such as a local variety of chili and orange but has put their other agricultural practices at risk. ▪ Both men and women participate in agricultural and livestock activities but women work in the household sphere while men take part in the community sphere. Women often do not have land ownership or opportunities to access trainings and education. ▪ They report declining water supply but increase in both forest coverage and health due to the handing over of forests to local communities, the promotion of stall feeding and prevention of open grazing. Most households are members of the community forest programs, have planted broadleaf

Date and Location	Entities Consulted	Main topics addressed and recommendations
		trees to stabilize the landscape and believe that community and private forestry are effective in maintaining greenery, protecting the Churia and producing income. ▪ Current coping strategies and potential livelihood improvement opportunities include growing a new cardamom variety, shifting from traditional cereal crops to cash crops, entering organic tea production, raising improved cattle variety and ecotourism. The community gave their support to implement program interventions with livelihood co-benefits and also voiced need for agricultural inputs, technical support and linkage development to agricultural markets.
December 22, 2017, 13:00 Sukhani, Illam/ Jhapa	Indigenous Women in Kankai Watershed	**Indigenous Nationalities: Limbu and Rai** **Agenda**:Discussion on climate change and drivers of land use change, presentation of GCF project proposal, followed by discussion, feedback and recommendations on the proposal. **Feedback/ Recommendations:** ▪ This settlement was established in the early 1980s ▪ The main sources of livelihoods are agriculture, small businesses, setting firewood and foreign employment/ remittances. Women are predominantly involved in service provision. ▪ Highly vulnerable groups dependent on subsistence farming in marginal lands and riverbanks are affected by floods, erosion and land degradation ▪ Recommendations of activities that address both conservation and livelihood needs included vegetable farming and livestock raising, skill development for handicrafts and off-farm employment, awareness raising, timber and non-timber forest product plantations, and promotion of grass cultivation, fodder trees and stall feeding
December 22, 2017, 15:00-17:00, Kankai, Illam/Jhapa	Indigenous Men from Kankai Watershed	**Indigenous Nationalities: Limbu** **Agenda**:Discussion on climate change and drivers of land use change, presentation of GCF project proposal, followed by discussion, feedback and recommendations on the proposal. **Feedback/ Recommendations:** ▪ The main sources of livelihood here are wage labour, agriculture with livestock management, small businesses (selling of local brew), the selling of firewood and foreign employment. ▪ The participants noted the following climate change impacts: temperature increases, erratic rainfall, end of prolonged misty rains and drying up of water springs ▪ Recommendations for project activities included promoting livestock-related activities like goat and pig keeping, bee-keeping, carpentry and bamboo-based construction. For women, supporting local cloth weaving and the promotion of small businesses to improve livelihoods was also suggested. There was interest in the installation of ponds on riverbanks for conservation and livelihood purposes.
December 22, 2017, 16:00, Kharkhola, Sunsari	Indigenous Group in Patnali Watershed	**Indigenous Nationalities: Magar and Newar** **Agenda**:Discussion on climate change and drivers of land use change, presentation of GCF project proposal, followed by discussion, feedback and recommendations on the proposal. **Feedback/ Recommendations:**

Date and Location	Entities Consulted	Main topics addressed and recommendations
		▪ The participants listed open grazing in the forest, illegal harvesting of forest products, extraction of river bed materials (i.e. sand, boulders, gravels), unsustainable agriculture practices, encroachment of lands in the upstream areas, inappropriate/unscientific management of natural resources and forest fires as major causes for degradation in Churia ▪ A focus on poverty alleviation, employment and income generation of locals, as well as landscape level planning and implementation of concrete actions was suggested for the proposed project. E.g. awareness raising campaigns, developing stall feeding practices, river embankment construction, tree plantations etc.
December 23, 2017, 09:00-11:00, Damak, Ratu River System	Indigenous Women's Group in Damak	**Indigenous Nationalities: Dhimal** **Agenda:** Discussion on climate change and drivers of land use change, presentation of GCF project proposal, followed by discussion, feedback and recommendations on the proposal. **Feedback/ Recommendations:** ▪ Although Dimal families used to own more than 67ha of land, now many own less than 2.1ha or are landless/ marginal farmers due to displacement promoted by the arrival of new people after the establishment of TarabariDipo (forest wood supply depo) and the malaria eradication project. ▪ Dimal people are highly dependent on farming and are experiencing reduced water availability and shifting rainfall patterns, affecting farming productivity. ▪ Cited causes of deforestation include river mining/ crusher industries, tree cutting/smuggling, open grazing and lack of awareness. ▪ Potential livelihood enhancement activities include bee keeping, goat raising, piggery, poultry, fishery, mushroom farming, weaving cloth (women), tourism, and fish ponds. The introduction of these activities must be linked with improved market and road networks, increased awareness of forest conservation and plantation strategies, and conservation of Dhimal culture. ▪ They recognize the strong linkage with upstream communities and advocate the addressment of encroachment, illegal settlements, tree cutting, open grazing and poverty issues in upstream communities.
December 23, 2017, 09:00-11:00, Damak, Ratu River System	Indigenous (Dhimal) Community Group in Damak	**Indigenous Nationalities: Dhimal** **Agenda**:Discussion on climate change and drivers of land use change, presentation of GCF project proposal, followed by discussion, feedback and recommendations on the proposal. **Feedback/ Recommendations:** ▪ Women and men are active in separate domains, men in the public domain and women in the household domain. Women are mainly involved in the household activities, vegetable farming and livestock management, with main sources of living being weaving of clothes, making local brew, and selling bhakka (special food made of flour) ▪ Dhimal women are impacted heavily by increasing water shortage, with water scarcity affecting household consumption, vegetable farming and other agricultural activities, as men are largely absent from the home sphere (working off-farm jobs or have migrated to foreign countries for work) ▪ Participants are interested in skill development in areas such as small businesses, vegetable farming, goat raising, tourism, hotel and services and weaving, to diversify livelihoods
December 23, 2017 17:00-18:00	Indigenous Community	**Indigenous Nationalities: Rai** **Agenda:** Discussion on climate change and drivers of land use change, presentation of GCF project proposal, followed by discussion, feedback and recommendations on the proposal.

Date and Location	Entities Consulted	Main topics addressed and recommendations
Sunakham-chu River Watershed Udayapur	in Udaya-pur	**Feedback/ Recommendations:** ▪ The main drivers of deforestation in the Churia were identified as illegal harvesting of sal trees, and it was noted that deforestation is linked to other environmental problems, especially landslides and flooding, which have major impacts on local livelihoods. ▪ Many households grow maize, beans, and fruits, among others. The local people do not have knowledge of climate-resilient farming and livestock management practices. ▪ It was emphasized that the project should support local livelihoods, taking into account local people's dependence on the agriculture and forestry sector´s for their livelihoods. Communities mentioned activities such as bamboo plantations, broom-grass (amriso) cultivation, cardamom cultivation and banana plantations as interesting to the community.
December 25, 2017 16:00 Mohanpur, Mahuli, Sap-tari	Womens Group (with high participa-tion from indigenous women)	**Indigenous Nationalities: Limbu, Rai, Magar and Tamang** **Agenda**: Discussion on climate change and drivers of land use change in their community, presentation of the GCF project proposal, discussion, feedback and recommendations **Feedback/ Recommendations:** ▪ Main economic activities here include farming and livestock management. The village is heterogeneous in terms of case and ethnic groups, leading to caste based social discrimination and inequalities. Although gender differences can be seen in household and public domains, both women and men are involved in household and agriculture activities. ▪ Livelihood improvement options for the BRCRN project include introducing improved or hybrid varieties of cattle (all households have at least some livestock but do not have funds to invest in improved variety), off season vegetable farming (issues of irrigation), utilizing barren lands for fodder trees, address irrigation issues, and grass plantations. ▪ They attribute forest degradation to over exploitation, human made fires, and political movements such as Maoist and Madeshi movements. Women now experience difficulties collected fodder, ground grasses, and water causing great time-poverty.
December 25, 2017, 09:00 Balan Khola Wa-tershed	Terai Com-munity (in-cluding Madheshis and Tharu peoples) in Balan Khola Watershed	**Indigenous Nationalities: Tharu** **Agenda**:Discussion on climate change and drivers of land use change, presentation of GCF project proposal, followed by discussion, feedback and rec-ommendations on the proposal. **Feedback/ Recommendations:** ▪ Participants indicated a strong connection to Churia forests due to the presence of a sacred site within, where offerings are made for community prosperity; it was suggested that this site be promoted as a tourist destination ▪ Respondents stressed that there are no cookie cutter solutions applicable to the community due to the diversity in the groups of people living in the area, and that project planning should take this into account. I.e. Tharu people do not often engage in livestock management (which other high caste hill groups do), and rather give more priority to farming, fishery and duck keeping ▪ The Musahar are landless and need support in terms of vegetable farming, to help promote their livelihoods
December 25, 2017, 16:30-18:30, Balan River	Tharu In-digenous Community in Balan	**Indigenous Nationalities: Tharu** **Agenda**:Discussion on climate change and drivers of land use change, presentation of GCF project proposal, followed by discussion, feedback and rec-ommendations on the proposal. **Feedback/ Recommendations:**

Date and Location	Entities Consulted	Main topics addressed and recommendations
System, Siraha	River System	▪ Farming and horticulture are the main livelihood strategies, with mango production being the main source of cash generation. Agriculture production is decreasing due to irrigation and labour shortages. There is a lack of awareness about climate change. ▪ The community reports population growth, settlement encroachment, illegal harvesting, open grazing, and people-induced forest fires to be main causes of forest degradation. ▪ They suggest stall feeding, plantation of fodder trees and grasses, provision of leasehold farming to landless, small and medium sized farmers and planting trees in Ailani lands to help protect the forests. ▪ Livelihood support in terms of check dam construction to combat landslides, promotion of mango, turmeric, ginger, fodder and grass plantations, integrating forest management with fodder production, and provision of training and technology to process mango into a variety of products to promote local employment were suggested.
December 26, 2017, 14:00 Gausala, Mahottari	Indigenous Group of Terai in Mahottari	**Indigenous Nationalities: Tharu** **Agenda**:Discussion on climate change and drivers of land use change, presentation of GCF project proposal, followed by discussion, feedback and recommendations on the proposal. **Feedback/ Recommendations:** ▪ Farming and horticulture are the main livelihood strategies here; paddy, dalhan, oilseeds, and vegetables are produced. Mango cultivation is becoming popular and is a source of cash generation in the area. ▪ Respondents expressed interest particularly in the promotion of stall feeding, plantation of fodder trees on the banks of rivers, and plantation of fodder trees in Ailani land, as part of the proposed GCF project. ▪ Respondents noted that in Gausala Village, villagers have traditionally been producing mangoes. Raw mango is sold to local traders, however, receiving support in the form of trainings, knowledge and technology to facilitate the production of jam, pickle, candy and related mango products would create more employment opportunities locally, including for women and poor people.

Note: additional consultations with mixed communities (indigenous and non-indigenous households) and community-based organizations were conducted, with high participation from indigenous peoples. These consultations represent the consultations that had a stronger focus on indigenous-specific issues and recommendations. Annex 3 contains attendance sheets and summaries of all consultation meetings.

8.2 Social Inclusion Planning Framework

233. The Social Inclusion Planning Framework (SIPF) will be applied in all locations within the project area, except those where the IPPF applies.

8.2.1 Baseline information

8.2.1.1 Dalits and other excluded/marginalized groups in Nepal

234. **Dalits**, though in many respects one of the most marginalized communities in Nepal, are not considered indigenous, nor do they self-identify as such. The Dalits are a "low caste" group which have experienced inter-generational discrimination, and are considered one of the most marginalized groups in Nepal. In Nepal there are an estimated 3.6 million Dalits living (around 13.6% of the population). Within the Dalit caste, Dalits are often divided into two categories: hill Dalits (i.e. Dalits living in the mid-hills and Churia range), and Terai Dalits (i.e. Dalits living in the Terai plains. Dalits are among the most poor castes and ethnicities in Nepal. While Dalits make up over 22.1% of poor people in Nepal, Hill Dalits comprise nearly 69% of poor Dalits.[160] They have a Human Development Index of 0.434, lower than the national average of 0.574, and have lower life expectancy rates, lower adult literacy, less formal education, and often have lower incomes.[161]Terai Dalits have lower HDI scores than hill Dalits (0.400 in comparison to 0.446), primarily due to them having comparatively lower income, education and literacy, whereas Hill Dalits have lower life expectancies and income.[162]

235. Dalit peoples may live in more remote areas that are farther away from urban centers. Dalit households are also more likely to be landless, and/or live in areas that are highly vulnerable to natural disasters (along riverbanks, near steep slopes).

236. **Madheshi**s are people living in the Terai plains of Nepal. Many indigenous peoples (Tharus), Dalits, other backward classes, as well as higher caste Brahmans and Chhetris living in the Terai plains may also identify as Madheshi, which makes it confusing and difficult to understand the extent of marginalization and barriers faced by Madheshis as it comprises such a diverse group of men and women, as well as ethnicities.[163]

237. **Muslims** comprise only 4-5% of Nepal´s population, and thus they are less populous than Dalits and indigenous peoples. The majority of Muslims (~97%) in Nepal live in the Terai plains. They make up only 3.5% of the country´s poor, however they have the lowest HDI out of the main castes/ethnic groups in the country with a score of 0.422. They also tend to have lower education, and often suffer discrimination due to their religious beliefs and cultural practices.[164]

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[160]UNDP 2014
[161]UNDP 2014
[162]UNDP 2014
[163]GESI Working Group 2017
[164] UNDP 2014

238. Other excluded and marginalized groups include people with disabilities, LGBTQIA persons, and people living in remote areas. Initiatives are needed that promote social inclusion, including sensitization, to help overcome discrimination and other barriers faced by these groups.[165]

8.2.1.2 Dalits and other excluded/ marginalized groups in the project area

239. There are over 418,100 Dalit men and women living within the project area (13% of inhabitants), of which 69% live in the Terai (i.e. Terai Dalits), and the remaining 31% live in the Churia hills (i.e. Hill Dalits).[166]The population of Terai Dalits is higher in some districts, such as Saptari and Dhanusa.

240. Other types of excluded/ marginalized ethnic and religious groups present in the core project area include:[167]
    a. Terai-origin Madhesi People: over 900,500 men and women (28%)
    b. Muslims: over 160,800 men and women (5%)

241. While the project aims to support proportional representation in CBOs, it is not recommended to set specific indicators at this stage, as the specific CBOs and locations of subactivities are unknown (will be determined in Component 2). More detailed social information should be collected on the specific selected CBOs and their members, as there can be substantial variation in the presence of ethnic groups and castes within the project area (e.g. depending on if more CBOs are selected within the Churia hills versus the upper-Terai). Once the specific CBOs are selected, detailed indicators promoting proportional representation of Dalits and other excluded/ marginalized groups can be set.[168]

8.2.1.3 Representation of Dalits and other excluded/ marginalized groups in Nepal

242. The International Dalit Solidarity Network is active in Nepal and works against caste-based discrimination, and several national Dalit organizations and networks exist, including: the Nepal National Dalit Social Welfare Organization, the Feminist Dalit Organization of Nepal (FEDO), the Dalit Alliance for Natural Resources Nepal (DANAR) and the Dalit NGO Federation, among others.

243. Various international organizations also support the empowerment of marginalized communities through their projects, and notably a group of 18 development partners (i.e. International Development Partners Group, Nepal) has formed a Gender Equality and Social Inclusion (GESI) Working Group to support the development of a common framework for gender equality and social inclusion. Along with these organizations, the United Nations Organizations, Office of the Higher Commissioner for Human Rights, World Bank, the Asian Development Bank and other international NGOs are also active.

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[165]GESI Working Group 2017

[166]CBS 2014; Based on 2014 VDC data

[167]Information on other groups was unavailable at the project target region level (data collected from 2014 VDC data).

[168]See ESMP and IP-ISP development processes in Chapter 6 and in Chapter 8.5 for more detailed information on CBO-level data collection

244. The Ministry of Federal Affairs and General Administration (MoFAGA) has a Dalit and Adivasi/Janajati (Indigenous Peoples) coordination committee, and the government has further established National Commissions for Women, Dalits, Indigenous Nationalities, Madheshis, Muslims, Tharus and a National Inclusion Commission, among other institutions to support social inclusion within the country.[169]

8.2.2 National policies and international commitments

245. Historically Dalits and members of other excluded/marginalized groups have often experienced cultural discrimination, economic exploitation, social exclusion and political oppression. The political consolidation of Nepal under a feudal regime throughout the 19th and 20th centuries discriminated against these groups, as did the Panchayat regime of the 1950s-80s.[170]

246. Issues of social exclusion and discrimination came to the forefront after the 1990 democratic movement.[171] The Constitution of 1990 and Interim Constitution of 2007 accept caste, ethnic, linguistic and religious diversities and the Interim Constitution included provisions to support gender equality and social inclusion. The Constitution of Nepal (2015) includes a Right to Equality stating that all citizens should be equal before the law, that they should not be denied equal protection and that nothing should bar the making of special provisions for the protection, empowerment or advancement of those lagging behind, including women, and marginalized groups. A sub-article dealing with social justice and inclusion exists and it supports the prioritization of employment for single women, the rehabilitation of *kamaiya* (bonded laborers), *kamlari*, *haruwa, charuwa, haliya*, landless and squatters.

247. Nepal has also ratified the International Convention on the Elimination of All Forms of Racial Discrimination in 1971 to secure the rights of indigenous peoples, Dalits and others who have suffered racial discrimination.[172] Nepal has also made several other international commitments to non-discrimination, gender equality and social justice. These include, among others:

- Universal Declaration of Human Rights
- Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities
- Beijing Declaration and Platform for Action
- Durban Declaration and Programme of Action
- International Decades of the World's Indigenous People
- United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)

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[169] GESI Working Group 2017
[170] Gurung 2009
[171] ADB 2010
[172] Ibid.

8.2.3 Key findings and analyses of impacts, risks and opportunities

248. As described in Chapter 2.3 of the ESMF, the population in the core BRCRN intervention area (i.e. within 26 river systems) is over 3,216,428 - around 11% of Nepal´s population. Women make up 51% of the population.[173]Diverse cultural, ethnic and caste groups inhabit the project area:[174] Terai-Origin Madheshi peoples (28%), hill-origin high caste (19%), Terai Dalits (9%), Hill Dalits (4%) and Muslims (5%), and others (4%). The majority of community-based organizations have heterogeneous membership in terms of caste, ethnicity and socio-cultural backgrounds.

249. At least 77% of inhabitants of the BRCRN core intervention area are from groups who have experienced some form of inter-generational socio-economic exclusion (including Dalits, Madheshis, and Muslims, refer to the note on vulnerability and exclusion in ESMF Chapter 2). Climate change will have a disproportionate adverse impact on these groups. These groups are often more vulnerable to climate change and climate-induced natural disasters due to inter-generational discrimination (social and economic exclusion), they are usually heavily dependent on natural resources to maintain their livelihoods, and they often live in high risk areas that are often along river beds or in susceptible landslide or erosion areas (especially Dalits).Therefore, the project is in their direct interest as it will strengthen the resilience of some of the most vulnerable and marginalized people in vulnerable river systems.

8.2.3.1 Potential impacts of the BRCRN project on Dalits and other excluded/ marginalized groups

250. Given the ethnic and socio-cultural diversity within the project area, and often within CBOs, promoting participatory land use planning that takes into account the differentiated vulnerabilities, priorities and contexts within community-based organizations will be important for project implementation. Participation in the project is voluntary, and FPIC will be a cross-cutting principle applied to ensure that free, prior and informed consent is provided prior to the implementation of any activities (cf. Section 8.3).

251. The project will support men and women from Dalit caste, and other excluded/marginalized groups, among others, living in vulnerable river systems to increase their awareness of climate change and future risks, and to support them to adopt climate-resilient farming practices. Such measures will reduce ecosystem degradation, improve agricultural yields through improved soil fertility and improved access to water sources as well as reduced erosion, and support the sustainable use of forest resources. It will ultimately reduce the vulnerability of communities and ecosystems to climate-induced hazards and projected impacts.

252. The project is based on a participatory approach in line with the principles of FPIC, so that community-based organizations are able to adopt measures that are well suited to their

[173] Ibid.

[174] CBS 2014 – based on VDC level data (Ward level data unavailable for 2014; and 2011 ward-level data does not include information on caste/ethnicity/cultural groups.

local context and differentiated vulnerabilities. Various measures aim to strengthen awareness on local knowledge and practices, and mainstream such information into trainings. Capacity building will also be provided to train local resource persons and extension agents on climate-resilient land use practices, including local knowledge.

253. Due consideration was given to the following potential impacts and mitigation measures within the context of the project:
    - In instances where critical ecosystems are jointly identified by community-based organizations and project staff, alternative land uses will be discussed with communities – taking into consideration the priorities and differentiated vulnerabilities of indigenous peoples and other marginalized groups. Discussed alternative sub-activities will only be implemented based on the full consent of the interested local communities and the related community-based organizations and in close coordination with the competent authority.
    - Sub-project screening will also ensure that appropriate management plans are adopted and monitored to minimize social and environmental risks and impacts from the project. Project activities will be implemented in line with Acts and Regulations adopted by the Federal, Provincial and Local Government bodies, respecting the customary rights of indigenous peoples and local communities over land and forest resources. It is anticipated that the project activities will reduce the likelihood of negative or adverse impacts on customary land tenure and livelihoods of indigenous peoples.
    - Exclusion or limited influence within community-based organizations: While community-based organizations have integrated social inclusion and policies related to enhancing the engagement of all groups, in practice there are occasionally challenges to fully engage Dalits and other marginalized groups into decision making processes. The project will support full, effective and proportional representation of marginalized men and women within the context of project activities. It will further promote targeted activities to support marginalized groups to be aware of their rights and opportunities within community-based organization management structures, and to promote leadership and skill development within the framework of the project.

8.2.3.2 Consultations with Dalit men and women, and other marginalized/excluded groups

254. Local consultations were held with Dalit men and women, however it was not possible to meet a local group of only Dalit men and/or women (Annex 3 provides meeting summaries, photos and attendance sheets for all consultations). All the groups were mixed-groups, however some had a high proportion of Dalits attending. Local consultations were also conducted with Madheshi people, however some indigenous peoples and Dalits also identified as both Madheshi and/or indigenous or Dalit, yet may have only checked one box. Only ethnic information was collected, and thus data on consulted local people from other marginalized/excluded groups is not available. Additional consultations at the national level were conducted with FEDO and DANAR, in private meetings and in workshops.

255. The project was well received by these groups, and they noted the importance of the project to address key vulnerabilities, especially given these groups´ reliance on agriculture and land use to maintain their livelihoods. Nonetheless, they emphasized the importance of designing a socially inclusive project and considering barriers that are specific to different groups of beneficiaries. Key findings are as follows (a detailed description is provided in ESMF Annex 3):

- Dalit and Madheshi men and women notice that degradation is becoming more prominent, and that the local environment is not the same that it used to be. However, they are often poor, landless and dependent on forests and other natural resources to maintain their livelihoods.
- Dalit people, especially women, in the Churia and Terai region are particularly vulnerable to natural hazards (such as flooding, landslides, drought), as well as climate change. Many Dalit people live in ´high risk´ areas, such as in areas prone to landslides or in areas along vulnerable river banks. Majority of Dalit people are not aware of climate change risks, nor measures to increase their resilience and preparedness for natural disasters or climate risks. While natural disasters continue to have a major impact on Dalit peoples living in the Terai/Churia region, it was noted that climate change will further impact them and have major impacts on their livelihoods (e.g. increased water scarcity). Water scarcity was noted as a major challenge which currently many dalit communities and especially women face. This includes a lack of clean drinking water and water for agriculture. With climate change if nothing changes, water scarcity could be further exacerbated and Dalit peoples will become increasingly vulnerable and impacted by climate change.
- Marginalized groups (especially Dalit caste) often face discrimination and additional barriers to access resources. They also may experience difficulties on their own to sell products at markets (with one community noting that non-Dalit men and women do not like to buy milk from Dalit people)
- While there is some Dalit representation in community forest user groups, their participation is perceived by many Dalit people to be tokenism. It was discussed that many of these groups are captured by elites. When Dalits participate in such groups it is most frequently men participating – Dalit women are rarely engaged in such groups due to lack of awareness, capacities and time-poverty. They mentioned while policies are developed which aim to increase the percent of Dalits participating in such groups, that there is still a long way to go before ensuring developing meaningful representation. While CBOs provide many benefits, targeted measures related to GESI are needed (sensitization, positive discrimination policies, leadership trainings, among others)[175].

[175]E.g. Specific training for Dalit women could be developed, and could include approaches such as training trainers within the communities to help build awareness and capacities within communities. They mentioned that key activities for Dalit Women will include awareness raising, capacity building increasing engagement and involvement of Dalit peoples, particularly Dalit women, within sustainable land use and disaster risk reduction to help strengthen the livelihoods of Dalit men and women.

- Specific indicators and a responsive monitoring system should be developed that helps ensure the engagement of Dalit peoples, especially Dalit women. This will not only improve project management, but also knowledge management and learning.
- Sustainable natural resource management and climate resilient land use practices, as well as flood risk reduction measures and emergency warning systems are of utmost importance to help Dalits and other marginalized/excluded housholds increase their resilience to climate risks and natural hazards. The example of conservation ponds was discussed by many communities as a measure which can have many social, environmental and economic benefits in addition to improving water security, and helping alleviate time poverty (especially in the dry season).
- Public land forests are seen as an important investment to support marginalized/ excluded, poor and landless households, and such investments should be accompanied by technical support and capacity development.
- Educational backgrounds and capacities need to be taken into account, considering many marginalized persons may not have a formal education. Information dissemination is not sufficient, and there needs to be on-the-ground technical support, including initiatives targeted to proactively engage marginalized/excluded and highly vulnerable households.
- Participants emphasized that project documents should be in local languages to avoid exclusion by language, and using innovative formats in case beneficiaries are illiterate.

8.3 Gender assessment and action

256. Four consultations were conducted with a focus on indigenous women in the framework of the BRCRN project: one consultation with the Nepal Indigenous Women's Federation (NIWF) and three local level consultations (with primarily Dhimal, Limbu, Rai, Magar and Tamang women). Additional consultations were also held with the Feminist Dalit Organization, women only-focus groups (including indigenous, Dalit, and Madheshi women), as well as with representatives from other CSOs such as the Himalayan Grassroots Women´s Natural Resource Management Association (HIMAWANTI), Forest Action Nepal and the Community-based Forestry Supporters´ Network (COFSUN), on topics related to gender and the engagement of women (Annex 3 provides a more detailed list of all consultations conducted, including consultations with diverse stakeholders, including indigenous women, and Dalit women, among others). In addition, a gender workshop was conducted for the project where 50% of the participants were indigenous women.
257. Within these consultations, it was highlighted that there is substantial diversity among women, including indigenous women (both between different indigenous nationalities, and within groups), Dalit women, and Madheshi women. Thus, it was emphasized that the project needs to take into account the differentiated vulnerability of women. It was further discussedthat women, especially indigenous women and Dalit women, are often more vulnerable to climate change, as they have a higher dependence on natural resources (although some indigenous groups more than others). It was noted that while indigenous women have often noted changes in the climate, that they may not be aware of the future

risks that climate change poses, as well as coping strategies. It was discussed in consultations that Dalit women often live in highly vulnerable areas (e.g. along river banks, near landslide prone areas), and are often extremely vulnerable to natural disasters, and climate change.

258. Traditional indigenous and local knowledge is important, includes several good practices to support climate change adaptation. However, it was nonetheless highlighted that capacity development on climate-resilient agriculture would also be appreciated, especially related to agriculture and agroforestry, as well as ecosystem restoration.

259. It was noted by many indigenous women and Dalit consulted that environmental degradation is a major issue within the project region, and has a major impact on their livelihoods including reduced soil fertility, land degradation, reduced water, and increased collection times for natural resources, among other impacts.

260. Consulted women noted that the project´s interventions are relevant, noting many recommendations to support improved livestock practices, vegetable farming, agroforestry, and ecotourism and skill development. Ecotourism was mentioned by various communities as interesting as it can support their livelihoods while also supporting the conservation of their culture and tradition.

261. In addition to the local consultations, a gender workshop was conducted on February 21, 2018 in Kathmandu to present and validate the gender assessment and action plan. In total, 50% of participants were indigenous women who noted the relevance of the Gender Action Plan and the importance of including targeted measures to empower women within the framework of the project. More detailed meeting minutes are included in Annex 3.

262. Recommendations provided from indigenous women, Dalit women and women from other marginalized/excluded groups were well aligned with the project, and measures to support their empowerment have been integrated into the Gender Action Plan (including translation services for materials and consultations, targeted measures on skill development to make women aware of their rights and roles within community-based organizations, trainings on leadership and empowerment as well as business literacy, interventions and support for ecotourism, and ensuring women can access farmer field schools, trainings and extension services, among others).

263. NIWF, FEDO, DANAR and other organizations representing indigenous and/or Dalit women, as well as other women's organizations, will be invited to have a permanent position on the PCUs, engaging them in the implementation of the project through improving coordination, communication and monitoring of the gender action plan and measures targeted for indigenous women.

8.4 Measures to avoid, minimize and mitigate negative impacts, and enable additional positive benefits

8.4.1 Guiding principles

264. The following guiding principles will be applied in the development of foreseen consultation activities within the framework of the BRCRN project.

265. The focus is based on human rights: these include the right to self-determination, the right to development with identity, the right to Free, Prior and Informed Consent, the right to full and effective participation at every stage of any action that may affect them directly or indirectly, the rights over land and other natural resources on which indigenous peoples depend for survival, collective rights that include recognition of their specific histories, languages, identities and cultures but also recognition of their collective rights to the lands, territories and natural resources.

266. Another important right of indigenous peoples relates to cultural distinctiveness and their right not to be subjected to forced assimilation or destruction of their cultures. In fact, indigenous peoples are entitled to live in accordance with the traditions and the customs that underlie their integrity and way of life. In this regard, the State must respect and acknowledge the different institutions and representative authorities, as well as the decision making process of indigenous peoples. As such, processes and procedures must be in line with their livelihoods, traditions and customs. In order to ensure this, the State must guarantee:

- Equality of rights. Assure the recognition of prerogatives inherent to all people, because of their human condition;
- Good faith. To assure an honest and fair interaction that is not misleading and based on the value of the word, building a harmonious and honest relationship respecting the agreements that assure trust;
- Multiculturalism. Based on respect for cultural and geographical diversity, implying the management of relationships in a horizontal and equitable manner.

8.4.2 Integration of recommendations into project design

267. The following measures to strengthen indigenous peoples´ participation within the project have been identified through various consultations with indigenous peoples, Dalit men and women, and other project stakeholders at the national, regional and local level, as well as through the development of the Forest Investment Program (FIP) and Emission Reductions Program Document (ER-PD) in Nepal, which also include sustainable interventions in the land use sector:

268. FPIC and existing national laws and international commitments related to indigenous peoples, Dalit men and women, and other marginalized/excluded communities must be respected. The project must comply with indigenous customary laws and practices. The project will require that FPIC principles are followed in consultations with all participating community-based organizations and relevant representative organizations (described in Chapter 8.1) before land use investments are implemented (i.e. during Activity 2.2.2, more information in Section 8.4.3).

269. Promoted climate-resilient land use practices should not adversely affect biodiversity, social and/or environmental integrity (see Chapter 9 for the project´s Biodiversity Management Framework). The project must ensure that no harm is caused to indigenous peoples, Dalit men and women, and other project beneficiaries. The project further seeks to have strong social, environmental and economic co-benefits to the greatest extent possible, as further described in section E of the GCF funding proposal.

270. The project must guarantee that no activities will have negative implications for customary land tenure, livelihoods, ancestral territories or cultural heritage sites of indigenous peoples. Project activities should not restrict indigenous peoples' use of forests and pasture lands that they have been customarily managing for generations.

271. Activities with a focus on knowledge and learning were identified as very important for local communities and indigenous peoples, and such measures need to promote and incorporate local and traditional knowledge of indigenous peoples. Traditional practices, customary practices and local knowledge will be respected through extensive consultations and engagement of communities, ensuring promoted practices are aligned with priorities and preferences. Activities 3.1.1 and 3.1.2 will help support the knowledge consolidation process, and engage indigenous peoples at the national, provincial and local level on climate change and local indigenous knowledge.

272. Trainers will be trained on appropriate data collection measures, and opportunities for collaboration with project partners will be sought out to ensure data collected reflects the priorities and contexts of BRCRN project inhabitants, including indigenous peoples and marginalized groups. Trainers will include indigenous men and women.

273. Outreach, extension/ technical support at the community-level, workshops and capacity building activities will be socially inclusive, aware of culturally diverse contexts and norms, and take into consideration local knowledge. Where necessary, the project will ensure the availability of translators (either from within the community or from external sources, if necessary) to facilitate the dissemination of knowledge and information. Translation can be provided for oral workshops, extension materials and other project-related materials (e.g. videos, radio programs, publications, etc.).

274. Livelihood interventions were identified as important to support the transition to climate-resilient development pathways, including measures that include capacity building and provision of support and incentives for communities to adopt and scale up sustainable climate-resilient land use practices.

275. The projectwill apply participatory and inclusive approaches that take into account regional and cultural diversity within the project area. Activity 2.2.2 allows for local-level land use planning to be based on participatory processes with community-based organizations, where prioritized activities are identified based on the community-based organization´s priorities, context and differentiated vulnerabilities. Participatory exercises within Activities 2.1.2-2.2.2 will further help identify the most vulnerable areas and people within community-based organizations, supporting the implementation of targeted measures that take into account their unique vulnerabilities.

276. Proportional representation will be promoted, including the participation of indigenous men and women, as well as opportunities to engage indigenous youth (e.g. within school eco-clubs). Such representation and engagement will be closely monitored throughout all activities. Leadership training should actively target indigenous people, Dalits, and other marginalized/ excluded groups, and further awareness raising conducted for these groups to inform them of their rights within CBOs.

277. Extension services should encourage the hiring of Dalit men and women, indigenous men and women, and men and women from other marginalized/excluded groups.

278. Capacity building and trainings will be provided for all members of the PMU, as well as local and provincial government authorities (including trainers and extension agents) on GESI within the context of the BRCRN project. Trainers will be trained on issues specific to indigenous peoples and marginalized groups, and ensure that training is suitable (e.g. taking into consideration time poverty and promoting time-saving activities, ensuring culturally appropriate materials are used, the availability of translators if necessary, etc.). GESI will be mainstreamed in training modules for the project. Training modules will include input from NEFIN, DANAR, FEDO, women´s organizations and other organizations representing marginalized/ excluded groups.
279. Engagement of indigenous peoples and Dalit men and women in project monitoring and knowledge management activities. Participation of indigenous federations and organizations representing Dalits, and other marginalized/excluded groups in PCU will ensure that regular reporting is conducted, and will enhance the accountability of the project. More detailed arrangements for monitoring and knowledge management will be identified during the inception phase and the elaboration of the indigenous peoples and social inclusion plan.

Implementation Arrangements

280. Indigenous peoples and marginalized groups have been involved in project development through ongoing consultations at the local regional and national level, and project design has been informed by the recommendations and comments provided by such stakeholders.
281. Institutional arrangements should provide a space for indigenous representatives to follow project implementation and to provide a space for continuous communication and coordination at all relevant levels. PCUs will serve as a key multi-stakeholder body for ongoing communication with diverse stakeholders within each of the three project provinces. Representatives from indigenous federations and organizations will be invited to maintain permanent representation on PCUs in each province.
282. Relevant local and provincial CSOs representing indigenous peoples should be continuously engaged with project implementation, and opportunities for institutional strengthening supported.
283. Trainers and local resource persons will include indigenous men and women.
284. A safeguard representative in the PMU and supporting staff in the provincial PPMUs will oversee the monitoring of the IPP within the BRCRN results management framework.

Budgetary Allocations

285. A section of the budget will be specifically allocated for the capacity building and institutionalization of existing organizations representing indigenous nationalities at the national, provincial and local level. Activities will include organizational strengthening and technological strengthening.

286. Budget allocations will also include the salaries, wages, or stipends for trainers and translators from indigenous communities. Trainers will be provided with the necessary resources and place to collect and transmit traditional knowledge, and provide technical support tailored to local contexts and priorities.

287. Budget allocations will further include resources for conducting the FPIC process during Activity 2.2.2, including funds for consultations, provision of informative materials and translation. Additional resources will be available for the implementation of the indigenous peoples and social inclusion plan.

Monitoring and Evaluation

288. Given the political transition, all participating community-based organizations will be registered with the relevant authority. During this process, geographic and demographic information for each community-based organization will be collected to help monitor project implementation and to support ongoing monitoring of GESI.

289. While monitoring project activities, indicators will ensure that:

- Contributions made to the consolidation of culture, including through educational and training processes, are included in monitoring and evaluation process;
- Indicators work to unify indigenous peoples and no indicators will put any one indigenous group at a disadvantage or provide any reason for conflict within indigenous group´s
- Sacred places or ceremonial sites are respected in the planning and implementation of project activities

290. A detailed strategy for monitoring, evaluation and reporting will be elaborated in the inception phase in the Indigenous peoples and social inclusion plan, which will be jointly elaborated with NEFIN and other indigenous organizations.

8.4.3 Ensuring FPIC for project implementation

291. Participation within the BRCRN project is voluntary, and FPIC will be a core underlying principle which is applied to all community-based organizations. In order to participate in the project the principles of FPIC will be followed in consultations with all 750 community-based organizations representing the related local communities, given that many community-based organizations have members from diverse socio-cultural and ethnic backgrounds. Consultations will be conducted according to the process detailed by FAO in the FPIC Manual for Project Practitioners.

292. In order to effectively consult and engage with indigenous peoples, Dalits and other excluded/ marginalized communities[176] during project implementation, the following process will be followed:

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[176]Note: 'Excluded´ or marginalized groups include those who have experienced inter-generational discrimination and have been systematically excluded due to *economic [situation], caste, ethnicity, gender, disability, sexual orientation,*

- Once project sites have been identified through the process detailed Component 2,[177] project activities will be grouped into sub-activities (see ESMF Chapter 6.1, "Defining Sub-Activities").Considering the activities to be implemented in each river system will be very similar in nature and scale across the implementation area, it is proposed that screening for potential risks is undertaken at sub-activity level. Sub-activities constitute a valid tool to identify expected impacts and mitigation and monitoring measures. Identification of sub-activities will take place during the implementation of Component 2, especially in the second year of project implementation, based on the critical ecosystem restoration plans developed. For each sub-activity, implementing sites will be identified along with sub-activities, including capacity building/training and stakeholder engagement information specific to each site.

293. Consultations, following the principles of FPIC, will be held with *all* participating community-based organizations. It is understood that this will involve:

    a. Consultation and consent **prior** to commencement of CBO-level activities (Sub-component 2.2 and Component 1). This involves providing CBO members, in particular indigenous peoples, Dalits and other members of excluded/ marginalized groups, the time needed to discuss based on a decision-making timeline identified by the respective CBOs.

    b. Consent must be **free** – i.e. given voluntarily and without coercion, intimidation or manipulation. It will also be obtained through a process which is sensitive and relevant to CBO members, in particular indigenous peoples, Dalits and other members of excluded/ marginalized groups.

    c. Provision of **information** to CBO members, in particular indigenous peoples, Dalits and other members of excluded/ marginalized groups, in relevant languages, in a clear consistent, accurate, transparent and accessible way that is culturally sensitive. Information will also be given on an ongoing basis throughout the project, thus it is not a one-time transfer of communication, rather an ongoing relationship between communities and project implementers/ practitioners.

    d. **Consent**, which refers to the collective decision made by the CBO members, in particular indigenous peoples, Dalits and other members of excluded/ marginalized groups, reached through their own customary decision-making processes. The consent must be sought and granted (or withheld) according to the unique formal or informal political-administrative dynamic of each community.

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and geographical reasons" (GESI Working Group 2017). This includes groups including women, poor people, Dalits, Adivasi/ Janajati, Madheshis, Muslims, people with disabilities, third-gender and people living in remote areas. For more information refer to the note on vulnerability in Section 2.3.

[177] Component 2 supports the identification of specific CBOs for the implementation of all other project activities. Within Sub-component 2.2, community-based organizations will be informed on project activities and the possibility for them to directly participate in the BRCRN project. This process will ensure full information is provided in a timely manner before CBO management plans are elaborated in Sub-component 2.2, and prior to the implementation of CBO-level investments in component 1, emphasizing that participation in the project is completely voluntary and that in case of non-compliance with the concurred arrangements, indigenous peoples have the right to withdraw their consent following the principles of FPIC.

294. A proposed template for such a process will be developed together by the Ministry of Forests and Environment, FAO, NEFIN and other indigenous organizations during the project inception phase, guided by the FAO FPIC Manual for Project Practitioners. Interventions targeting community-based organizations will not be implemented until consultations have been completed and consent is obtained according to FPIC principles.

295. Once consent for project interventions has been established, these interventions will be closely monitored according to the work plan for Indigenous Peoples and Social Inclusion Management Plan (see below), which will build off of the work plans developed for the IPPF and SIPF (see Annex 1). Regular reporting will be conducted through project reports, PCU meetings, PSC meetings and at stakeholder events and consultations (including those identified in Annex 1 and further described in Section 8.10).

296. Affected peoples are able to submit a complaint or grievance at any time during project implementation through the project´s grievance redress mechanism (see Section 8.9 below).

297. Participation in the project is voluntary, and if local communities decide they are no longer interested in the project they are able to freely leave the project in accordance with FPIC principles.

8.4.4 Development of Indigenous Peoples Management Plans (IPMPs) and Social Inclusion Management Plans (SIMPs)

298. As indigenous peoples, Dalits and other excluded/ marginalized groups are present throughout the project area, Indigenous Peoples Management Plans (IPMPs) and Social Inclusion Management Plans (SIMPs) must be prepared for each of the 26 river systems (1 per river system). IPMPs and SIMPs will be drafted by the project recruited safeguards experts. IPMPs must practically explain how social inclusion will be ensured in the project area, as it relates to the indigenous peoples; and SIMPs must explain how it will be ensured in the context of Dalits and other excluded/ marginalized groups present. The Provincial Safeguard and Gender Specialists, in coordination with recruited safeguard experts, will bear overall responsibility for:

    a. Screening activities and assessing (i) potential negative impacts on the indigenous peoples, Dalits and persons from excluded/ marginalized groups, and (ii) potential barriers that may inhibit relevant them from participating in (and benefiting from) the activities;
    b. Developing IPMPs and SIMPs that include risk mitigation measures to address potential negative impacts identified, as well as other measures to overcome barriers to exclusion and promote inclusion;
    c. Overseeing the timely and effective delivery of the IPMPs and SIMPs, the day-to-day implementation of which will be led by a range of project staff (in close consultation with the PMU´s Safeguard and Gender Specialists) as per the general working arrangements between the project-recruited safeguards specialists and other project staff described in Annex 9 of the ESMF;
    d. Overseeing responses to grievances from CBO members, especially indigenous peoples, Dalits and people from other excluded/ marginalized groups, to ensure they

are properly addressed, either in accordance with the general grievance redress mechanism to be established for this project (as outlined in Section 7.5.2 of the ESMF) or in line with a separate grievance redress mechanism established for the indigenous peoples, if this is expressed as their preference during IPMP development (as outlined in Section 8.9); and

e. Ensuring effective monitoring of the implementation of IPMPs and SIMPs in collaboration with the project-recruited monitoring specialists, and ensuring timely andinformative reporting on IPMP and SIMP implementation is prepared for review by the PMU and FAO E&S Management Unit.

297. The following information must be detailed in the IPMPs and SIMPs:

- Description of indigenous peoples, Dalits, and members of excluded/ marginalized groups present, including any relevant social/political arrangements, unique decision making processes, and baseline information about their social and economic conditions.
- Description of activities to be conducted in the area.
- Detail the FPIC process which was followed for that community, and include proof of iterative discussions and (if obtained) consent – including conditional consent – or proof of refusal to participate in the project.
- Results of the consultations carried out according to the principles of FPIC, including:
  - Positive and negative impacts expected based on the sub-project activities;
  - Preferred Grievance Redress Mechanism or any instances in which project activity-implementation will differ as a result of the preferences of the minority community; and
- Description of how consultations will continue being held throughout implementation.
- If applicable, IPMPs and SIMPs will: identify mitigation measures to address potential negative impacts identified, as well as additional actions/measures geared toward promoting greater social inclusion to ensure indigenous peoples, Dalits and people from excluded/ marginalized groups can benefit from project activities/support; indicators to be used to monitor implementation of the IPMPs and SIMPs; roles and responsibilities for implementing specificactions/measures included in the IPMPs and SIMPs, as well as monitoring and reporting; and timeframes forthe implementation of the IPMPs and SIMPs. These will be added to the monitoring plan of the overall project to ensure the safeguards performance is regularly reported upon, along with regular stakeholder engagement per site.
- Clearly describe how participatory monitoring and reporting will be conducted at that site, following the timeline provided in the overall ESMF and detailing any additional requested monitoring measures needed.

8.5 Community-based natural resource management

299. The project will strengthen community-based natural resource management within the project area, building on the successful model of community-based natural resource management developed in Nepal.

300. Community-based organizations are inclusive and democratic institutions despite heterogeneous structure, and often include mixed-membership of people from diverse nationalities, ethnicities and socio-cultural background. Within operational acts and guidelines for such organizations there are guidelines for social inclusion. Such groups should include proportionate representation from poor, lower-caste groups, minority ethnic groups and indigenous peoples.[178] While there are challenges in maintaining social justice and equity through implementing such policies at the local level, the project represents an important opportunity to raise awareness within such organizations of the policies and rights for indigenous peoples and marginalized minority to groups, and to provide opportunities to strengthen their capacities to take on more active roles within the organization, and to support the adoption of climate-resilient land use management.

301. Targeted support will be provided for highly marginalized and vulnerable communities, also focusing on raising awareness, developing leadership skills, and taking into account learning approaches tailored to such groups (e.g. if there are higher levels of illiteracy, lower awareness of certain technology, among other factors).

302. Access to and sustainable management of natural resources will be further strengthened in the project area. Tree planting will be supported in the Bhavar and Terai areas where lack of access to community-forests or forested land has been identified as a challenge for communities.[179] The project will support the formalization of public land forest user groups, and will support direct investments for these groups to improve degraded forests and increase access to sustainably managed forest resources. Investments in sustainable forest management and ecosystem restoration will enhance the provision of ecosystem services, improving forest quality and promoting sustainable use of natural resources, while also enhancing the resilience of ecosystems and local communities to climate change. Investments in climate-resilient agriculture, especially in the Churia and Bhavar areas, will help reduce soil erosion and sedimentation, improve ground water recharge and enhance the resilience of the local communities and ecosystems to climate change throughout the project area.

8.6 Benefits of the measures

303. In general, based on the consultations held, local communities, including Indigenous and Dalit men and women, among others, expressed interest in the project and noted that the proposed activities would increase their resilience and benefit their livelihoods. It was emphasized as important that the selection of such measures should be based on a participatory process, where community-based organizations are able to select interventions in the land use sector that are suitable for their context, considering differentiated vulnerabilities and priorities.

304. Improved knowledge on climate change, climate change risks and risk reduction measures will help communities to build their adaptive capacities. Measures such as Activities 3.1.1-

[178] Pandey and Paudyall 2015
[179] Kanel 2005 in Smith 2013

3.1.2, which aim to improve awareness on local and indigenous knowledge will further help ensure that such valuable knowledge is recognized and applied.

305. Interventions in the land use sector, especially agriculture and ecosystem restoration, were identified as important given that many indigenous communities in the project area maintain their livelihoods through diverse activities, differing among communities, including agriculture, foraging, horticulture and pastoralism.

306. The project includes targeted measures to engage the most vulnerable groups, including indigenous peoples, Dalits and other excluded/ marginalized groups. Such measures aim to enhance their participation within community-based organizations, and to also support poor households and marginalized communities to invest in ecosystem restoration and sustainable natural resource management, while also strengthening their adaptive capacities and overall resilience to climate change.

8.7 Tenure arrangements

307. Direct project interventions will focus on public land, including public land that has been handed over to community-based organizations for their management (where CBOs will either hold formal certificates awarded by the responsible government authorities, or the project will support them to register their CBO).No activities are planned that would negatively affect the legitimate tenure rights of individuals, communities or others.

308. Technical support will be provided to private land forest owners (on non-forested land), however they will need to demonstrate land use rightsin order to participate in the project (i.e. Land Ownership Certificates issued by the Government). No direct-project investments will occur on this land, and it is anticipated that such interventions will not limit local people´s access to forest resources.

8.8 Grievance redress mechanisms

Informal and Customary Grievance Review

309. The M&R specialist will consider the opinions or recommendations of leaders from any informal redress mechanisms before making any decisions. Customary practices of different community, ethnic and religious groups to manage conflicts will be integrated into the formal grievance mechanism (described in Section 7.4.2 above). In many instances grievance cases are addressed in an informal manner by local communities under the direction of community or traditional leaders. For example, in the Tharu community, meetings called ´*Bhalvansa*´ are held to manage grievances, and thus the M&R specialist will consult Bhalvansa leaders when addressing related grievances.

310. As described in Chapter 8.5.3 IPMPs and SIMPswill be developed together with indigenous federations and organizations, as well other organizations representing Dalits and other excluded/marginalized groups during the inception phase and first year of the project will provide a detailed approach for indigenous peoples, Dalits, and other excluded/marginalized groupsto place grievances, which provides the opportunity for customary grievance reviews.

8.9 Costs, budgets, timetables, organizational responsibilities and monitoring, evaluation and reporting.

311. During project inception, an Indigenous Peoples Plan (IPP) will be developed together with NEFIN and other indigenous people'sorganizations. A Social Inclusion Plan (SIP) will also be developed together with organizations representing Dalits and other excluded/marginalized groups. During this process, risk mitigation measures, timeline, responsibilities and plans for monitoring and reporting will be revised.

312. The implementation of the IPPF and IPP, and of the SIPF and SIP, will be overseen by the project´s Indigenous Peoples and Social Inclusion Specialist, in coordination with PMU´s Safeguard and Gender Specialist and PPMU staff at the provincial level. Bi-annual progress reports will be delivered to representatives from indigenous organizations (including NEFIN and NIWF), Dalit organizations (e.g. FEDO and DANAR), and other NGOs. Updates will be further provided in PCU meetings, where federations and organizations representing indigenous peoples, Dalits and other excluded/ marginalized groups will be invited to have permanent representation.

313. A proposed timeline with responsibilities and indicators for monitoring is included within Annex 1.

314. Costs for the elaboration and implementation of the IPPF and IPP, and of the SIPF and SIP have been included into the budget, and are summarized in Annex 1.

9 BIODIVERSITY MANAGEMENT FRAMEWORK

9.1 Introduction

315. The risk to biodiversity from the BRCRN project is considered to be low. The project expects to generate substantial positive environmental benefits from the restoration of degraded critical ecosystems, sustainable management of forest and natural resources, and the scaling up of climate-resilient land use practices that will not only increase the resilience of ecosystems and local communities to climate change, but will also reduce land degradation and deforestation. In particular, the project expects to:

- Reduce emissions from deforestation and forest degradation on 186,246 ha of land
- Implement improved grassland management on 19,369 ha
- Implement sustainable forest management in 186,246 ha of forested land, including support for forest restoration and rehabilitation, with a co-benefit of supporting biodiversity conservation
- Support in restoration of degraded forests and tree planning in non-forested land to improve habitat and facilitate free movement of wild animals (especially mega fauna) and reduce pressure in natural forest for fuelwood, forage and timber respectively;
- Enhance the adoption of appropriate climate-resilient agricultural practices to reduce erosion and sedimentation that contribute to land degradation and agricultural expansion, and that contribute to exacerbated impacts from flooding in downstream areas. Such measures will further reduce the application of pesticides and herbicides.
- Support wetland restoration through the implementation of soil and water conservation measures to support livelihoods and fresh water biodiversity conservation;
- Support to establish and operate bio-briquette plants using fibers of alien plants to suppress their invasion and colonization in natural forests and improve health of forests and ecosystem services;
- Build capacities and develop informational materials (farmer field schools, guidelines, among others), on climate resilient land use practices, including protective measures to handle invasive species, forest fire prevention and appropriate management, among information on improving response to other environmental risks.

316. The project is further expected to improve awareness of climate change and climate-resilient sustainable natural resource management, which is expected to increase awareness on the importance of mainstreaming climate change mitigation and adaptation measures in their forest and farmmanagement

317. No direct project interventions will be implemented in protected area core protection areas or buffer zone of the Koshi Tappu Wildlife Reserve. However, restoration activities in river systems are expected to have a positive impact on creating connectivity and corridors for free movement of wild life between wildlife Reserves, Buffer zone forests and adjoining public and community managed forests; which is important for improving gene pool as well as adaptation for habitat shift due to climate change in long-run.

9.2 Objectives and biodiversity approach

318. The objective of this Biodiversity Management Framework is to describe the planned approach taken by the BRCRN project to safeguard biodiversity resources, and to manage and mitigate potential impacts that could arise during project implementation.

319. Biodiversity is seen as a cross-cutting additional benefit of project activities, and the project is aligned with Nepal´s National Biodiversity Strategy and Action Plan (2014-2020). Notably, the strategy and action plan highlights the importance of the Churia landscape, noting the importance of awareness raising on the *"fragility, vulnerability and importance*" of the Churia region of Nepal.[180]

320. Project Outputs and activities are expected to generate diverse positive impacts, as documented in the following Table:

Table 18: Overview of project impact on biodiversity

Component/ Sub-component	Impact on Biodiversity
Component 1. Scaling up climate-resilient sustainable natural resource management (SNRM)	
Sub-component 1.1 Climate resilient land use practices are adopted	▪ Reduced erosion and sedimentation from agricultural land ▪ Improved soil fertility and water availability ▪ Transition to improved livestock management practices (e.g. fodder banks, stall feeding, etc.) will reduce free grazing in forested areas leading to reduced degradation and soil erosion ▪ Reduced degradation of agricultural land will improve agro-biodiversity conservation;
Sub-component 1.2 Natural forest ecosystems are better maintained and protected	▪ Improved habitat and conservation of ecosystem services on 206,277 ha of land due to ecosystem restoration and sustainable management, supporting biodiversity conservation ▪ Improved capacities and action to suppress invasion and colonization of invasive species ▪ Improved habitat and extended connectivity facilitate free movement of wild life that will reduce Human wild life conflict and support in biodiversity conservation (mainly big wild animals) ▪ sustainable management of degraded forests will enhance the in-situ conservation due to improved forest health,; ▪ Reduced vulnerability to climate-induced hazards that impact ecosystem function and quality in 26 vulnerable river systems ▪ Improved awareness of invasive species, and eradication strategies. The adoption of climate-resilient practices will help limit the spread of such species.[181]
Sub-component 1.3 Forests and tree cover	▪ Reduced pressure on natural forests for fuelwood forage and timber ▪ Increased vegetation cover on abandoned or degraded lands provide extended habitat for birds and big animals;

[180] MoFSC 2014c
[181] MoFSC 2013

Component/ Sub-component	Impact on Biodiversity
are restored and maintained in the river system landscape	▪ Supports in Ex-situ conservation of game animals;
Component 2. Strengthening institutions and planning for climate-resilient SNRM	
Sub-component 2.1 Planning for climate-resilient SNRM is enhanced	▪ Improved integrated planning at the river system level will help to mainstream biodiversity conservation in local level (Municipality level) development planning ▪ Climate-resilience mainstreamed into 3 provincial-level strategies; ▪ Critical ecosystems identified at the local level ▪ Improved capacities at the provincial and local level on climate change risks and climate-resilient land use planning and management will improve the long-term management of biodiversity, promoting sustainable climate-resilient land use with strong biodiversity co-benefits ▪ Scaling up of measures for DRR that may also have biodiversity benefits (e.g. establishment of green buffer zones along riverbanks, forest restoration, etc.) ▪ Reduced deforestation and forest degradation due to increased awareness of negative impacts from unsustainable NRM, and due to the adoption of DRR and SNRM practices ▪ Reduction in ecosystems affected by climate-induced natural disasters ▪ DRR and climate change adaptation mainstreamed into planning processes for disaster risk planning at the provincial level, with substantial benefits for safeguarding ecosystems and ecosystem function
Sub-component 2.2 CBOs are equipped to scale up climate-resilient SNRM	▪ Improved awareness of climate risks and their impacts on ecosystems and local livelihoods, as well as climate-resilient land use practices that will reduce the vulnerability of local people and ecosystems to climate change ▪ Participatory mapping will identify the most vulnerable people and ecosystems, and develop tailored approaches to promote climate-resilient land use practices based on local communities´ context and priorities. Strengthened local ownership will help create improved commitment to climate-resilient land use, with strong biodiversity co-benefits as described in Output 1.
Component 3. Improving knowledge, awareness, and local capacity for climate-resilient SNRM	
Sub-component 3.1 Local knowledge on climate-resilient SNRM is enhanced	▪ Identification of local and indigenous knowledge on climate change adaptation that can support communities in the region to adapt to climate change through the sustainable management of natural resources ▪ Improved awareness of climate change and climate change adaptation measures in the land use sector that strengthen ecosystem resilience
Sub-component 3.2 The extension system is equipped to promote climate-resilient SNRM	▪ Extension support materials are centered around good climate-resilient practices for the land use sector, taking into account best practices and local and indigenous knowledge, promoting good practices that support biodiversity conservation and enhance the resilience of ecosystems to climate change

Component/ Sub-component	Impact on Biodiversity
	▪ Improved knowledge and information to support the eventual scaling up of climate-resilient interventions to reduce exposure, build adaptive capacities and enhance the resilience of ecosystems ▪ Improved use of climate information in decision making and planning processes

321. Thus, the project will provide a unique approach that's based on not only direct investments to enhance the resilience of local communities and ecosystems, but will also strengthen institutional capacities at the provincial, local (rural municipality) and community-based organization level, and will improve awareness, knowledge and communication. Together, these measures will help to support a transformation towards climate-resilient agricultural practices in the land use sector.

322. In the context of the ESMF, once the project beneficiaries are identified (Activity 2.2), an environmental and social screening exercise will be carried out under Activity 2.3 using FAO´s environmental and social screening checklist. This tool will help identify sub activities that require mitigation measures, including those discussed in Section 6 of this document. For sub-activities that require mitigation measures, and environmental and social management plan will be developed to be monitored thought he implementation phase.

9.3 Biodiversity characterization

323. The project will be implemented in 26 river systems with different potentiality for of conserving biodiversity, ecosystems and ecosystem services. As stated in Section 3.1, the project region is critical in terms of ecosystem and biodiversity. Of the 188 ecosystems of Nepal, 14 are found within the Churia hills and another 12 are founding within the Terai Madhesh region. In terms of biodiversity, of the total 1,988 species of flora and fauna in Nepal, 1,308 are found within the Churia-Terai Madhesh landscape.[182] Flagship species, including tigers, elephants, rhinos and wild-buffalo, are also found within these habitats, as well as 321 or the Nepal's 493 endangered species of flora and fauna.[183]

324. There is one protected area located in the project intervention area: the Koshi-Tappu Wildlife Reserve, which was declared Nepal´s first Ramsar site. The following sub-sections provide an overview of the protected area, as well as measures adopted by the BRCRN project to safeguard biodiversity within the wildlife reserve and ensure the project does no harm.

[182] MoFSC 2014ª; PCTMCDB 2016
[183] Ibid.

9.4 Koshi Tappu Wildlife Reserve

9.4.1 Overview

325. The reserve is located within the lower tropical bioclimatic zone and is below 500m of elevation within the Terai physiographic zone. The reserve is made up of five main ecosystem types: Khair-Sissoo riverine forest, pseudo steppe with graminae, cultivated land, Terai cultivated land and water bodies.[184] The main vegetation type in the area is riverine Khair-Sissoo and mixed broad leaf forest. The Sapta Koshi is one of the three main tributaries of the Ganges, and in the monsoon months there is intense and rapid flooding.

326. Some 514 species of flora have been recorded in the area, including six plant species listed in the specific threat categories of IUCN and CITES.[185] Twenty-three species of mammals, 527 species of birds, 17 species of amphibians and reptiles and 105 species of fish have also been documented. Thirteen of the 23 mammal species are protected by CITES and symbolic mammal species of the area include the wild water-buffalo (Babalus arnee) and the Gangetic dolphin (Platanista gangetica). Of the 527species of birds, 12 species are globally threatened and 101 species are endangered within Nepal. The Koshi Tappu Wildlife Reserve is the only area in Neal where the Water cock (Gallicrex cinerea) and Abbott's babbler (Malacocincla abbottiI) can be found. Rufous vented prinia (Prinia burnessi nepalicola) is recorded only within the boundary of this reserve (Baral, 2016). This reserve also serves as the most important wetland for migratory water birds in Nepal and one of the most important in Asia.[186] Seventeen of the amphibian and reptile species found in the reserve are nationally threatened, of which six are globally threatened. Nine species of fish found in Koshi Tappu Wildlife Reserve are listed in various threatened categories, with eight species being vulnerable and one species considered endangered.[187]

327. In terms of biodiversity conservation, the Koshi Tappu Wildlife Reserve has led to several significant achievements. These include the evacuation of domestic buffaloes from reserve areas, translocation of wild water-buffaloes within Nepal, support of over 5,000 waterfowls, increase in bird sighting as well as number and frequency of migrating birds, decrease in reported wildlife deaths, and prevention of human-wildlife conflicts, with only 13 human casualty from wildlife encounters between 2009 and 2018.[188] The wildlife reserve is also used for various research purposes including studies on crop damage and livestock depredation, economics of the wild buffalo, prospective challenges in the reserve buffer zone, elephant-human interface and habitat studies on riverine forests, Arna habitat, and swamp partridge.

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[184]Bhuju et al. 2007
[185]Bhuju *et al.* 2007.
[186] Thapa. 2009.
[187]Bhuju *et al.* 2007.
[188]Ibid.

9.4.2 Buffer zone management in the Koshi Tappu Wildlife Reserve

328. The buffer zone of the Koshi Tappu Wildlife Reserve covers 173.5km^2 and includes four municipalities and one Rural municipality from the districts of Sunsari, Saptari and Udayapur, representing a total of 84,423 people from 14,865 households.[189] There is one Buffer Zone management committee, 9 user committees and 469 user groups within the Koshi Tappu Wildlife Reserve Buffer Zone.[190] User committees act as the mediator between the user groups and the Buffer Zone councils for the implementation of resource conservation and community development programs.

329. The Koshi Tappu Wildlife Reserve Buffer Zone was originally established in order to halt the illegal harvesting that arose after the declaration of the area as a reserve and to provide for the basic needs of the local people. After the National Park and Wildlife Conservation Act was instated in 1973, the protection of biodiversity came in direct conflict with the needs of communities and the traditional forest-related dependence and practices within these communities to meet livelihood needs. Thus, the fourth amendment of the National Park and Wildlife Conservation Act in 1992, created the provision of Buffer Zones for protected areas, creating an area of low human interference around the park and involving the local communities in park management activities. Buffer zones in Nepal have taken an ecosystem approach in which both resource conservation and sustainable human development objectives are intertwined. Buffer zones aim to provide an alternative resource base for local livelihoods in order to reduce dependence on park resources, compensate for local communities for any depredation caused by wildlife and to create park-people harmony to ensure long-term conservation success. Buffer zone management programs executed by DNPWC, with support from various partners such as UNDP and WWF, have led to positive development such as up-lifting socio-economic conditions of Buffer zone communities, local institutional strengthening, gender mainstreaming, pilot conservation activities and park resource mobilization.[191]

330. Forest resources within the Koshi Tappu Wildlife Reserve have been gradually handed over to the communities under the community forestry approach. Within the Koshi Tappu Buffer Zone, 157.63 ha of forest area has been handed over for community forestry, with 15 user groups, and proposed one representing 2,931 households having access to buffer zone community forest resources.[192] The outcome of these buffer zone community forests differ from community forests in the rest of the country in that the primary focus is to restore lost habitat for wildlife, with the secondary focus being to supply communities with basic needs like fuelwood, fodder and income through nature tourism. However, buffer zone forest products are not allowed to be sold outside the buffer zone area. Other buffer zone initiatives include anti-poaching initiatives, infrastructure development, relief distribution to wildlife victims and ecotourism promotion. The Buffer Zone Management Guidelines outline that 30% of park revenue invested in buffer zones is to go to conservation, 20% to

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[189] Chettri *et al.* 2016.
[190] Bhusal, 2012.
[191] Bhusal, 2012.
[192] Ibid.

income generation and skill development, 10% to conservation education and 10% to administration.[193] Through these activities and provisions, much progress has been made on the side of social mobilization, community human resource development, conservation and development awareness and community finance generation and mobilization within the Koshi Tappu Wildlife Reserve Buffer Zone.

9.4.3 Livelihoods linked to the protected area

331. Before the establishment of the area as a reserve, the area was used by local communities for fishing, hunting, grazing, livestock and collecting fodder, fuelwood and other resources. Local communities are still highly dependent on the ecosystem of the reserve. Agriculture is the main livelihood source for over 87% of the households within the area and only 20% of the households are food secure.[194] Along with agricultural activities, livestock is the other major economic activity, with a livestock density on average of 1.5 cattle per household.[195] Households are also highly dependent on forest products, with the greatest dependency on firewood, followed by thatch, timber and grasses. There also exists great dependency on the wetland ecosystem services, including fish, driftwood, pater and snails.[196] The dependency of the local population on a variety of Koshi Tappu Wildlife Reserve products are shown in the following Figure.

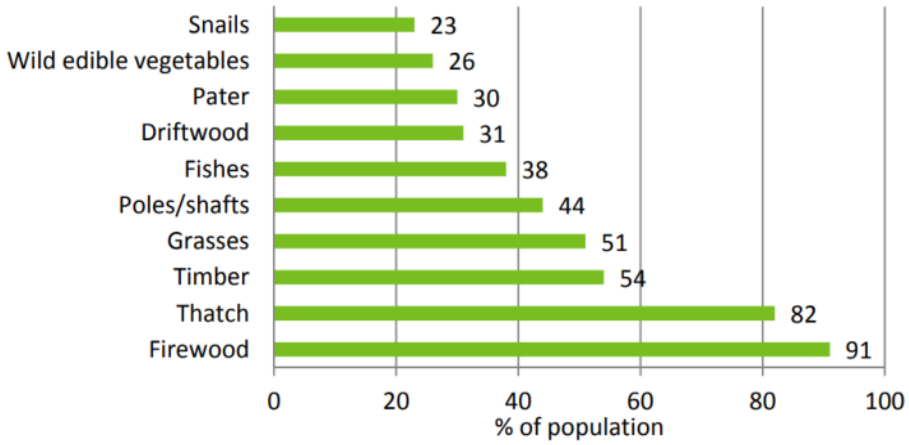

Figure 25: Percent of local population dependent on products from Koshi Tappu Wildlife Reserve

Source: Chettri et al. 2016

[193] Ibid.
[194] Chettri *et al.* 2016.
[195] Ibid.
[196] Chettri *et al.* 2016.

9.4.4 Challenges faced by the protected area and related BRCRN actions

332. As noted above, one protected partially overlaps with one of the 26 BRCRN prioritized river systems (Adherei Khola, Baruwa Khola and Duar Khola River System): the Koshi Tappu Wilfdlife Reserve (Figure 26). The core protected area has an overlap of 31 ha, while the buffer zone overlaps 471 ha with Adherei Khola, Baruwa Khola and Duar Khola River system.

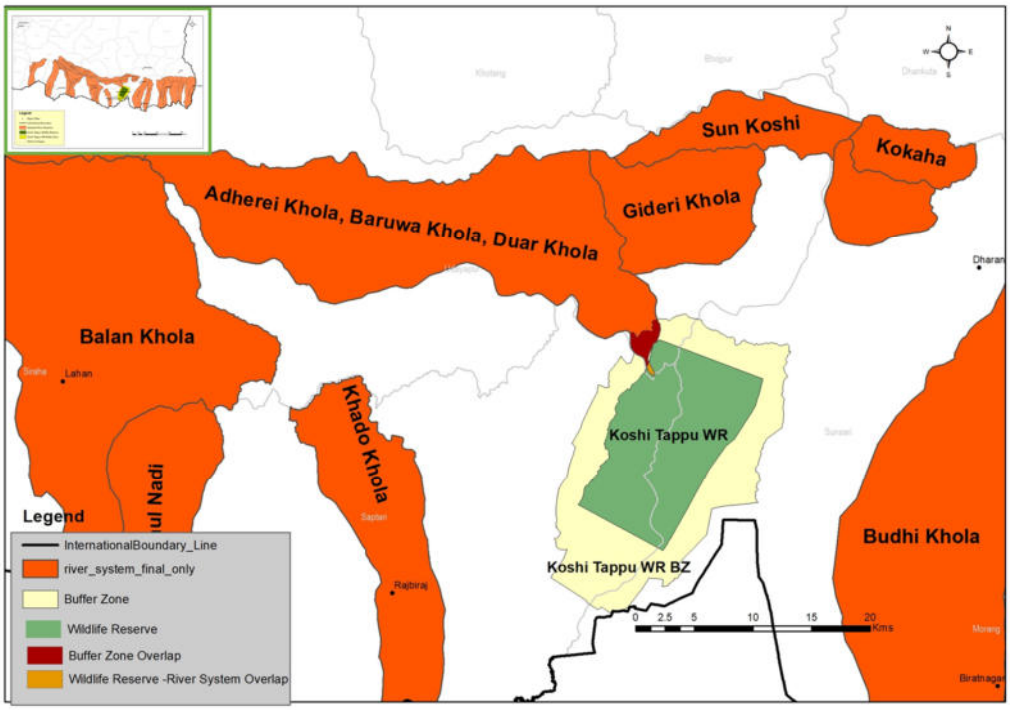

Figure 26: Overview of protected areas within the BRCRN project area.

333. No direct project interventions will be implemented in protected area core protection areas or buffer zone of the Koshi Tappu Wildlife Reserve. All project activities will be in compliance with the National Buffer Zone Management Regulation (1996) and Buffer Zone Management Guidelines (1999; more information below). All project activities will maintain a minimum 50m distance to the buffer zone of the national park. For all activities in the Adherei Khola, Baruqa Khola and Duar Khola river system, GPS coordinates will be collected and assessed to ensure that sufficient distance between project interventions and the protected area is maintained. Field visits within Activity 2.3 will further ensure that implemented activities are appropriate and will not have a negative impact on the protected area.

Positive Impacts

334. The project is anticipated to provide positive environmental impacts for the Koshi Tappu Wildlife Reserve due to the implementation of climate-resilient measures in upstream areas which will reduce sedimentation, decreasing the impact and exposure to flooding within the

reserve. It will further improve groundwater recharge upstream, improving access to water sources during dry season for wild animals in core and buffer zone forests. Measures will also provide alternatives for the unsustainable harvesting of forest products, reducing pressure on native forests for forest products including fuelwood, fodder, timber and NTFPs.

335. Furthermore, the project will take into account habitat connectivity and aim to enhance wildlife corridors with the potential to limit human wildlife conflicts. Local government officials will be trained on human-wildlife conflict management within training activities in Activity 3.6 to support the implementation of measures in Output1, and appropriate trainings can be provided to local resource persons and community-based organizations as needed.

336. The establishment of corridors along the Churia foothills of Kokrha, Patnali, Gideri, duar khola and Sunkoshi river systems will improve the connectivity for mega fauna of the Koshi Tappu Wildlife Reserve for free movement to adjoining natural and planted forests. Such corridors can also help relieve the wild buffalo-induced conflicts seen in Saptari and Sunsari areas. In these areas wild buffalo and boar take a large toll on wheat, potato and paddy crops, and occasionally cause human injury and even death.[197] BRCRN conservation efforts can contribute to alleviate the crop loss experienced around Koshi Tappu Reserve, along with reducing human-human and human-institution conflicts that arise with human-wildlife conflicts. These corridors will also address the increasing number of wild elephant related incidents, and corresponding high human fatality rates, experienced as these elephants move from India through Nepal.[198]

337. By maintaining functional wildlife corridors to connect protected areas throughout the Terai region, an increase in native flora and fauna populations is foreseen. Given the large proportion of Nepal's total biodiversity and ecosystems found in the Churia landscape and the importance of corridors for the continuation of viable populations, the establishment and protection of these corridors will lead to greater protection of Nepal's critical species and ecosystems. The establishment of viable wildlife corridors will also help reduce the occurrence of human-wildlife conflict. Although the development of wildlife corridors alone is not sufficient to curtail human-wildlife conflict, along with other interventions, such as installing proper fencing, improving awareness of climate change risks and their impact ecosystem services and local livelihoods, as well as holding trainings on animal behavior, corridors play a crucial role in protecting both wildlife and humans.[199]

338. By promoting sustainable forest management and reducing forest degradation it is anticipated that the project will reduce the spreading of invasive species (including *Mikania mirantha, Chromolaena odorata, Ipomoea carne asp, Fistulosa sp., Lantana camara and Parthenium hysteophorus*).[200]Unsustainable activities leading to forest degradation, such as

[197] Limbu and Karki 2003
[198] Acharya 2016
[199] Acharya 2016
[200] MoFSC 2013

grazing and the use of vehicles in forested areas, can lead to the spreading of these materials.[201] The project will support communities to identify and remove such species of plants, support forest restoration with desired plant species and support management regimes that limit the risk of invasive species by promoting sustainable natural resource use.[202]

339. In general, it is expected the project will have numerous positive impacts on biodiversity in the entire project region.

Negative Impacts

340. While negative impacts are not anticipated, potential impacts are highlighted in the following Table:

Table 19: Overview of potential negative impacts on biodiversity from project activities

Negative Impact	Likelihood	Impact	Risk Level
Increased human wildlife conflict due to improved habitat	Possible[203]	Low	Low
Increased competition with non-native tree species	Rare	Low	Low
Site-specific impacts (e.g. sedimentation) due to small-scale infrastructure construction	Possible	Low	Low[204]
Invasive species could be transported by vehicles, supporting the spread of the species	Possible	Medium	Low

341. A detailed analysis of potential negative impacts will be carried out with the elaboration of the biodiversity management plan during project inception and the implementation of Activity 2.3 (described in more detail in Section 6).

[201] Ibid.
[202] Ibid.
[203] On the one hand improved habitat could lead to increasing populations and increased human-wildife conflict, but it could also lead to reduced human-wildlife conflict due to improved habitat.
[204] Considered low as the project will train communities on invasive species identification and appropriate management. Promoted management regimes are likely to limit the spread of invasive species.

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ANNEXES

Annex 1: ESMF Work Plan

Annex 2: Project Exclusion List

Annex 3: Documentation of Stakeholder Consultations and Workshops

Annex 4: FAO Environmental and Social Screening Checklist

Annex 5: Site Selection Approach

ANNEX 1: ESMF WORK PLAN AND BUDGET

The following Table provides an overview of the work plan for the ESMF, Indigenous Peoples and Social Inclusion Planning Framework and Biodiversity Management Framework.

Table A1.1: ESMF Work Plan

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
Monitoring and Reporting																																	
PMC	Monitoring and reporting on safeguards performance and stakeholder engagement	Progress reports																													Gender and Safeguards Specialists within PMU and PPMU, together with partner organizations including indigenous, Dalit and women organizations, among others	223,737	223,737
Environmental and Social Screening and Assessment																																	
2.1.2	Identification of sub-activities and intervention sites	List of sub-activities and potential intervention sites																													PMU team in coordination with PSC, PCU and PPMUs	96,300	408,633
2.1.2	Environmental and social screening of sub-activities	Environmental and social Screening Checklist																													FAO Safeguard Specialist	10,700	408,633
2.1.2	Environmental and social assessment and drafting of safeguards related documentation for compliance (ESMPs)	Pre-implementation documents per sub-activity																													Safeguard/ Indigenous People/ Gender/ Biodiversity Experts	54,998	54,998
2.2.1	Agreements on Free Prior Informed Consent with each participating community-based organization.	Agreements signed prior to implementation of workshops																													PMU M&R specialist in Coordination with National Project Director (NPD)	110,296	110,296
Capacity Building of Project Staff																																	
2.1.1	Capacity building of project staff on ESS and GESI	Training of project management staff on ESS and GESI (training logs and reports).																													Safeguards Specialist within PMU in cooperation with the NPD	14,980	276,702
2.1.1	Trainings for provincial and local governments on climate-threats, as well as gender-sensitive and socially inclusive low-carbon and climate resilient planning	Training logs and reports																													PMU staff/ NPD	5,778	276,702
2.1.1	Training government authorities and trainers to conduct workshops with community-based organizations on climate-resilient land use planning	Training logs and reports																													PMU staff/ NPD	75,328	276,702
3.2.2	Training of extension staff, local resource persons and trainers for the scaling up of climate-resilient SNRM (Activities 1.1-1.3)	Training logs and reports																													PMU staff/ NPD/ MoFE/ MoALMC/ MoITFEstaff	227,268	227,268
3.2.2	Training of extension staff, project partners and local resource persons	Training logs and reports																													PMU staff/ MoFE/	159,831	159,831

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
	for study on local indigenous knowledge and information consolidation																														MoALMC/ MoITFE staff in cooperation with indigenous organizations/ federations		
3.2.3	Training of extension staff, government officials, local resource persons and trainers on the CKC, including online system and regional hubs	Training logs and reports																													PMU staff	92,555	92,555
2.1.3	Training of extension staff, government officials, local resource persons and trainers to support trainings on risk management planning and management.	Training logs and reports																													PMU staff/ MoFE/ MoHA/ MoITFE/MoWREI staff	175,266	175,266
2.1.3	Trainings on for local governments on local level risk management planning best practices and considerations for rural municipalities	Training logs and reports																													PMU staff/ MoFE/ MoHA/ MoITFE/MoWREI staff	75,649	75,649
Stakeholder Engagement																																	
PMC	Invitation of stakeholders to participate on PCUs	Invitation letters																													NPD/ PMU safeguard officer	428	34,668
PMC	Multi-stakeholder PCU Meetings (four times a year in each province – 12 PCU meetings per year)	Meeting summaries, attendance sheets																													NPD/ PMU Staff/ MoITFE	23,112	23,112
2.1.1	Workshops for CSOs on climate change and climate-resilient land use	Meeting summaries and attendance sheets, photos																													PMU Staff/ MoFE/ MoITFE	75,328	75,328
2.1.2	Consultations (provincial-level) on strategies and river system level action plans	Meeting summaries and attendance sheets, photos																													PMU Staff/ MoFE(MoITFE	11,556	11,556
2.1.2	Validation of provincial strategies and river system level action plans	Meeting summaries and attendance sheets, photos																													PMU Staff/ MoFE/ MoITFE	16,692	16,692
2.2.2	Workshops for community-based organizations on climate-resilient land use planning and SNRM	Meeting summaries and attendance sheets, photos																													PMU Staff/ MoFE/ MoITFE	374,500	374,500
2.2.1	Establishment of 26 private forest owner networks	Official documents declaring the creation of the network																													PMU Staff/ MoFE/ MoITFE	6,955	6,955
2.2.1	Establishment of 26 networks of CFUGs	Official documents declaring the creation of the network																													PMU Staff/ MoFE/ MoITFE	13,910	13,910
3.1.1	Community consultations and workshops with a focus on traditional knowledge for climate change adaptation	Meeting summaries and attendance sheets, photos																													PMU Staff/ M&E specialist/ MoFE/ MoITFE in coordination with indigenous organizations/ federations	142,711	142,711

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
3.1.1	Multi-stakeholder validation workshops to present guidelines and findings from dissemination processes	Meeting summaries and attendance sheets, photos																													PMU Staff/ M&R specialist/ MoFE/ MoITFE in coordination with indigenous organizations/ federations	17,120	17,120
3.1.1	Meetings with CSOs to discuss proposed training modules, to receive feedback to ensure they promote gender-equality and social inclusion	Meeting summaries and attendance sheets, photos																													PMU Staff/ MoFE/ MoITFE	4,788	95,765
3.1.2	Awareness raising on prepared modules for CSOs and other stakeholders (meetings, information sharing)	Communication plan																													PMU Staff/ MoFE/ MoITFE	22,727	227,268
3.2.3	Trainings for CSOs and community-based organizations on the CKC	Meeting summaries and attendance sheets, photos																													PMU Staff/ MoFE/ MoITFE	92,555	92,555
2.1.3	Stakeholder consultation workshops in each province on the risk management plans	Meeting summaries and attendance sheets, photos																													PMU Staff/ MoFE/ MoITFE	175,266	175,266
2.1.3	Multi-stakeholder validation workshops on provincial risk management plans	Meeting summaries and attendance sheets, photos																													PMU Staff/ MoFE/ MoITFE	75,649	75,649
1.1.1	Farmer field schools and trainings	Attendance sheets, photos																													PMU Staff/ MoFE/ MoITFE	1,023,434	1,023,434
Environmental and Social Screening and Assessment																																	
Cross-cutting	Identification of sub-activities	List of sub-activities																													Safeguard Specialist within FAO project management unit	60,000	-
Cross-cutting	Environmental and social (E&S) screening of sub-activities	E&S Screening Checklists																													Safeguard Specialist within FAO project management unit		
Cross-cutting	E&S assessment and drafting of ESMPs	1 ESMP per sub-activity																													Safeguard Specialist within FAO project management unit		
Monitoring and reporting																																	
Cross-cutting	Monitoring and reporting on safeguards performance and stakeholder engagement	Semi-annual progress reports on stakeholder engagement, and ESMPs																													Safeguard Specialist within FAO project management unit	-	Included within total project monitoring costs
		Annual compilation of E/S safeguards performance																													Safeguard Specialist within FAO project		

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
																															management unit		
Indigenous peoples planning Framework																																**Exclusively dedicated for IPPF**	**Included in Project Activities**
PMU	Indigenous Peoples and Social Inclusion Specialist hired for project management unit	Specialist hired																													Project Director	120,000	-
PMC	Invitation of representatives from indigenous federations, to participate in PCUs	Participation of groups in PCU																													NPD/ PSC/ FAO	285.2	9,202
2.1.1	Participatory development of an Indigenous Peoples Plan, based on the IPPF	IPP elaborated																													Project´s Indigenous Peoples and Social Inclusion Specialist in coordination with representative organizations	-	Budget included in ESMP development
2.1.1	Participatory development of a work plan with indigenous peoples representatives	Work plan created and implemented																													Project´s Indigenous Peoples and Social Inclusion Specialist in coordination with representative organizations	1061.4	34,240
2.2.2	Workshops for CSOs, including indigenous organizations, on climate change, climate-change risks and climate-resilient land use in each province	3 workshops (1 per province), consultation attendance sheets and reports																													Indigenous Peoples and Social Inclusion Specialist/ MoFE/ MoITFE in coordination with indigenous organizations/ federation to raise awareness	179.2	5,778
2.1.2	Consultation workshops on provincial level strategy and river system level action plans promote proportional representation within consultations	3 workshops (1 per province) Consultation attendance sheets and reports																													Indigenous Peoples and Social Inclusion Specialist and Safeguard and Gender Specialists	358.4	11,556
2.2.2	Workshops on climate-resilient land use planning and SNRM for members of 750 CBOs, ensuring 31% of beneficiaries are comprised of indigenous peoples, of which 50% are women	Workshops conducted, attendance sheets and reports																													Trainers will provide reports to PMC and PCU, who will provide the reports to safeguard specialist within the FAO project management unit	5804.8	374,500

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
3.1.1	Identification of local indigenous practices for climate change adaptation, and integration into informative materials	Report, Workshop Meeting Summaries, Guideline																													Indigenous Peoples and Social Inclusion Specialist/ MoFE/ MoALMC/ MoWREI/ MoITFE in cooperation with indigenous organizations/ federations and other CSOs	142,711	142,711
3.1.1	Development of capacity building plan for indigenous traditional knowledge	Capacity building plan																													Indigenous Peoples and Social Inclusion Specialistn cooperation with indigenous organizations/ federations	17,120	17,120
3.2.1	Integrating local indigenous practices for climate change adaptation into modules for extension services/ farmer field schools.	Local indigenous practices mainstreamed into each module.																													Indigenous Peoples and Social Inclusion Specialist/ MoFE/ MoALMC/ MoWRE/ MoITFE I in cooperation with indigenous and Dalit organizations/ federations and other CSOs	7,009	95,765
3.2.1	Consultations with indigenous organizations/ federations on meta module on farmer field schools and extension approach, for trainers and extension agents, to ensure that the approach is culturally-sensitive and that it promotes gender equality and social inclusion.	Meeting summaries and attendance sheets																													Indigenous Peoples and Social Inclusion Specialist/ MoFE/ MoALMC/ MoWREI/ MoITFE in cooperation with indigenous organizations/ federations	2,675	95,765
3.2.2	Training of trainers for farmer field schools and extension, including indigenous men and women	Training reports and attendance sheets																													Indigenous Peoples and Social Inclusion Specialist and Safeguard and Gender Specialist/ MoFE/ MoALMC/ MoWREI/ MoITFE in coordination with indigenous	7045.4	227,268

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
																															and Dalit organizations and federations		
3.2.3	Trainings for CSOs, including indigenous federations and organizations on CKC	Training reports and attendance sheets																													Indigenous Peoples and Social Inclusion Specialistand Safeguard Specialist/ MoFE/ MoITFE in coordination with indigenous and Dalit organizations and federations	2869.4	92,555
3.1.2	Establishment of Eco clubs in school, that promote the engagement of indigenous boys and girls	Membership sheet																													Indigenous Peoples and Social Inclusion Specialistand Safeguard Specialist/ MoFE/ MoITFE in coordination with indigenous and Dalit organizations and federations	53,500	160,500
3.2.3	Mainstreaming local indigenous adaptation practices and knowledge into the CKC	Materials uploaded into online CKC and available in provincial hubs. Plan for communication (input and dissemination) elaborated with indigenous organizations and CSOs.																													Indigenous Peoples and Social Inclusion Specialist/ MoFE in coordination with indigenous organizations and federations	4,120	41,195
2.1.3	Indigenous organizations provide feedback on Provincial DRR plans	Provincial DRR plans include chapter on indigenous peoples and social inclusion. Workshop attendance sheets and summaries, meeting minutes from bilateral meetings.																													Indigenous Peoples and Social Inclusion Specialist/ MoFE/ MoITFE in coordination with indigenous organizations and federations	8,763	175,266
2.2.1	Formalization/ institutionalization of at least 100 public forest user groups, which primarily include poor and marginalized households, where at least 50% of members are women with proportional representation of indigenous peoples	Registration documents																													Provincial safeguard specilistss will report to Safeguard Specialist within Federal PMU	2380.5	76,799
Component 1 Activities	Implementation of climate-resilient land use practices on at least 512,498	Project reports																													Indigenous Peoples and Social	3465380.3	36,060,148

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
	ha, engaging at least 750 CBOs containing over 831,168 beneficiaries, where 31% of beneficiaries are indigenous people (of which 50% are indigenous women)																														Inclusion Specialistand Safeguard Specialist and PMU in coordination with indigenous organizations and federations		
Cross-cutting	Participatory monitoring of ESMP and stakeholder engagement (including FPIC and IPPF-related measures), ensuring social inclusion in the monitoring process	Project reports																													Safeguard Specialist within FAO project management unit in coordination with Indigenous Peoples and Social Inclusion Specialist	-	Included in ESMP budget
Social inclusion planning Framework																																**Exclusively dedicated for SIPF**	**Included in Project Activities**
PMC	Invitation of representatives from Dalit organizations and other CSOs representing marginalized/excluded groups to participate in PCUs	Participation of groups in PCU																													NPD/ PSC/ FAO	634.8	9,202
2.1.1	Participatory development of a Social Inclusion Plan, based on the SIPF	SIP elaborated																													Project´s Indigenous Peoples and Social Inclusion Specialist in coordination with representative organizations	-	Budget included in ESMP development
2.1.1	Participatory development of a work plan with Dalits, and other marginalized/excluded group representatives	Work plan created and implemented																													Project´s Indigenous Peoples and Social Inclusion Specialist in coordination with representative organizations	2362.4	34,240
2.2.2	Workshops for CSOs on climate change, climate-change risks and climate-resilient land use in each province	3 workshops (1 per province), consultation attendance sheets and reports																													Indigenous Peoples and Social Inclusion Specialist/ MoFE/ MoITFE in coordination with indigenous organizations/ federation to raise awareness	398.8	5,778

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
2.1.2	Consultation workshops on provincial level strategy and river system level action plans promote proportional representation within consultations	3 workshops (1 per province) Consultation attendance sheets and reports																													Indigenous Peoples and Social Inclusion Specialist and Safeguard and Gender Specialists	797.6	11,556
2.2.2	Workshops on climate-resilient land use planning and SNRM for 750 community-based organizations, ensuring 13% of beneficiaries are Dalits, of which 50% are women	Workshops conducted, attendance sheets and reports																													Trainers will provide reports to PMC and PCU, who will provide the reports to safeguard specialist within the FAO project management unit	12920.3	374,500
3.2.2	Training of trainers for farmer field schools and extension, including representatives of Dalits and marginalised groups	Training reports and attendance sheets																													Indigenous Peoples and Social Inclusion Specialist and Safeguard and Gender Specialist/ MoFE/ MoALMC/ MoWREI/ MoITFE in coordination with indigenous and Dalit organizations and federations	15681.6	227,268
3.2.3	Trainings for CSOs on CKC, including federations and organizations representing Dalits and marginalised groups	Training reports and attendance sheets																													Indigenous Peoples and Social Inclusion Specialistand Safeguard Specialist/ MoFE/ MoITFE in coordination with indigenous and Dalit organizations and federations	6386.6	92,555
2.2.1	Formalization/ institutionalization of at least 100 public forest user groups, which primarily include poor and marginalized households, where at least 50% of members are women with proportional representation of Dalits and other marginalized groups	Registration documents																													Provincial safeguard specilistss will report to Safeguard Specialist within Federal PMU	5298.5	76,799
Component 1 Activities	Implementation of climate-resilient land use practices on at least 512,498 ha, engaging at least 750 community-based organizations containing over 831,168 beneficiaries, where 13% of	Project reports																													Indigenous Peoples and Social Inclusion Specialistand Safeguard Specialist	7713265.7	36,060,148

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
	beneficiaries are Dalits (of which 50% are women)																														and PMU in coordination with indigenous organizations and federations		
Cross-cutting	Participatory monitoring of ESMP and stakeholder engagement (including FPIC and SIPF-related measures), ensuring social inclusion in the monitoring process	Project reports																													Safeguard Specialist within FAO project management unit in coordination with Indigenous Peoples and Social Inclusion Specialist	-	Included in ESMP budget
Biodiversity Management Framework																																	
PMC	Monitoring and reporting on implementation of biodiversity management plans	Project reports																													PMU Safeguards Specialist in coordination with biodiversity specialists	192,921	192,921
PMC	Elaboration of biodiversity management plan for Activities 1.1-1.15	3 biodiversity management plans (1/ activity)																														3,531	192,921
2.1.2	Analysis and consultations to identify specific practices and activities with a potential impact on biodiversity	Report																													Biodiversity Specialist	27,499	54,998
2.1.2	Identification of priority areas with biodiversity importance	26 River System Climate-resilient action plans, with a section on biodiversity hotspots in each river system																													Biodiversity Specialist/ PMU staff	408,633	408,633
2.1.2	Revision of proposed interventions based on consultations with community-based organizations, considering local biodiversity hotspots	Implementation proposals of community-based organizations reviewed																													Biodiversity Specialist/ PMU staff	110	110,296
3.2.2	Trainings for extension agents and trainers on biodiversity management within the context of the BRCRN project	Training materials, attendance sheets and reports																													Biodiversity Specialist/ PMU staff	22,727	227,268
3.2.2	Elaboration of manual on site-species matching and good practices for forestry activities	Manual elaborated and published																													PMU Staff	9,566	95,658
Gender Action Plan																																	
Cross-cutting	Monitoring and reporting on GAP	Project reports																													PMUM&R specialist in cooperation with women's organizations/ CSOs	-	Included in regular budget
Output 1: Reduced greenhouse gas emissions and enhanced resilience to climate change through investments in innovative technology and practices in the forest and agriculture sectors																																	

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
PMC	Ensure training and engagement of women in adopting climate-resilient land use practices. Time and locate trainings taking into account women's work schedules and accessibility to ensure maximum participation and outreach, coordinate with local women's organizations to build on existing networks and best practices for outreach	▪ Extension services ensure that women are able to access extension services (at least 50% of beneficiaries are women*), and that 50 % extension staff are women*																													PMUM&R specialist in cooperation with women's organizations/ CSOs	87,312	87,312
1.1.1-1.1.3	Women adopt and benefit from climate-resilient agricultural practices.	▪ At least 250 community-based organizations adopt climate-resilient agricultural practices (50% of beneficiaries are women*)																													PMU M&R specialist in cooperation with women's organizations/ CSOs	1,463,760	2,927,520
1.2.1-1.2.2	Women adopt and benefit from restoration and sustainable management of degraded natural forests, critical watersheds and wetlands to avoid emissions, enhance sequestration and improve other ecosystem services (incl. biodiversity conservation).	▪ Restoration activities implemented on ~206,227 ha, which benefits at least 750 community-based organizations in 26 critical river systems (of which at least 50% of beneficiaries will be women*)																													PMU M&R specialist in cooperation with women's organizations/ CSOs	2,143,804	4,287,608
1.3.2	Women benefit from tree planting on private and public lands to release pressure on natural forests for fuelwood, timber and forage	▪ At least 50 private forests owned by women registered by local government ▪ At least 100 public land forests registered by local government, of which 50% are established by women user groups* ▪ 24,958 ha of plantation forests established, where at least 50% of beneficiaries are women*																													PMU M&R specialist in cooperation with women's organizations/ CSOs	5,608	11,215,633
Output 2: Strengthened institutions and capacities for integrated climate-resilient land use																																	

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
PMC	Gender focal points assigned in multi-stakeholder project coordination entities	▪ Gender Focal Point Assigned in PSC and PCU																													National Project Director (NPD) in coordination with gender focal point from Ministry of Forests and Environment (MoFE) and federal and PPMU safeguard officers	1,070	21,400
PMC	Invitation of CSOs representing women (including indigenous women's groups and Dalit women's groups, among others) to participate on PCUs	▪ At least one women´s group participates in each provincial PCU*																													PMU Gender and Safeguard Officer	1,070	23,112
2.1.2	Engagement of women and women's organizations in identifying vulnerable areas, critical ecosystems and integration of women's issues in sub-river system level SNRM planning;	▪ At least 26 multi-stakeholder workshops, where GESI topics to be discussed and implemented, women's organizations to be invited to workshop																													PMU Gender and Safeguard Officer	21,347	408,633
2.1.2	Identification of female beneficiaries who are working with existing SNRM projects and / or those who are interested in introducing SNRM and DRR practices as *´champions´*	▪ Identification of champions to support the implementation of activity 2.2 as well as Outputs 1 and 3																													PMU Gender and Safeguard Officer with support from representatives from women's organizations/ CSOs	21,347	408,633
2.1.2	Provincial climate-resilient land use planning strategies and river system level action plans include a sub-section on gender	▪ 3 provincial strategies and 26 action plans include sub-section on gender																													PMU M&R specialist	5,500	54,998
2.2.2	Strengthen outreach to women, including women from indigenous nationalities and marginalized groups.	▪ 10 trainings on leadership, rights, climate risks and climate-resilient land use planning targeted for women*																													PMU M&R specialist	6,420	374,500
2.2.2	Mainstreaming adaptation and mitigation measures at the community level, with a focus on forests, water and land management practices/ operation guidelines through active participation of women, indigenous peoples and marginalized groups;	▪ Trainings for 750 community based management organizations, of which at least 50% are women*																													PMU M&R specialist	187,250	374,500
Output 3: Enhanced awareness, knowledge and communication on climate-resilient land use and disaster risk reduction																																	
3.1.1	Respect and document local knowledge from women, including	▪ Women's organizations invited to 6																													PMU M&R specialist	4,815	142,711

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
	women from indigenous nationalities, Dalit caste, and other marginalized groups	provincial consultation workshops and validation workshops																															
3.1.1	Respect and document local knowledge from women, including women from indigenous nationalities, Dalit caste, and other marginalized groups	▪ 78 community consultations (~3 per river system) least 50% of people consulted should be women*																													PMU M&R specialist in cooperation with women's organizations/ CSOs	69,550	142,711
3.1.2	User group associations as well as women's groups, indigenous peoples, Dalits, marginalized minority organizations engaged in info documentation, and dissemination (networks). Women's networks support awareness raising campaigns to engage women.	▪ 125 broadcasts regarding Churia Conservation related news and views, including broadcasts in local languages																													PMU M&R specialist	346,145	346,145
3.2.2	Trainers trained on GESI within the context of the BRCRN project, and measures to improve the engagement of women, indigenous peoples and marginalized groups in knowledge consolidation, dissemination and extension.	▪ Trainers should include people from diverse socio-cultural backgrounds, and translation services should be available for trainings or consultations in local languages.																													PMU M&R specialist	22,727	227,268
3.1.2	Support establishment of 130 eco-clubs, with participation from boys and girls to become engaged on topics related to climate change and climate-resilient land use	▪ 130 eco-clubs established, with 50% girls																													PMU M&R specialist	80,250	160,500
3.2.2	Trainers should include people from diverse socio-cultural backgrounds, and translation services should be available for trainings or consultations in local languages.	▪ At least 50% of trainers should be women*																													PMU M&R specialist	113,634	227,268
3.2.2	Trainers trained on GESI within the context of the BRCRN project, and measures to improve the engagement of women, indigenous peoples and marginalized groups in knowledge consolidation, dissemination and extension.	▪ Trainers include women, indigenous peoples, Dalits and other marginalized groups. Trainings in local languages are available with support from trainers and local resource persons																													PMU M&R specialist in cooperation with women's organizations/ CSOs	22,727	227,268
3.2.1	Training modules and guidelines for extension and technical assistance to be designed taking into account GESI.	▪ 10 training modules include sub-sections on i) gender and ii) social inclusion																													PMU M&R specialist	20,330	95,765

Activity	Task	Indicator	Project Year 1				Project Year 2				Project Year 3				Project Year 4				Project Year 5				Project Year 6				Project Year 7				Responsibility	Costs	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Exclusively dedicated for ESMF	Included in Project activities
	Extension modules each include a section on i) gender and ii) social inclusion																																
3.1.2	Exposure visits for trainers and government staff include participation of women	▪ 50% of beneficiaries should be women*																													PMU M&R specialist	7,244	14,488
3.2.3	Engagement of women in the design and operation of the Churia Knowledge Center	▪ Women's organizations are invited and participate in 3 workshops on the CKC																													PMU M&R specialist	10,700	88,275
3.2.3	Engage women in monitoring and knowledge management activities	▪ Women support the monitoring of environmental and social characteristics in the BRCRN project area, where at least 50% of resource persons trained are women*																													PMU M&R specialist	8,828	88,275
3.2.3	Integrate information on GESI into CKC knowledge, and communicate gender-related issues linked to climate change and unsustainable natural resource management	▪ GESI portal established within online CKC, and GESI materials available in regional hubs																													PMU M&R specialist	8,828	88,275
3.1.2	Engage youth, boys and girls, in learning opportunities related to climate change, SNRM, and DRR through the Churia Knowledge Center	▪ CKC presented to 130 eco-clubs in schools, with 50% participation of girls in clubs																													PMU M&R specialist	16,050	160,500
2.1.3	Raise awareness of women in vulnerable communities about climate-induced disasters and risks and the link with unsustainable NRM, as well as SNRM, DRR measures	▪ Increased awareness of women in 26 vulnerable river systems climate change risks																													PMU M&R specialist in cooperation with women's organizations/ CSOs	175,266	175,266
2.1.3	Engage women including indigenous peoples and marginalized groups in the development of provincial DRR plans.	▪ 3 consultation workshops and 3 validation workshops, with women's organizations invited to each workshop.																													CSOs to support participation of women in consultation workshops (awareness raising).	10,700	175,266
3.2.3	Integrate women´s, including, indigenous peoples and marginalized minority groups, priorities´ into disaster risk management plans and guideline development through consultations with women in local-community based organizations, and through engaging with local networks	▪ Provincial DRR plan includes a section on i) gender and on ii) social inclusion																													PMU M&R specialist	7,565	75,649

*promoting proportional representation of highly vulnerable groups including indigenous women (31%) and Dalits (13%)

ANNEX 2: PROJECT EXCLUSION LIST

The following is the Project Exclusion List, a list of activities that the BRCRN project will not support:

- The project will not support activities that result in a negative change to existing legitimate tenure rights
- The project will not involve the involuntary resettlement of households
- The project will not support the construction of medium to large infrastructure (e.g. dams above 5m in height)
- Activities that may increase greenhouse gas emissions substantially
- The project will not be implemented in protected areas
- The project will not support the direct supply of agro-chemicals
- The project will not support the clearing of native forests
- The project will not use non-locally adapted species.
- The project will not include interventions within protected areas.

ANNEX 3: DOCUMENTATION OF STAKEHOLDER WORK-SHOPS AND CONSULTATIONS

Annex 3 is available in a separate word file.

ANNEX 4: FAO ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST

Every sub-activity will must undergo an initial screening, utilizing FAO's Safeguards Screening Checklist, found at the end of this annex. Based on the screening, sub-activities will be categorized as low, moderate, or high risk. Based on the screening, sub-activities will either be approved for implementation, or will be amended to meet the requirements detailed within this ESMF (specifically, all sub-activities must have low to-moderate impact; high risk sub-activities will not be allowed under the project, nor will sub-activities which involve elements listed in the Annex 1 Non-Eligibility List of this document).

Guidance and Examples for Sub-Activity Categorization

Categorization: To ensure that the extent of the review is commensurate with the nature of risk, categorization is a useful step in procedures where based on basic information about a project such as sector and scale, the level of E&S risk the project could pose is determined. This also enables the PMU Safeguards and Gender Specialists to determine the extent and sophistication of the E&S review required. Categorization may be low, moderate or high. For the purposes of this project, all sub-activities are expected to be Category B (Medium) or Category C (Low) risk.

High Risk (Category A) Sub-Activity

The location of the farmers/project enterprise or activity may be:

- Near sensitive and valuable ecosystems, protected areas and habitat of endangered species;
- Near sensitive receptor such as hospital, school, temple, etc.;
- Near areas with archaeological and/or historic sites or existing cultural and social institutions;
- Near or in areas occupied by vulnerable ethnic minorities or indigenous peoples, or lands to whichthey are collectively attached, where negative impacts are expected and/or have not involved prior
- consultation;
- In densely populated areas, where resettlement may be required or potential pollution impacts andother disturbances may significantly affect communities;
- In regions where there are conflicts in natural resources allocation;
- Near watercourses, aquifer recharge areas or in reservoirs used for potable water supply; or inclose proximity to lands or waters containing valuable resources.

Examples of sensitivity issues are those where the sub-activity can:

- Cause adverse global or regional environmental impacts;
- Concern the rights of indigenous people or vulnerable ethnic minorities;
- Require large scale land acquisition or subsequent change in land use that produces loss or damageof assets or income for local residents;
- Lead to involuntary settlements or displacement of people from their livelihoods;
- Impact protected or otherwise recognized areas of high biodiversity or cultural value; or
- Lead to toxic waste disposal.

- Acquisition of small parcels of land, even if obtained on a negotiated basis with property owners or thosewith recognized rights to the land, should be considered as sensitive if expropriation or other compulsorymeasures would have resulted upon the failure of negotiation.

Examples where the nature of the sub-activity may:
- Cause irreversible degradation or unsustainable exploitation of natural resources; or
- Pose serious risks of significant harm to human health and safety.

Examples of the magnitude of the sub-activity where:
- A high amount of scarce resources may be put at risk;
- The timing and duration of the negative impacts are long; or
- The cumulative effects of many similar, but individually small transactions together lead to seriousimpacts.

Category A sub-activities are perceived to have significant adverse environmental and/or social impacts, andare not permitted to form part of the target portfolio.

Medium Risk (Category B) Sub-Activity

Transactions with a limited number of potentially adverse environmental or social impacts that are generallysite-specific, largely reversible, and readily addressed through mitigation measures that reduce the risk tomoderate or low levels are normally classified as Category B.

The following characteristics indicate aCategory B sub-activity:
- Environmental and social risks for the most part are mostly limited to and readily mitigated throughapplication of good industry practice as described in relevant Environmental, Health and Safety

Guidelines;
- Labor and working conditions are unlikely to include harmful child labor, involuntary or compulsorylabor, or significant occupational health and safety issues;
- Significant land acquisition or significant land use change is not expected, nor is there expectationof displacement of people or significant loss of livelihoods due to project activities; and
- Socially or economically disadvantaged groups, such as tribal or ethnic groups or similarcommunities, are not known to occur in the project's area of direct impact, nor does the activityinvolve use of lands to which they are collectively attached, or where those communities arepresent but consultation has indicated Free Prior and Informed Consent (FPIC).

Low Risk (Category C) Sub-Activity:

Sub-activity proposals that are perceived to have minimal or noadverse environmental or social impacts are classified as Category C, and no further environmental or socialassessment work needs to be done after initial screening and categorization.

Environmental and Social Risk Identification – Screening Checklist

	Question	YES	NO
1	Would this project: • result in the degradation (biological or physical) of soils or undermine sustainable land management practices; or • include the development of a large irrigation scheme, dam construction, use of waste water or affect the quality of water; or • reduce the adaptive capacity to climate change or increase GHG emissions significantly; or • result in any changes to existing tenure rights[205] (formal and informal[206]) of individuals, communities or others to land, fishery and forest resources?		
2	Would this project be executed in or around protected areas or natural habitats, decrease the biodiversity or alter the eco-systemfunctionality, use alien species, or use genetic resources?		
3	Would this project: • Introduce crops and varieties previously not grown, and/or; • Provide seeds/planting material for cultivation, and/or; • Involve the importing or transfer of seeds and or planting material for cultivation or research and development; • Supply or use modern biotechnologies or their products in crop production, and/or • Establish or manage planted forests?		
4	Would this project introduce non-native or non-locally adapted species, breeds, genotypes or other genetic material to an area or production system, or modify in any way the surrounding habitat or production system used by existing genetic resources?		
5	Would this project:		

[205][205] Tenure rights are rights to own, use or benefit from natural resources such as land, water bodies or forests

[206] Socially or traditionally recognized tenure rights that are not defined in law may still be considered to be 'legitimate tenure rights'.

	• result in the direct or indirect procurement, supply or use of pesticides[207]: ▪ on crops, livestock, aquaculture, forestry, household; or ▪ as seed/crop treatment in field or storage; or ▪ through input supply programmes including voucher schemes; or ▪ for small demonstration and research purposes; or ▪ for strategic stocks (locust) and emergencies; or ▪ causing adverse effects to health and/or environment; or • result in an increased use of pesticides in the project area as a result of production intensification; or • result in the management or disposal of pesticide waste and pesticide contaminated materials; or • result in violations of the Code of Conduct?		
6	Would this project permanently or temporarily remove people from their homes or means of production/livelihood or restrict their access to their means of livelihood?		
7	Would this project affect the current or future employment situation of the rural poor, and in particular the labour productivity, employability, labour conditions and rights at work of self-employed rural producers and other rural workers?		
8	Could this project risk overlooking existing gender inequalities in access to productive resources, goods, services, markets, decent employment and decision-making? For example, by not addressing existing discrimination against women and girls, or by not taking into account the different needs of men and women.		
9	Would this project: • have indigenous peoples* living outside the project area[1] where activities will take place; or • have indigenous peoples living in the project area where activities will take place; or • adversely or seriously affect on indigenous peoples' rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, governance systems, and culture or heritage (physical[2] and non-physical or intangible[3]) inside and/or outside the project area; or • be located in an area where cultural resources exist?		

[207] Pesticide means any substance, or mixture of substances of chemical or biological ingredients intended for repelling, destroying or controlling any pest, or regulating plant growth.

	* FAO considers the following criteria to identify indigenous peoples: priority in time with respect to occupation and use of a specific territory; the voluntary perpetuation of cultural distinctiveness (e.g. languages, laws and institutions); self-identification; an experience of subjugation, marginalization, dispossession, exclusion or discrimination (whether or not these conditions persist). [1]The phrase "Outside the project area" should be read taking into consideration the likelihood of project activities to influence the livelihoods, land access and/or rights of Indigenous Peoples' irrespective of physical distance. In example: If an indigenous community is living 100 km away from a project area where fishing activities will affect the river yield which is also accessed by this community, then the user should answer "YES" to the question. [2]Physical defined as movable or immovable objects, sites, structures, group of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic or other cultural significance located in urban or rural settings, ground, underground or underwater. [3]Non-physical or intangible defined as "the practices, representations, expressions, knowledge and skills as well as the instruments, objects, artifacts and cultural spaces associated therewith that communities, groups, and in some cases individuals, recognize as part of their spiritual and/or cultural heritage"		

Second Level Questions

SAFEGUARD 1 NATURAL RESOURCES MANAGEMENT

Question	Management of soil and land resources	No	Yes	Comments
1.1	Would this project result in the degradation (biological or physical) of soils	**LOW RISK**	**MODERATE RISK** Demonstrate how the project applies and adheres to the principles of the World Soil Charter	
1.2	Would this project undermine sustainable land management practices?	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

	Management of water resources and small dams	No	Yes	Comments
1.3	Would this project develop an irrigation scheme that is more than **20 hectares**or withdraws more than **1000 m3/day**of water?	**LOW RISK**	**MODERATE RISK** Specify the following information: a) implementation of appropriate efficiency principles and options to enhance productivity, b) technically feasible water conservation measures, c) alternative water supplies, d) resource contamination mitigation or/and avoidance, e) potential impact on water users downstream, f) water use offsets and demand management options to maintain total demand for water resources within the available supply. g) The**ICID-checklist** will be included, as well as appropriate action within the project to mitigate identified potential negative impacts.	

			h) Projects aiming at improving water efficiency **will carry out thorough water accounting** in order to avoid possible negative impacts such as waterlogging, salinity or reduction of water availability downstream.	
1.4	Would this project develop an irrigation scheme that is more than **100 hectares**or withdraws more than **5000 m3/day**of water?	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	
1.5	Would this project aim at improving an irrigation scheme (without expansion)?	**LOW RISK**	**MODERATE RISK** The**ICID-checklist** will be included, as well as appropriate action within the project to mitigate identified potential negative impacts. Projects aiming at improving water efficiency **will carry out thorough water accounting** in order to avoid possible negative im-	

			pacts such as waterlogging, salinity or reduction of water availability downstream.	
1.6	Would this project affect the quality of water either by the release of pollutants or by its use, thus affecting its characteristics (such as temperature, pH, DO, TSS or any other?	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	
1.7	Would this project include the usage of wastewater?	**LOW RISK**	**MODERATE RISK** Demonstrate how the project applies and adheres to applicable national guidelines or, if not available, the WHO/FAO/UNEP Guidelines on Safe Usage of Waste Water in Agriculture	
1.8	Would this project involve the construction or financing of a dam that is more than **15 m**. in height?	**LOW RISK**	**CANNOT PROCEED**	
1.9	Would this project involve the construction or financing of a dam that is more than **5 m**. in height?	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

	Tenure	No	Yes	Comments

1.10	Would this project permanently or temporarily deny or restrict access to natural resources to which they have rights of access or useCould this project result in any changes to existing *tenure rights*[1] (*formal and informal*[2]) of individuals, communities or others to land, fishery and forest resources? [1]Tenure rights are rights to own, use or benefit from natural resources such as land, water bodies or forests [2]Socially or traditionally recognized tenure rights that are not defined in law may still be considered to be 'legitimate tenure rights'.		**LOW RISK**	**PROCEED TO NEXT Q**	
	1.10.1	Could this project result in a negative change to existing legitimate tenure rights?	**MODERATE RISK** Demonstrate how the project applies and adheres to the principles/framework of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	
	Climate		**No**	**Yes**	**Comments**

1.11	Could this project result in a reduction of the adaptive capacity to climate change for any stakeholders in the project area?		**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	
1.12	Could this project result in a reduction of resilience against extreme weather events?		**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	
1.13	Could this project result in a net increase of GHG emissions beyond those expected from increased production?		**LOW RISK**	**PROCEED TO NEXT Q**	
	1.13.1	Is the expected increase below the level specified by FAO guidance or national policy/law (whichever is more stringent)?	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	**LOW RISK**	

	1.13.2	Is the expected increase above the level specified by FAO guidance or national policy/law (whichever is more stringent)?	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

SAFEGUARD 2 BIODIVERSITY, ECOSYSTEMS AND NATURAL HABITATS

	Protected areas, buffer zones or natural habitats	No	Yes
2.1	Would this project be implemented within a legally designated protected area or its buffer zone?	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.

	Biodiversity Conservation	No	Yes	Comments
2.2	Would this project change a natural ecosystem to an agricultural/aquacultural/forestry production unit with a reduced diversity of flora and fauna?	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	
2.3	Would this project increase the current impact on the surrounding environment for example by using more water, chemicals or machinery than previously?	**LOW RISK**	**MODERATE RISK** Demonstrate in the project document what measures will be taken to minimize adverse impacts on the environment and ensure that implementation of these measures is reported in the risk log during progress reports.	

	Use of alien species	No	Yes	Comments
2.4	Would this project use an alien species which has exhibited an invasive* behavior in the country or in other parts of the world or a species with unknown behavior? *An invasive alien species is defined by the Convention on Biological Diversity as "an alien species whose introduction and/or spread threaten biological diversity" (see https://www.cbd.int/invasive/terms.shtml).	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

	Access and benefit sharing for genetic resources	No	Yes	Comments
2.5	Would this project involve access to genetic resources for their utilization and/or access to traditional knowledge associated with genetic resources that is held by indigenous, local communities and/or farmers?	**LOW RISK**	**MODERATE RISK** Ensure that the following issues are considered and appropriate action is taken. The issues identified and the action taken to address them must be included in the project document and reported on in progress reports. For **plant genetic resources for food and agriculture**	

			(PGRFA) falling under the Multilateral System of Access and Benefit-sharing (MLS) of the International Treaty on Plant Genetic Resources for Food and Agriculture (Treaty), ensure that Standard Material Transfer Agreement (SMTA) has been signed and comply with SMTA provisions. For **genetic resources, other than PGRFA falling under the MLS of the Treaty**: 1. Ensure that, subject to domestic access and benefit-sharing legislation or other regulatory requirements, prior informed consent has been granted by the country providing the genetic resources that is the country of origin of the resources or that has acquired the resources in accordance with the Convention on Biological Diversity, un-	

			less otherwise determined by that country; and 2. Ensure that benefits arising from the utilization of the genetic resources as well as subsequent applications and commercialization are shared in a fair and equitable way with the country providing the genetic resources that is the country of origin of the resources or that has acquired the resources in accordance with the Convention on Biological Diversity; and 3. Ensure that, in accordance with domestic law, prior informed consent or approval and involvements of indigenous and local communities is obtained for access to genetic resources where the indigenous and local	

			communities have the established right to grant such resources; and 4. Ensure that, in accordance with domestic legislation regarding the established rights of these indigenous and local communities over the genetic resources, are shared in a fair and equitable way with the communities concerned, based on mutually agreed terms. For **traditional knowledge associated with genetic resources** that is held by indigenous and local communities: 1. Ensure, in accordance with applicable domestic law, that knowledge is accessed with the prior and informed consent or approval and involvement of these indigenous and local communities, and that	

			mutually agreed terms have been established; and 2. Ensure that, in accordance with domestic law, benefits arising from the utilization of traditional knowledge associated with genetic resources are shared, upon mutually agreed terms, in a fair and equitable way with indigenous and local communities holding such knowledge. Ensure that the project is aligned with the Elements to Facilitate Domestic Implementation of Access and Benefit Sharing for Different Subsectors of Genetic Resources for Food and Agriculture when it is the case	

SAFEGUARD 3 PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

	Introduce new crops and varieties	No	Yes	Comments
3.1	Would this project Introduce crops and varieties previously not grown?	**LOW RISK**	**MODERATE RISK** • Follow appropriate phytosanitary protocols in accordance with IPPC • Take measures to ensure that displaced varieties and/or crops, if any, are included in the national or international *ex situ* conservation programmes	

	Provision of seeds and planting materials		No	Yes	Comments
3.2	Would this project provide seeds/planting material for cultivation?		**LOW RISK**	**PROCEED TO NEXT Q**	
	3.2.1	Would this project involve the importing or transfer of seeds and/or planting materials for cultivation?	**LOW RISK**	**MODERATE RISK** • Avoid undermining local seed & planting material production and supply systems through the use of seed voucher schemes, for instance • Ensure that the seeds and planting materials are from locally adapted crops and varieties that are accepted by farmers and consumers	

				• Ensure that the seeds and planting materials are free from pests and diseases according to agreed norms, especially the IPPC • Internal clearance from AGPMG is required for all procurement of seeds and planting materials. Clearance from AGPMC is required for chemical treatment of seeds and planting materials • Clarify that the seed or planting material can be legally used in the country to which it is being imported • Clarify whether seed saving is permitted under the country's existing laws and/or regulations and advise the counterparts accordingly. • Ensure, according to applicable national laws and/or regulations, that farmers' rights to PGRFA and over associated traditional knowledge are respected in the access to PGRFA and the sharing of the benefits accruing from their use. Refer to ESS9: Indigenous peoples and cultural heritage.	
	3.2.2	Would this project involve the importing or transfer of seeds	**LOW RISK**	**MODERATE RISK** Ensure compliance with Access and Benefit Sharing norms as stipulated in the International Treaty on Plant Genetic Resources for	

		and/or planting materials for research and development?		Food and Agriculture and the Nagoya Protocol of the Convention on Biodiversity as may be applicable. Refer also to ESS2: Biodiversity, Ecosystems and Natural Habitats.	

	Modern biotechnologies and the deployment of their products in crop production	**No**	**Yes**	**Comments**
3.3	Would this project supply or use modern plant biotechnologies and their products?	**LOW RISK**	**MODERATE RISK** • Adhere to the Cartagena Protocol on Biosafety of the Convention on Biological Diversity to ensure the safe handling, transport and use of Living Modified Organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health. • Adhere to biosafety requirements in the handling of Genetically Modified Organisms (GMOs) or Living Modified Organisms (LMOs) according to national legislation or[208]	

[208]Food and Agriculture Organization of the United Nations. 2011. Biosafety Resource Book. Rome, http://www.fao.org/docrep/014/i1905e/i1905e00.htm

			• Take measures to prevent geneflow from the introduced varieties to existing ones and/or wild relatives	

	Planted forests	No	Yes	Comments
3.4	Would this project establish or manage planted forests?	**LOW RISK**	**MODERATE RISK** • Adhere to existing national forest policies, forest programmes or equivalent strategies. • The observance of principles 9, 10, 11 and 12 of the Voluntary Guidelines on Planted Forests suffice for indigenous forests but must be read in full compliance with ESS 9- Indigenous People and Cultural Heritage. • Planners and managers must incorporate conservation of biological diversity as fundamental in their planning, management, utilization and monitoring of planted forest resources. • In order to reduce the environmental risk, incidence and impact of abiotic and biotic damaging agents and to maintain and improve planted forest health and productivity, FAO will work together with stake-	

			holders to develop and derive appropri-ate and efficient response options in planted forest management.	

SAFEGUARD 4 ANIMAL (LIVESTOCK AND AQUATIC) GENETIC RESOURCES FOR FOOD AND AGRICULTURE

	Introduce new species/breeds and change in the production system of locally adapted breeds		**No**	**Yes**	**Comments**
4.1	Would this project introduce non-native or non-locally adapted species, breeds, genotypes or other genetic material to an area or production system?		**LOW RISK**	**PROCEED TO NEXT Q**	
	4.1.1	Would this project foresee an increase in production by at least 30% (due to the introduction) relative to currently available locally adapted breeds	**CANNOT PROCEED**	**LOW RISK**	

		and can monitor production performance?			
	4.1.2	Would this project introduce genetically altered organisms, e.g. through selective breeding, chromosome set manipulation, hybridization, genome editing or gene transfer and/or introduce or use experimental genetic technologies, e.g. genetic engineering and gene transfer, or the products	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

		of those technologies?		
4.2	Would this project introduce a non-native or non-locally adapted species or breed for the first time into a country or production system?	**LOW RISK**	**MODERATE RISK** A genetic impact assessment should be conducted prior to granting permission to import (cover the animal identification, performance recording and capacity development that allow monitoring of the introduced species/ breeds' productivity, health and economic sustainability over several production cycles) • http://www.fao.org/docrep/012/i0970e/i0970e00.htm • ftp://ftp.fao.org/docrep/fao/012/i0970e/i0970e03.pdf	
4.3	Would this project introduce a non-native or non-locally adapted species or breed, independent whether it already exists in the country?	**LOW RISK**	**MODERATE RISK** • If the project imports or promotes species/breeds with higher performance than locally adapted ones, ensure: feed resources, health management, farm management capacity, input supply and farmer organization to allow the new species/breeds to express their genetic potential	

			• Follow the OIE terrestrial or aquatic code to ensure the introduced species/breed does not carry different diseases than the local ones • Include a health risk assessment and farmer/veterinary capacity development in the project to ensure the introduced species/breed do not have different susceptibility to local diseases including ecto-and endo-parasites than the locally adapted/native species/breeds.	
4.4	Would this project ensure there is no spread of the introduced genetic material into other production systems (i.e. indiscriminate crossbreeding with locally adapted species/breeds)?	**MODERATE RISK** Introduce a) animal identification and recording mechanism in the project and b) develop new or	**LOW RISK**	

		amend existing livestock policy and National Strategy and Action Plan for AnGR		

	Collection of wild genetic resources for farming systems	**No**	**Yes**	**Comments**
4.5	Would this project collect living material from the wild, e.g. for breeding, or juveniles and eggs for ongrowing?	**LOW RISK**	**MODERATE RISK** Guidance to be provided	

	Modification of habitats	**No**	**Yes**	**Comments**
4.6	Would this project modify the surrounding habitat or production system used by existing genetic resources?	**LOW RISK**	**MODERATE RISK** Guidance to be provided	
4.7	Would this project be located in or near an internationally recognized conservation area e.g. Ramsar or World Heritage Site, or other nationally important habitat, e.g. national park or	**LOW RISK**	**MODERATE RISK** Guidance to be provided	

		high nature value farmland?			
4.8	**AQGR**	Would this project block or create migration routes for aquatic species?	**LOW RISK**	**MODERATE RISK** Guidance to be provided	
4.9		Would this project change the water quality and quantity in the project area or areas connected to it?	**LOW RISK**	**MODERATE RISK** Guidance to be provided	
4.10		Would this project cause major habitat / production system changes that promote new or unknown chances for geneflow, e.g. connecting geographically distinct ecosystems or water bodies; or would	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

	itdisrupt habitats or migration routes and the genetic structure of valuable or locally adapted species/stocks/breeds?			
4.11	Would this project involve the intensification of production systems that leads to land- use changes (e.g. deforestation), higher nutrient inputs leading to soil or water pollution, changes of water regimes (drainage, irrigation)?	**LOW RISK**	**MODERATE RISK** Guidance to be provided	

SAFEGUARD 5 PEST AND PESTICIDES MANAGEMENT

	Supply of pesticides by FAO	**No**	**Yes**	**Comments**
5.1	Would this project procure, supply and/or result in the use of pesticides on	**LOW RISK**	**MODERATE RISK**	

	crops, livestock, aquaculture or forestry?		• Preference must always be given to sustainable pest management approaches such as Integrated Pest Management (IPM), the use of ecological pest management approaches and the use of mechanical/cultural/physical or biological pest control tools in favour of synthetic chemicals; and preventive measures and monitoring, • When no viable alternative to the use of chemical pesticides exists, the selection and procurement of pesticides is subject to an internal clearance procedure http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/E_SS5_pesticide_checklist.pdf • The criteria specified in FAO's ESM Guidelines under ESS5 must be adhered to and should be included or referenced in the project document. • If large volumes (above 1,000 litres of kg) of pesticides will be supplied or used throughout the duration of the project, a Pest Management Plan must be prepared to demonstrate	

			how IPM will be promoted to reduce reliance on pesticides, and what measures will be taken to minimize risks of pesticide use. • It must be clarified, which person(s) within (executing) involved institution/s, will be responsible and liable for the proper storage, transport, distribution and use of the products concerned in compliance with the requirements.	
5.2	Would this project provide seeds or other materials treated with pesticides (in the field and/or in storage) ?	**LOW RISK**	**MODERATE RISK** The use of chemical pesticides for seed treatment or storage of harvested produce is subject to an internal clearance procedure [http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/E_SS5_pesticide_checklist.pdf]. The criteria specified in FAO's ESM Guidelines under ESS5 for both pesticide supply and seed treatment must be adhered to and should be included or referenced in the project document.	

5.3	Would this project provide inputs to farmers directly or through voucher schemes?	**LOW RISK**	**MODERATE RISK** • FAO projects must not be responsible for exposing people or the environment to risks from pesticides. The types and quantities of pesticides and the associated application and protective equipment that users of a voucher scheme are provided with must always comply with the conditions laid out in ESS5 and be subject to the internal clearance procedure [link]. These must be included or referenced in the project document. • Preference must always be given to sustainable pest management approaches such as Integrated Pest Management (IPM), the use of ecological pest management approaches and the use of mechanical or biological pest control tools in favour of synthetic chemicals	
5.4	Would this project lead to increased use of pesticides through intensification or expansion of production?	**LOW RISK**	**MODERATE RISK** Encourage stakeholders to develop a Pest Management Plan to demonstrate how IPM will be promoted to reduce reliance on pesticides, and what measures will be taken to minimize risks of pesticide use.	

			This should be part of the sustainability plan for the project to prevent or mitigate other adverse environmental and social impacts resulting from production intensification.	
5.5	Would this project manage or dispose of waste pesticides, obsolete pesticides or pesticide contaminated waste materials?	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

SAFEGUARD 6 INVOLUNTARY RESETTLEMENT AND DISPLACEMENT

		No	Yes	Comments
6.1	Would this removal* be voluntary? *temporary or permanent removal of people from their homes or means of production/livelihood or restrict their access to their means of livelihoods	**CANNOT PROCEED**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

SAFEGUARD 7 DECENT WORK

		No	Yes	Comments
7.1	Would this project displace jobs? (e.g. because of sectoral restructuring or occupational shifts)	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	
7.2	Would this project operate in sectors or value chains that are dominated by subsistence producers and other vulnerable informal agricultural workers, and more generally characterized by high levels "working poverty"?	**LOW RISK**	**MODERATE RISK** Take action to anticipate the likely risk of perpetuating poverty and inequality in socially unsustainable agriculture and food systems. Decent work and productive employment should appear among the priorities of the project or, alternatively, the project should establish synergies with specific employment and social protection programmes e.g. favouring access to some social protection scheme or form of social insurance. Specific measures and mechanisms should be introduced to empower in particular the most vulnerable /disadvantaged categories of rural workers such as small-scale producers, contributing family workers, subsistence farmers, agricultural informal wage workers, with a special attention to women and youth who are predominantly found in these employment statuses.An age-	

			and gender-sensitive social value chain analysis or livelihoods/employment assessment is needed for large-scale projects.	
7.3	Would this project operate in situations where youth work mostly as unpaid contributing family workers, lack access to decent jobs and are increasingly abandoning agriculture and rural areas?	**LOW RISK**	**MODERATE RISK** Take action to anticipate likely risk of unsustainably ageing agriculture and food systems by integrating specific measures to support youth empowerment and employment in agriculture. A youth livelihoods/employment assessment is needed. Complementary measures should be included aiming at training youth, engaging them and their associations in the value chain, facilitating their access to productive resources, credit and markets, and stimulating youth-friendly business development services.	
7.4	Would this project operate in situations where major gender inequality in the labour market prevails? (e.g. where women tend to work predominantly as unpaid contributing family members or subsistence farmers, have lower skills and qualifications, lower productivity and	**LOW RISK**	**MODERATE RISK** Take action to anticipate likely risk of socially unsustainable agriculture and food systems by integrating specific measures to reduce gender inequalities and promote rural women's social and economic empowerment. A specific social value chain analysis or livelihoods/employment assessment is needed for large-scale projects. Facilitation should be provided for women of all ages to access productive resources (including land), credit, markets and marketing	

	wages, less representation and voice in producers' and workers' organizations, more precarious contracts and higher informality rates, etc.)		channels, education and TVET, technology, collective action or mentorship.Provisions for maternity protection, including child care facilities, should be foreseen to favour women participation and anticipate potential negative effects on child labour, increased workloads for women, and health related risks for pregnant and breastfeeding women.	
7.5	Would this project operate in areas or value chains with presence of labour migrants or that could potentially attract labour migrants?	**LOW RISK**	**MODERATE RISK** Take action to anticipate potential discrimination against migrant workers, and to ensure their rights are adequately protected, with specific attention to different groups like youth, women and men.	

		No	Yes	Comments
7.6	Would this project directly employ workers?	**LOW RISK**	**MODERATE RISK** FAO projects will supposedly guarantee employees' rights as per UN/FAO standards as regards information on workers' rights, regularity of payments, etc. Decisions relating to the recruitment of project workers are supposed to follow standard UN practices and therefore not be made on the basis of personal characteristics unrelated to inherent job requirements. The employment of project workers	

			will be based on the principle of equal opportunity and fair treatment, and there will be no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, etc.	
7.7	Would this project involve sub-contracting?	**LOW RISK**	**MODERATE RISK** Take action to anticipate likely risk of perpetuating inequality and labour rights violations by introducing complementary measures. FAO projects involving sub-contracting should promote, to the extent possible, subcontracting to local entrepreneurs – particularly to rural women and youth – to maximize employment creation under decent working conditions. Also, FAO should monitor and eventually support contractors to fulfil the standards of performance and quality, taking into account national and international social and labour standards.	

		No	Yes	Comments
7.8	Would this project operate in a sector, area or value chain where producers and other agricultural workers are typically exposed to significant occupational and safety risks[209]?	**LOW RISK**	**MODERATE RISK** Take action to anticipate likely OSH risks by introducing complementary provisions on OSH within the project. Project should ensure all workers' safety and health by adopting minimum OSH measures and contributing to improve capacities and mechanisms in place for OSH in informal agriculture and related occupations. For example, by undertaking a simple health and safety risk assessment, and supporting implementation of the identified risk control measures. Awareness raising and capacity development activities on the needed gender-responsive OSH measures should be included in project design to ensure workers' safety and health, including for informal workers. Complementary measures can include measures to reduce risks and protect workers, as well as children working or playing on the farm, such as alternatives to pesticides, improved handling and storage of pesticides, etc.	

[209]Major OSH risks in agriculture include: dangerous machinery and tools; hazardous chemicals; toxic or allergenic agents; carcinogenic substances or agents; parasitic diseases; transmissible animal diseases; confined spaces; ergonomic hazards; extreme temperatures; and contact with dangerous and poisonous animals, reptiles and insects.

			Specific provisions for OSH for pregnant and breastfeeding women should be introduced. FAO will undertake periodic inspections and a multistakeholder mechanism for monitoring should be put in place.	
7.9	Would this project provide or promote technologies or practices that pose occupational safety and health (OSH) risks for farmers, other rural workers or rural populations in general?	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

		No	Yes	Comments
7.10	Would this project foresee that children below the nationally-defined minimum employment age (usually 14 or 15 years old) will be involved in project-supported activities?	**LOW RISK**	**CANNOT PROCEED**	
7.11	Would this project foresee that children above the nationally-defined minimum employment age (usually	**LOW RISK**	**MODERATE RISK** Take action to anticipate likely risk of engaging young people aged 14-17 in	

	14 or 15 years old), but under the age of 18 will be involved in project-supported activities?		child labour[210] by changing design or introducing complementary measures. For children of 14 to 17 years, the possibility to complement education with skills-training and work is certainly important for facilitating their integration in the rural labour market. Yet, children under the age of 18 should not be engaged in work-related activities in connection with the project in a manner that is likely to be hazardous or interfere with their compulsory child's education or be harmful to the child's health, safety or morals. Where children under the age of 18 may be engaged in work-related activities in connection with the project, an appropriate risk assessment will be conducted, together with regular monitoring of health, working conditions and hours of work, in addition to the other requirement of this ESS. Spe-	

[210]Child labour is defined as work that is inappropriate for a child's age, affects children's education, or is likely to harm their health, safety or morals. Child labour refers to working children below the nationally-defined minimum employment age, or children of any age engaging in hazardous work. Hazardous work is work that is likely to harm the health, safety or morals of a child. This work is dangerous or occurs under unhealthy conditions that could result in a child being killed, or injured and/or made ill as a consequence of poor health and safety standards and working arrangements. Some injuries or ill health may result in permanent disability. Countries that have ratified ILO Convention No.182 are obligated to develop National lists of hazardous child labour under Article 4.

			cific protection measures should be undertaken to prevent any form of sexual harassment or exploitation at work place (including on the way to and from), particularly those more vulnerable, i.e. girls.	
7.12	Would this project operate in a value chain where there have been reports of child labour?	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

		No	Yes	Comments
7.13	Would this project operate in a value chain or sector where there have been reports of forced labour[211]?	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

[211]Forced labour is employed, consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. It includes men, women and children in situations of debt bondage, suffering slavery-like conditions or who have been trafficked. "In many countries, agricultural work is largely informal, and legal protection of workers is weak. In South Asia, there is still evidence of bonded labour in agriculture, resulting in labour arrangements where landless workers are trapped into exploitative and coercive working conditions in exchange for a loan. The low wages associated with high interest rates make it quite difficult for whole families to escape this vicious circle. In Africa, the traditional forms of "vestiges of slavery" are still prevalent in some countries, leading to situations where whole families (adults and children, men and women) are forced to work the fields of landowners in exchange for food and housing. In Latin America, the case of workers recruited in poor areas and sent to work on plantations or in logging camps has been widely documented by national inspection services and other actors." (ILO, Profits and poverty: the economics of forced labour / International Labour Office. - Geneva: ILO, 2014)

SAFEGUARD 8 GENDER EQUALITY

		No	Yes	Comments
8.1	Could this project risk reinforcing existing gender-based discrimination, by not taking into account the specific needs and priorities of women and girls?	**LOW RISK**	**MODERATE RISK** Take action to anticipate likely risk of perpetuating or reinforcing inequality by conducting a gender analysis to identify specific measures to avoid doing harm, provide equal opportunities to men and women, and promote the empowerment of women and girls.	
8.2	Could this project not target the different needs and priorities of women and men in terms of access to services, assets, resources, markets, and decent employment and decision-making?	**LOW RISK**	**MODERATE RISK** Take action to anticipate likely risk of socially unsustainable agriculture practices and food systems by conducting a gender analysis to identify the specific needs and priorities of men and women, and the constraints they may face to fully participate in or benefit from project activities, and design specific measures to ensure women and men have equitable access to productive resources and inputs.	

SAFEGUARD 9 INDIGENOUS PEOPLES AND CULTURAL HERITAGE

			No	Yes	Comments
9.1	Are there *indigenous peoples** living *outside the project area*** where activities will take place?[212]?		**LOW RISK**	**GO TO NEXT QUESTION**	
	9.1.1	Do the project activities influence the Indigenous Peoples living outside the project area?	**LOW RISK**	**MODERATE RISK** A Free, Prior and Informed Consent Process is required Project activities should outline actions to address and mitigate any potential impact Please contact the ESM/OPCA unit for further guidance.	
9.2	Are there indigenous peoples living in the project area where activities will take place?		**LOW RISK**	**MODERATE RISK** A Free Prior and Informed Consent process is required.	

* FAO considers the following criteria to identify indigenous peoples: priority in time with respect to occupation and use of a specific territory; the voluntary perpetuation of cultural distinctiveness (e.g. languages, laws and institutions); self-identification; an experience of subjugation, marginalization, dispossession, exclusion or discrimination (whether or not these conditions persist).

** The phrase "Outside the project area" should be read taking into consideration the likelihood of project activities to influence the livelihoods, land access and/or rights of Indigenous Peoples' irrespective of *physical distance*. In example: If an indigenous community is living 100 km away from a project area where fishing activities will affect the river yield which is also accessed by this community, then the user should answer "YES" to the question

			If the project is for indigenous peoples, an Indigenous Peoples' Plan is required in addition to the Free Prior and Informed Consent process. Please contact the ESM/OPCA unit for further guidance. **In cases where the project is for both, indigenous and non-indigenous peoples,** an Indigenous Peoples' Plan will be required only if a substantial number of beneficiaries are Indigenous Peoples. project activities should outline actions to address and mitigate any potential impact. Please contact ESM/OPCA unit for further guidance. A Free, Prior and Informed Consent Process is required	
9.3	Would this project adversely or seriously affect on indigenous peoples' rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, governance sys-	**LOW RISK**	**HIGH RISK** A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

	tems, and culture or heritage (*physical** and *non-physical or intangible***) inside and/or outside the project area? **Physical defined as movable or immovable objects, sites, structures, group of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic or other cultural significance located in urban or rural settings, ground, underground or underwater.* ***Non-physical or intangible defined as "the practices, representations, expressions, knowledge and skills as well as the instruments, objects, artifacts and cultural spaces associated therewith that communities, groups, and in some*			

	cases individuals, recognize as part of their spiritual and/or cultural heritage"			
9.4	Would this project be located in an area where cultural resources exist?	**LOW RISK**	**MODERATE RISK** To preserve cultural resources (when existing in the project area) and to avoid their destruction or damage, due diligence must be undertaken to: a) verify that provisions of the normative framework, which is usually under the oversight of a national institution responsible for protection of historical and archaeological sites/intangible cultural heritage; and b) through collaboration and communication with indigenous peoples' own governance institutions/leadership, verifying the probability of the existence of sites/ intangible cultural heritage that are significant to indigenous peoples. In cases where there is a high chance of encountering physical cultural resources, the bidding documents and contract for any civil works must refer to the need to include recovery of	

			“chance findings” in line with national procedures and rules.	

ANNEX 5: RIVER SYSTEM RISK ASSESSMENT

River system risk assessment to identify BRCRN intervention areas

Based on available spatial and statistical datasets, a multi-criteria analysis was performed to define and rank BRCRN intervention areas within the Churia region. The unit of assessment used is the river system. For the development of the Churia Master Plan the Government of Nepal conducted a consolidated and up-to-date spatial as well as statistical feasibility study on the Churia region. For their assessment, they identified river systems as the main unit of analysis and planning of interventions. Altogether, 164 river systems have been inventoried in such mapped out river systems. The step-wise procedure of this analysis to derive river systems with high priority for interventions within the BRCRN includes:

1. Compilation of available spatial datasets to perform river system based analysis for the Churia region. The following spatial as well as statistical dataset were used:
   - National land use dataset 2000, 2010 (both from ICIMOD), 2015 (from Churia Master Plan)
   - Spatial layers degraded areas, area prone for flooding, area susceptible to erosion, elevation, physiographic zones within the Churia (Dun, Hills, Bhavar, Terai), distance to roads, distance to settlements, distance to grids (from Churia Masterplan)
   - River system statistics such as population density/ population increase (extrapolated from ward level statistics); population prone to flooding in 2001 and 2011; total No of Settlements; No Settlements in Churia hills; area under slope instability/ susceptibility categorized as high; medium or low; No of susceptible households with regards to slope instability; No of wetland of ponds (all from Churia Masterplan)
2. Elaboration of a river system database (in Excel) with information on land cover, land cover changes and specific data on all above mentioned variables
3. Filtering the river systems according to the location within the whole Churia range; based on overall vulnerability assessment and consultations during the feasibility study the BRCRN is implemented within river systems located in the central to eastern parts of the Churia. Therefore, all further analysis is limited to only these river systems.
4. Performing a statistical analysis (Pearson correlation) to understand the correlation of the different variables, in particular in view of deforestation (independent variable) in this selected Churia region.
5. Selection and weighting of criteria which are used to assess the risk of the river systems in terms of future deforestation. Based on the statistical analysis the criteria taken into consideration include:

   a. **Annual deforestation rate** in % 2000- 2015 of each river system
   b. **Existing forest area share** (in % of the total land area of a river system)
   c. Area share in % of the total land area of a river system under **slope instability/ susceptibility for erosion**
   d. **% of settlements located in the Churia hill zone** compared to the total No of settlements in the river system (basically downstream in the Terai plains of the river system)

   Two additional criteria were considered that did not correlate in the statistical analysis, yet were identified as important indicators for other reasons:

   e. **Area share in % of the total land area of a river system,** which is identified as degraded land according to the Churia Masterplan. This criterion is important to identify

potential restoration areas (tree restoration plantation, protective plantations, etc.), therefore river systems with proportionally higher shares of degraded land should be prioritized.

f. **Origin of rivers:** Based on the consultations during the feasibility study and the review of existing documentation, the BRCRN interventions should prioritize river systems which originate mainly from the Churia region. The main reason for this is that the nature of the BRCRN project is aiming for a holistic river system approach with specific project interventions designed to address degradation and erosion within the source zones of rivers as well as interventions along the rivers in terms of river bank protection, riverbed restoration, etc.

6. Ranking of river systems for each criterion: By using a percentile method each river system was ranked as ´high´, ´medium´ or ´low´ for each of the criteria. This means that, for instance for the criterion of annual deforestation the different % deforestation rates of the river systems were categorized into three 'bins' representing one 'bin' of high deforestation rate (classified as 'high'), one 'bin' representing the average deforestation rates (classified as medium') and one 'bin' representing low deforestation rates (classified as 'low').
7. Combined ranking of the river system: A combined ranking into ´high´, ´medium´ or ´low´ was assigned to each river system by a simple 'sum-product' calculation in Excel considering the specific ranks and weightings of each of the criteria. This resulted in a list of river systems ranked from high to low and the selection of those river systems prioritized as project areas for the BRCRN project.

The BRCRN project area consists of 26 river systems that were identified as having ´high´ (14 river systems, 54% of project river systems) or ´moderate´ (12 river systems, 46% of project river systems). These river systems cover 720,620 ha in total. Excluding settlements and bodies of water, the total area is 702,011 ha.

Process for selection of community-based organizations and local level interventions:

Within the 26 river systems and across the physiographic zones, specific areas for interventions will be identified using a multi- criteria analysis which takes into account a combination of technical analysis using available GIS and statistical data as well as community and stakeholder consultations to rank and prioritize the specific selection criteria. The result of this 'intervention mapping' process which is done as part of Activity 2.2, is a spatially explicit menu of interventions tailored for each river system addressing the drivers and triggering factors of environmental degradation, thereby reducing the vulnerability and enhancing resilience of the river systems. The multi-criteria analysis is similar to the analysis performed to identify the 26 prioritized river systems as project area, however, now focusing on a more local implementation level, i.e. village (VDC) and/ or community areas. The section below lists the process and selection criteria for key intervention areas, which will be refined more during activity 2.2.

GIS & statistical analysis to identify prepare village/ community based land use risk maps: Similar to the risk mapping done to identify the 26 priority river systems for the project area, this risk mapping will be done on a local within each of the river systems using the smallest available spatial planning units, i.e. VDC and or community areas. As shown in the overview problem statement figure above (Figure 4), the complex interlinkages of up-and downstream drivers of land use, climate induced and climate change reinforced hazards translates into forest

deforestation and degradation, soil erosion and sedimentation (loss of productive land). Therefore the following criteria are used to identify hotspots of this environmental degradation on a local (village boundary level):

- Areas of deforested between 2000- 2015, ranked into 'low', 'medium' and 'high' based on the extend of the deforested areas
- Areas of existing forests in % of the total land area of a village/ community level boundary. This indicator is relevant to identify forest areas which need to be managed as part of project interventions to prevent future deforestation/ degradation. Ranked into 'low', 'medium' and 'high' based on the extend of the forest areas
- Area share in % of the total land area of a village/ community level boundary under slope instability/ susceptibility for erosion (landslide risk). Ranked into 'low', 'medium' and 'high' based on the area shares.
- Area share in % of the total land area of a village/ community level boundary prone to flooding. Ranked into 'low', 'medium' and 'high' based on the area shares.
- Area share in % of the total land area of a village/ community level boundary which is identified as degraded land according to the Churia Masterplan. Ranked into 'low', 'medium' and 'high' based on the area shares
- Area share in % of the total land area of a village/ community level boundary which is identified as river bank according to the latest available land use classification 2015. Ranked into 'low', 'medium' and 'high' based on the area shares

The ranking for each criterion is done by using a percentile method. This means that, for instance for the criterion of areas of deforestation the different area parcels of forest loss are categorized into three 'bins' representing one 'bin' of large deforested areas (classified as 'high'), one 'bin' representing the average areas of forest loss (classified as medium') and one 'bin' representing smaller areas (classified as 'low').

Combined risk maps: A combined ranking into ´high´, ´medium´ or ´low´ is assigned to village boundary by using the 'weighted sum' considering the specific ranks and equal weightings of each of the criteria.

Future deforestation hotspots: In addition to the analysis of existing hotspots of land degradation, a separate analysis will be done to identify hotspots within the local village/ community boundaries where future deforestation most likely will occur. Based on the historical patterns of deforestation (see feasibility study) the location of future deforestation can be predicted with the following variable and variable categories:

Forest Loss			
Variable name	**Categories**	**Value ranks**	**Ranking (high, moderate, low)**
Degradation	0	1	High
	1	3	Low
Slope	0-20 deg	1	Low
	20-30 deg	2	Moderate
	> 30 deg	3	High
Elevation	0-500 m, > 3000 m	3	Low
	500-1000 m	2	Moderate

Forest Loss			
Variable name	**Categories**	**Value ranks**	**Ranking (high, moderate, low)**
	1000 -3000m	1	High
Roads	0-1 km	1	High
	1-2 km	2	Moderate
	2-5 km	3	Low

The ranking assigned to the different variables reflects the risk of future deforestation based on the historical analysis. By using the "weighted sum" of the four variables risk maps of future deforestation are developed and risk areas will be calculated at village boundary level to see quantum of risk in each of these units.

Land use& hydrological analysis: A separate GIS analysis is needed which complements the risk mapping above. In this analysis the broad land use categories (cultivated land, forest, shrub land, grassland, settlements, river banks, barren land, wetlands, etc. are assessed on a village boundary level against the available spatial information on water courses (permanent rivers and tributaries, seasonal rivers and tributaries, rivers of different origin, wetland locations and areas, etc. This analysis will then be overlaid with the risk mapping und step 1 resulting in an overall risk and planning map which then can be used during the field consultation

Local Institutional mapping: As a preparation for the field consultation and planning of interventions, all existing community structures should also be mapped as much as possible. This includes the location of existing community forest user groups, and other forms of forest management institutions, existing cooperatives and other forms of common natural resource management systems.

Field consultations, participatory natural resource mapping and planning of project interventions: Based on the local risk maps overlaid with the land use and hydrological information as well as the institutional landscape, a field consultation, sensitization and project intervention planning phase is performed. SOPs will be developed to ensure a consistent participatory process of these field consultation. The main steps include (participatory village land analysis and field assessments are included within Activity 2.2):

Village/ community sensitization process: In participatory community meetings, the purpose of this project, its major objectives and possible impacts are introduced including the identified land use and risk mapping done this particular community.

Participatory village land analysis: An intensive consultation is then carried out following standard participatory rural approach (PRA) methodology. Facilitated by the project, each village/ community is sketched showing details concerning different land use, land use changes over the last 10 years and the identification of the intervention areas. The village/ community sketch will be jointly elaborated using visualization techniques. Using a set of questions related to the general information on the whole village, the project will collect detailed land use activity information. The potential project interventions tailored to a particular risk profile of a community will be discussed and a prioritized ranking of interventions developed

Field Assessment: After the group-based analysis, the project together with the community members will assess the identified and potential project intervention areas on a sample basis.