

# Terminal Evaluation of

## Enhancing Sustainability and Climate Resilience of Forest and Agriculture Landscape and Community Livelihoods in Bhutan

**BHUTAN – UNDP GEF PIMS # 5713**



**July 2023**



## Project Summary Table

<b>Project Title</b>	Enhancing Sustainability and Climate Resilience of Forest and Agriculture Landscape and Community Livelihoods		
<b>UNDP PIMS #:</b>	5713	<b>PIF Approval Date:</b>	22 October 2015
<b>GEF Project ID:</b>	9199	<b>CEO Endorsement Date:</b>	15 June 2017
<b>ATLAS Business Unit:</b>	BTN10 00090310.5 00090310.4	<b>Project Start Date (ProDoc Signature):</b>	30 <sup>th</sup> October, 2017
<b>Quantum Project ID #:</b>		<b>Project End Date:</b>	30 <sup>th</sup> October, 2023
<b>ATLAs Output ID #:</b>	00090310		
<b>Country:</b>	Bhutan	<b>Date project manager hired:</b>	NA
<b>Region:</b>	South Asia	<b>Inception Workshop date:</b>	16 <sup>th</sup> November, 2017
<b>Focal Areas:</b>	Climate Change, Biodiversity	<b>Midterm Review completion date:</b>	November 2020
<b>GEF Focal Area Strategic Objective:</b>	Biodiversity, Sustainable Forest Management	<b>Terminal Evaluation completion date</b>	July 31 <sup>st</sup> , 2023
<b>Trust Fund</b>	Multi Trust Fund (GEF/LDCF)	<b>Planned closing date:</b>	30 <sup>th</sup> October 2023
<b>Executing Agency/ Implementing Partner:</b>	Ministry of Finance (erstwhile Gross National Happiness Commission)		
<b>Other execution partners:</b>	UNDP		
<b>Project Financing</b>			
<b>GEF financing</b>	USD \$3,467,124		
<b>LDCF Fund</b>	USD \$10,500,000		
<b>UNDP contribution</b>	USD \$1,080,300		
<b>Government</b>	USD \$41,550,000		
<b>Total co-financing</b>	USD \$42,630,300		
<b>Project total</b>	<b>USD \$56,597,424</b>		

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## Table of Contents

<b>Project Summary Table</b> .....	<b>i</b>
<b>Acronyms and Abbreviations</b> .....	<b>iv</b>
<b>Executive Summary</b> .....	<b>vi</b>
<b>1 Introduction</b> .....	<b>1</b>
1.1 Purpose and objective of the TE.....	1
1.2 Scope.....	1
1.3 Methodology.....	2
1.4 Data Collection & Analysis .....	3
1.5 Ethics .....	3
1.6 Limitations to the evaluation .....	4
1.7 Structure of the TE report .....	4
<b>2 Project Description</b> .....	<b>5</b>
2.1 Development Context.....	5
2.2 Problems the project sought to address .....	5
2.3 Project Overview .....	6
2.4 Key Stakeholders .....	9
2.5 Theory of Change.....	10
<b>3 Terminal Evaluation Findings</b> .....	<b>11</b>
3.1 Project Design/Formulation .....	11
3.1.1 Theory of Change .....	11
3.1.2 Analysis of Results Framework: project logic and strategy.....	12
3.1.3 Assumptions and Risks.....	13
3.1.4 Planned stakeholder participation .....	13
3.1.5 Linkages between project and other interventions within the sector .....	14
3.1.6 Gender responsiveness of project design .....	14
3.1.7 Social and Environmental Safeguards .....	14
3.2 Project Implementation.....	15
3.2.1 Adaptive management .....	15
3.2.2 Actual Stakeholder Participation and Coherence .....	16
3.2.3 Project Finance and Co-finance .....	16
3.2.4 Monitoring & Evaluation .....	18
3.2.5 UNDP implementation/oversight and Implementing Partner execution, overall project implementation/execution, coordination, and operational issues .....	19
3.2.6 Risk Management and Social and Environmental Standards .....	21
3.3 Project Results .....	22
3.3.1 Progress towards the Objective and Expected Outcomes.....	22
3.3.2 Relevance.....	29
3.3.3 Effectiveness .....	31

3.3.4	Efficiency .....	32
3.3.5	Sustainability.....	34
3.3.6	Country Ownership .....	36
3.3.7	Gender.....	36
3.3.8	UNDP and GEF Additionality .....	38
3.3.9	Catalytic/Replication Effect .....	39
3.3.10	Impact.....	39
<b>4</b>	<b>Main Findings, Conclusions, Recommendations &amp; Lessons .....</b>	<b>43</b>
4.1	Main Findings.....	43
4.2	Challenges .....	43
4.3	Recommendations .....	44
4.4	Lessons Learned.....	45
	<b>Annex 1. Terms of Reference for Terminal Evaluation .....</b>	<b>48</b>
	<b>Annex 2. Evaluation Matrix .....</b>	<b>59</b>
	<b>Annex 3. List of Documents Reviewed .....</b>	<b>67</b>
	<b>Annex 4 Field Mission Schedule.....</b>	<b>68</b>
	<b>Annex 5. UNEG Code of Conduct .....</b>	<b>69</b>
	<b>Annex 6. Theory of Change Analysis Tables.....</b>	<b>70</b>
	<b>Annex 7: SMART Review of Project Indicators.....</b>	<b>75</b>
	<b>Annex 8. Terminal Evaluation of Strategic Results Framework Indicator Target Achievement.....</b>	<b>79</b>
	<b>Annex 9. Terminal Evaluation of Risk Ratings.....</b>	<b>90</b>
	<b>Annex 10. Evaluation of Progress Towards Completion of Outcome and Output Activities .....</b>	<b>97</b>
	<b>Annex 11. Terminal Evaluation Clearance Form .....</b>	<b>125</b>
	<b>Annex 12: List of stakeholders consulted .....</b>	<b>126</b>
	<b>Annex 13: Record of site visits and consultations</b>	

## Acronyms and Abbreviations

AF	Agro-Forestry
AWP	Annual Work Plan
BBS	Bhutan Broadcasting Service
BC	Biological Corridor
BD	Biodiversity
BFL	Bhutan for Life
BMU	The Federal Ministry of the Environment, Nature Conservation and Nuclear Safety,
BTN	Bhutanese Ngultrum
CBD	Convention of Biological Diversity
CC	Climate Change
CCA	Climate Change Adaptation
CCR	Climate Change Resilience
CEO	Chief Executive Officer
CF	Community Forest
COVID	Corona Virus Diseases
CSO	Civil Society Organization
DAMC	Department of Agriculture & Marketing Cooperatives
DRR	Disaster Risk Reduction
DSA	Daily Subsistence Allowance
EFRC	Environment-Friendly Road Construction
EOP	End of Project
ESMF	Environmental and Social Management Framework
FACE	Funding Authorization and Certification of Expenditures
FG	Farmer Group
FMU	Forest Management Unit
GC	Gewog Connectivity
GCF	Global Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GESI	Gender Equality and Social Inclusion
GIS	Geographic Information System
GNHC	Gross National Happiness Commission
HWC	Human-Wildlife Conflict
HWCM	Human-Wildlife Conflict Management Strategy
S	
ICT	Information and Communication Technology
ILM	Integrated Land Management
KII	Key Informant Interview
LDCF	Least Developed Countries Fund
LFMP	Local Forest Management Plan
METT	Management Effectiveness Tracking Tool
MOAL	Ministry of Agriculture and Livestock
MOAF	Ministry of Agriculture and Forests
MoWHS	Ministry of Works and Human Settlement
MRG	Mainstream Referencing Group

MTR	Mid Term Review
NAPA	National Adaptation Program of Action
NBSAP	National Biodiversity Strategies and Action Plan
NGO	Non-governmental Organization
NIM	National Implementation Modality
NRM	Natural Resource Management
OECD	Organization for Economic Cooperation and Development
OMV	Organic Model Village
PA	Protected Area
PB	Project Board
PES	Payment of Ecosystem Services
PIR	Project Implementation Review
PMU	Project Management Unit
PPG	Project Preparation Grant
RIP	Responsible Implementing Partner
RGoB	Royal Government of Bhutan
RNR	Renewable Natural Resource
SDG	Sustainable Development Goal
SEA	Strategic Environment Assessment
SESP	Social and Environmental Screening Procedure
SFM	Sustainable Forest Management
SLM	Sustainable Land Management
SMART	Spatial Monitoring & Reporting Tool
TACC	Technical Advisory Coordination Committee
TE	Terminal Evaluation
TT	Tracking Tool
UNDP	United Nations Development Programme
UNEG	United Nations Evaluation Group
USD	United State Dollar
WMD	Watershed Management Division

## Executive Summary

### ***Terminal Evaluation Purpose and Methodology***

The Terminal Evaluation (TE) assessed the achievement of project results against what was expected to be achieved and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE promotes accountability and transparency and assesses the extent of project accomplishments.

The TE covers the time span from the date of commencement of the project, October 30th 2017, to the current date while undertaking the TE, May to July 2023. Project closure is scheduled for October 30th, 2023.

The TE has been conducted by an evaluation team, consisting of a national evaluation consultant (Yeshe Dorji) and an international evaluation team leader (Brent Tegler). The TE included a desk review of available documents and a field mission to conduct Key Informant Interviews (KII) with stakeholders and Focus Group Discussions (FGD) with beneficiaries. Data triangulation has been used to verify documented information with information gathered in the field mission.

A 33 day field mission was undertaken by the national TE consultant by visiting government stakeholders, beneficiaries and project sites in Haa, Paro, Bumthang, Trongsa, Tsirang, Wangduephodrang, Punakha, Paro, Zhemgang, Mongar, Lhuntse, Sarpang and the target Protected Areas (PA) and four Biological Corridors (BC).

### ***Development Context***

The project was developed aligning with the Royal Government of Bhutan's (RGoB) Eleventh FYP (2013-2018), the objective of which was "Self-Reliance and Inclusive Green Socio-economic Development" by promoting carbon-neutral and environmentally sustainable development, and mainstreaming of environment, climate change and disaster risk reduction as cross-cutting issues along with gender and poverty reduction. The project was also developed in such a way that it contributed to the objectives of the Twelfth Five Year Plan (2018-2023) most specifically to the following National Key Result Areas (NKRA):

***NKRA 5 - healthy ecosystem services maintained;***

***NKRA 6 - carbon-neutral and climate- and disaster-resilient development enhanced;***

***NKRA 8 - water, food and nutrition security ensured***

The project landscapes contain some of the finest examples of a continuum of ecosystems, connecting the largely subtropical zone of southern Bhutan and the predominantly sub-alpine/ alpine zone of northern Bhutan. These landscapes, with proper conservation management plans in operation and sustainable livelihoods in practice, will cushion the adverse impacts of climate change to key development sectors and local livelihoods and enhance the ecological resilience to changing climate and associated risks.

The project is intended to address the combined issues of climate change and unsustainable land use practices that negatively impact landscape-level ecosystem services, rural community livelihoods and native biodiversity. The project addresses socio-economic vulnerabilities associated with unsustainable land use practices and climate change impacts. The project also addresses biodiversity vulnerabilities arising from threats that include habitat fragmentation and degradation, forest fires, overharvesting of natural resources, poaching and illegal harvesting, and Human Wildlife Conflict (HWC).

## Project Overview

The RCEBC Project Objective is:

*To operationalize an integrated landscape approach through strengthening of biological corridors, sustainable forest and agricultural systems, and build climate resilience of community livelihoods.*

The RCEBC project has the following four Outcomes and 16 associated Outputs:

**Outcome 1:** Enhanced institutional capacity for ILM and climate change resilience: This component will focus on building institutional capacities for ILM as well as enhancing climate resilience across rural communities.

**Outcome 2:** Biological corridor governance and management established and demonstrated with management linkage to adjoining protected areas.

**Outcome 3:** Livelihood options for communities are made climate-resilient through diversification, SLM and climate-smart agriculture and supported by enhanced climate-resilient infrastructure.

**Outcome 4:** Knowledge management system established to support sustainable management of forest and agricultural landscapes and climate-resilient communities.

## Terminal Evaluation Findings

Summary of Terminal Evaluation Findings			
Monitoring and Evaluation	rating*	Implementing Agency (IA) & Executing Agency (EA) Execution	rating*
M&E design at entry	S	Quality of UNDP Implementation – Implementing Agency	S
M&E Plan Implementation	S	Quality of Execution - Executing Agency	HS
Overall quality of M&E	S	Overall quality of Implementation / Execution	HS
Assessment of Outcomes	rating*	Sustainability	rating*
Relevance	HS	Financial resources	L
Effectiveness	HS	Socio-political	L
Efficiency	HS	Institutional framework and governance	L
Overall Project Outcome Rating	HS	Environmental	L
		Overall likelihood of sustainability	L

\* HS highly satisfactory; S satisfactory; MS moderately satisfactory; U unsatisfactory HU highly unsatisfactory;

\* L likely; ML moderately likely; MU moderately unlikely; U unlikely.

The project was well designed with input from stakeholders and beneficiaries contributing to excellent engagement and support by stakeholders and beneficiaries during implementation. The ToC of change is logical and remains valid to support similar initiative going forward. The project is relevant on many levels, including national priorities and global commitments and more importantly it is highly relevant to local governments and the communities they serve.

The executing agency, PMU and the many national and local government implementing partners were well coordinated, met and communicated regularly, effectively adapted to challenges as they occurred leading to successful implementation of a long list of project activities (**Annex 10**). Beneficiaries were meaningfully engaged, whereby regular

communication ensured their voices were heard, helping to shape locally appropriate activities for which they took ownership.

As a result of the project, PAs and BCs are more effectively managed sustainably leading to enhanced protection of native biodiversity, improved livelihoods for communities and greater climate change resilience of natural areas and areas of agricultural production.

Strong support and ownership by government stakeholders and beneficiaries has contributed to social and institutional sustainability. The project has collaborated with Bhutan For Life (BFL) and others to develop sustainable financing mechanisms to help to sustain and upscale project activities.

There are other regions in Bhutan where the project could be replicated and scaled-up to work with local governments and communities that require similar interventions to address issues of SFM and SLM, climate-resilient livelihoods, protection of native biodiversity and improved livelihoods.

<b>Terminal Evaluation Recommendations</b>	
<b>Recommendations</b>	
1.	Further improvements and beautification of the market shed should be undertaken to enhance its functionality to better serve the community. Extending and enhancing the market shed will provide additional space to accommodate more vendors and provide better facilities for both farmers and customers. In some market sheds, there is need of improvement to open walls with only wire mesh covering, which was insufficient for providing adequate protection and comfort for the vendors and customers. There are concerns regarding walls chipping, tiles breaking and poor electrical fittings.
2.	Conduct a comprehensive market value chain study for strawberry cultivation in all four project gewogs. This study should assess the entire value chain, from production to consumption, and identify potential opportunities for value added opportunities at different stages. There is a need to provide insights into market demand, consumer preferences, distribution channels, and pricing strategies. Farmers lack an understanding of price dynamics and market mechanisms when selling their produce. Many farmers tend to sell their products individually without considering the prevailing market prices. Local market prices may be higher, but farmers do understand the supply chain between vendors and farmers.
3.	There is a need to determine what further trainings are required to educate farmers on best practices for strawberry production. Training topics to be included are, soil preparation, planting techniques, fertilization, pest and disease management, weed control, and proper harvesting methods. Training is needed to equip farmers with the necessary knowledge and skills to optimize their strawberry production and achieve better yields.
4.	There is a need to introduce the concept of biosecurity measures to the farmers aimed at preventing the introduction and spread of harmful pest and disease organisms within the farming systems. Biosecurity should include maintaining hygienic practices, managing waste properly, monitoring for potential pests and diseases and pest and disease control.
5.	There is a need to explore potential funding sources to support the implementation of HWC mitigation measures. This could include government grants, agricultural development programs, or collaboration with conservation organizations which are specifically dealing with wildlife conservation and HWC mitigation.

## Recommendations

6. Conduct ongoing monitoring of HWC mitigation measures to document successful strategies to use in other areas. Monitoring should include the type of wildlife, behavior patterns, terrain, and existing agricultural practices. Combined with feasibility studies in new areas, monitoring results will help to determine appropriate HWC strategy specifications, dimensions, and quantities of infrastructure required including technology aspects.
7. Explore opportunities for mechanization in agricultural activities such as paddy plantation. Investigate machinery and equipment suitable for the specific farming practices in the region. This can include options like mechanical transplanters or direct seeding techniques that reduce the need for manual labor and make agricultural operations more efficient.
8. Conduct ongoing monitoring of the effectiveness of new technologies and interventions to gather feedback from farmers and local communities. Monitoring should assess the improved resilience, livelihoods and economic benefits. This monitoring can be used to identify any necessary adjustments or improvements to maximize the benefits of this and future project interventions.
9. Prioritize available funding to install HWC protective fencing in unprotected areas of villages where project HWC was undertaken. When some households in the project villages are left unprotected they become more vulnerable to HWC.
10. Work with water user groups to implement guidelines and regulations. The water user group association responsible for managing and distributing irrigation water among farmers, is currently operating without standard procedures in place. There has been a delay in providing the necessary directions and guidance to the villagers regarding the formulation of the bylaws.
11. Introduce and promote innovative and effective approaches in lake revival. There is a need to conduct research, seek guidance from experts and develop strategies tailored to the local context. Local cultural and spiritual beliefs related to lakes need to be acknowledged and incorporated into the planning and implementing activities related to lake revival.
12. Compile and make available in an accessible format the following knowledge products from the project:
  - Information sources, best practices, lessons learned on ILM, SLM, CCR and HWC in Bhutan.
  - Case studies presenting project-supported best practices and traditional knowledge; and
  - Upload information on PAs and BCs to the Biodiversity to add to the new GIS boundaries of BCs.

### **Terminal Evaluation Key Lessons Learned**

1. With continuous awareness raising programs with the communities, people are able to understand the importance of integrated watershed management, environmental and biodiversity conservation, land management, pasture development and HWC management and the importance of their involvement. With such awareness and advocacy programs, the communities recognized the value of preservation and protection of water sources, biodiversity conservation and other project initiatives.
2. Initially, the farmers were hesitant to embrace innovative ideas and approaches related to land development but to overcome their reluctance, it was necessary to showcase the potential benefits through one or two pilot projects or demonstrations. These pilot projects served as practical examples to demonstrate the positive outcomes of technology and helped them to understand the potential advantages.

3. Especially in infrastructure projects, regular consultation, communication and community involvement is essential to develop a shared understanding and ownership of infrastructure projects and support from all stakeholders.
4. Some villagers claimed that the remaining unprotected areas are now more vulnerable to wildlife attacks. When completing HWC mitigation measures, it is vital to work with all community members to ensure the burden of HWC is not shifted to other nearby communities.
5. In order to enhance sustainability and promote effective communication, farmers have established social media groups such as Telegram groups in collaboration with the Gewog Agriculture Officer. The Telegram group is serving as an effective platform for farmers to engage in discussions, share information, and seek solutions for their needs and issues.
6. It was crucial for the project to emphasize on the importance of demonstration and participatory learning through practical demonstrations and field trials to showcase the benefits and effectiveness of innovative agricultural practices. In that way, farmers were able to witness positive impacts of the techniques in their own local context to build confidence and trust in the new methods.
7. It was important for the project to involve community and local leaders from the beginning of the project (even during design or planning phase) to make them understand about the objectives and to develop willingness to participate in the project.
8. It was felt crucial that the project took a multi-stakeholder approach that engaged field implementers and community members in the process of site selection and identifying project beneficiaries. This is especially important in activities such as plantation and management, where the geographical location of a particular chiwog or area may require additional budgetary considerations for effective implementation. Failure to take these factors into account can lead to inadequate budget allocation and potential challenges during project execution.
9. During the COVID period, most of the trainings were conducted online (virtually) which was not as effective as in-person training.
10. As a long-term project (six years) implementation was enhanced as a result of the opportunity to learn from mistakes and adjust the activities in adaptive management. Regular meetings (quarterly), good coordination and planning within the project group and technical assistance from the TACC also contributed to adaptive management.
11. By including various stakeholders, such as local community members, farmer groups, government officials, and agricultural experts, in the decision-making process, the project benefited from diverse perspectives, local knowledge, and expertise. This collaborative approach allowed for the identification of specific needs, challenges, and opportunities within the target communities, ensuring that the project's activities were relevant and tailored to the local context.
12. It was difficult for some farmers to follow the cost-sharing mechanism for implementation of some of the project activities. This was introduced by the government to build sense of ownership within the farmers. However, this could be implemented on a case-by-case basis depending on the financial situation of the farmers.

# Inception Report for Terminal Evaluation of Enhancing Sustainability and Climate Resilience of Forest and Agriculture Landscapes and Community Livelihoods in Bhutan

## 1 Introduction

### 1.1 Purpose and objective of the TE

The Terminal Evaluation (TE) assessed the achievement of project results against what was expected to be achieved and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE promotes accountability and transparency and assesses the extent of project accomplishments. The Terms of Reference for the TE is provided in **Annex 1**.

Detailed objectives of the TE are as follows:

- a. Assess to what extent the project has contributed to address the needs and problems identified during programme design, i.e., to “Enhance Sustainability and Climate Resilience of Forest and Agricultural Landscape and Community Livelihoods”
- b. Assess how effectively the project has achieved its stated development objective or purpose;
- c. Measure how efficiently the outcomes were realized, and outputs delivered in attaining the development objective/purpose of the project;
- d. Assess both negative and positive factors that have hampered and facilitated, respectively the progress in achieving the project outcomes, including external factors/environment, weakness in design, management and resource allocation;
- e. Assess the extent to which the application of the rights-based approach and gender mainstreaming are integrated within the planning and implementation of the project;
- f. Identify and document substantive lessons learned, good practices and also opportunities for scaling up in future;
- g. Provide forward-looking programmatic recommendations for the project and the relevant portfolios of UNDP and the Royal Government of Bhutan (RGoB).

### 1.2 Scope

The TE focused on six key evaluation criteria: relevance, efficiency, effectiveness, potential impact, sustainability, and coherence. The TE provides credible, useful, evidence-based information which enables timely incorporation of its findings, recommendations and lessons into decision making processes of UNDP and key stakeholders. The TE also assessed the potential of the next phase of the project. The TE covers the time span from the date of commencement of the project, October 30th, 2017 to the current date while undertaking the TE, May to July 2023. Project closure is scheduled for October 30th, 2023.

The primary intended users of the TE results are UNDP and GEF, but the evaluation results will equally be useful to the relevant ministries of the Royal Government of Bhutan, development partners and donors. The TE has been conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects.

### 1.3 Methodology

The TE has been conducted by an evaluation team, consisting of a national evaluation consultant (Yeshe Dorji) and an international evaluation team leader (Brent Tegler). The TE included a desk review of available documents and a field mission to conduct Key Informant Interviews (KII) with stakeholders and Focus Group Discussions (FGD) with beneficiaries. Data triangulation has been used to verify documented information with information gathered in the field mission. The TE schedule is shown in **Table 1**.

The TE report has assembled information and provides a narrative assessment of questions in the Evaluation Matrix (**Annex 2**).

**Table 1.** Terminal Evaluation Schedule

Schedule for Terminal Evaluation		
Date	Activity	Responsible
May 15 <sup>th</sup> , 2023	Preparation and submission of TE Inception report	TE Consultants
May 16 <sup>th</sup> , 2023	Presentation of Proposed TE Methodology	TE Consultants
May 15 <sup>th</sup> to 17 <sup>th</sup> , 2023	Review and feedback on draft Inception Report – follow-up meeting to discuss if required	UNDP, PMU and other relevant stakeholders
May 18 <sup>th</sup> to June 8 <sup>th</sup> , 2023	Field mission to conduct stakeholder consultations and project site visits	National TE Consultant
May 18 <sup>th</sup> to June 8 <sup>th</sup> , 2023	Virtual interviews with UNDP and project stakeholders	International TE Consultant
June 1 <sup>st</sup> to 5 <sup>th</sup> , 2023	Conduct interviews with central agency project stakeholders	National TE Consultant
June 14 <sup>th</sup> , 2023	Presentation of Initial Findings	TE Consultants
June 15 <sup>th</sup> to 29 <sup>th</sup> , 2023	Develop Draft TE Report	TE Consultants
July 9 <sup>th</sup> , 2023	Submission of Draft TE Report	TE Consultants
July 10 <sup>th</sup> to 21 <sup>st</sup> , 2023	Review of draft TE Report	UNDP, PMU and other relevant stakeholders
July 24 <sup>th</sup> to 29 <sup>th</sup> , 2023	Incorporate comments from review of draft TE Report to prepare final TE Report and Audit Trail	TE Consultants
July 30 <sup>th</sup> , 2023	Submission of Final TE Report	TE Consultants

#### **Desk Review**

The TE reviewed and analyzed relevant documentation as listed in the ToR as well as any other documents that could potentially provide information for the TE. Documents listed in the ToR that were provided for review are shown in **Annex 2**.

#### **Field Mission**

Stakeholder consultations were a core activity conducted during the field mission by the national TE consultant. Site visits were also conducted to evaluate the results of project activities during the field mission. The preferred format for stakeholder consultations was one-by-one meetings to provide focused input from each stakeholder and to make the most efficient use of the stakeholder’s time.

The field mission undertaken by the national TE consultant conducted Key Informant Interviews (KII) and Focus Group Discussions (FGD). KII and FGD were conducted independently; project staff and/or other UNDP staff were not present. The field mission included Haa, Paro, Bumthang, Trongsa, Tsirang, Wangduephodrang, Punakha, Zhemgang, Mongar, Lhuntse, Sarpang and other Dzongkhags/Districts including the project sites falling within these Dzongkhags as well as the three protected areas (PAs) and four Biological Corridors (BCs) (see **Annex 3. Field Mission Schedule**).

The engagement approach went beyond simple questioning, to include investigative questioning that promoted self-reflection and action-oriented learning of stakeholders which in turn enhanced their commitment to engagement and sustaining project outcomes.

## **1.4 Data Collection & Analysis**

Data analysis utilized objectively verifiable indicators as outlined in the project's Strategic Results Framework (SRF) to assess the project objective and outcomes based on the baseline and targets established in the SRF.

### ***Data Triangulation and Analysis***

The TE team verified results by triangulating data that assessed the available data from a wide variety of documents with information gathered through in-country field mission by meeting with stakeholders and conducting site visits along with KII and FGD held with project stakeholders.

The results of data triangulation have been used to complete a narrative evaluation as presented in **Section 3 Findings**. The draft TE report has been shared with UNDP and key stakeholders to provide an opportunity to validate the data presented.

### ***Analysis of Overall Project Performance***

Using the data gathered from the desk review and data collected from the field program a defined rating system has been applied to the criteria of relevance, effectiveness, efficiency, sustainability and impact. The evaluation ratings are presented in a summary table format in **Section 3**.

### ***Analysis of Cross-cutting Issues***

The TE consultants have used gender-responsive methodologies to measure the project's contribution to advancing Gender Equality and Social Inclusion results. The TE has considered the extent to which GESI, women's empowerment and human rights have been considered in the delivery of the project and the extent to which it adheres to and further supports human rights principles.

The TE has assessed the ability of the project to achieve social inclusion, including meaningful engagement of Persons with Disability, under-represented cultural groups, youth and elderly.

In addition, the TE assessed the level of understanding of GESI amongst staff, stakeholders and partners, including their knowledge of the relevance of GESI to project activities and effective measures that ensure GESI methods are implemented.

### ***Analysis of Project Finance***

With assistance from UNDP and the PMU, key financial aspects of the project have been evaluated, including planned and actual GEF funding as well as government co-financing.

## **1.5 Ethics**

The evaluation has adhered to United Nations Evaluation Group Norms and Standards for Evaluation (2017) and guidance provided by the OECD Development Assistance Committee (DAC) (OECD 2021 Applying Evaluation Criteria Thoughtfully). The TE team has followed ethical guidelines to ensure safe, non-discriminatory, respectful engagement of stakeholders following UNEG Ethical Guidelines for Evaluations (**Annex 5**). Those participating in KII and/or FGD were informed that their participation was voluntary and all information provided would be treated confidentially and that their name is not associated with information provided in the

TE report.

## **1.6 Limitations to the evaluation**

The TE team has not been able to have the opportunity to meet with all stakeholders. Since there were many beneficiaries engaged in the project, there has not been sufficient time to meet with all beneficiaries. Beneficiaries were selected based on a stratified random sampling method to obtain a good cross-section.

## **1.7 Structure of the TE report**

An outline of the TE report is as follows:

Executive Summary

- 1 Introduction
- 2 Project Description
- 3 Findings
  - 3.1 Project Design/Formulation
  - 3.2 Project Implementation
  - 3.3 Project Results
- 4 Main Findings, Conclusions, Recommendations & Lessons
- 5 Annexes

## 2 Project Description

### 2.1 Development Context

The project was developed aligning with the RGoB's Eleventh FYP (2013-2018), the objective of which was "Self-Reliance and Inclusive Green Socio-economic Development" by promoting carbon-neutral and environmentally sustainable development, and mainstreaming of environment, climate change and disaster risk reduction as cross-cutting issues along with gender and poverty reduction. The project was also developed in such a way that it contributed to the objectives of the Twelfth Five Year Plan (2018-2023) most specifically to the following National Key Result Areas (NKRA):

**NKRA 5** - *healthy ecosystem services maintained;*

**NKRA 6** - *carbon-neutral and climate- and disaster-resilient development enhanced;*

**NKRA 8** - *water, food and nutrition security ensured*

Furthermore, through a decentralized project implementation approach to the development of community-based climate-resilient livelihood practices and mainstreaming of climate change and environmental considerations in sub-national/ local development planning, the project will contribute to the NKRA 13 - *democracy and decentralization strengthened.*

### 2.2 Problems the project sought to address

The project is intended to address the combined issues of climate change and unsustainable land use practices that negatively impact landscape-level ecosystem services, rural community livelihoods and native biodiversity. As stated in the ProDoc:

*Bhutan's abundant forest and water resources support outstanding biodiversity and provide valuable resources such as firewood, fodder and medicinal plants for rural communities as well as providing ecosystem services such as water and timber that underpin the national economy. The role of natural forest ecosystems in supporting the resilience of rural landscapes and communities against climate change through ecosystem- based adaptation is also well recognized.*

#### **Socio-Economic Vulnerabilities**

Climate change models for Bhutan predict steady increases in air temperature and annual rainfall. With inherent vulnerabilities to landslides as a result of topography and existing land use practices, climate change induced increases in temperature and rainfall are predicted to increase landslide frequency and severity as well as flash floods. Rural communities that currently have poor access to social services and markets and which are reliant on agriculture for food and income are likely to be impacted by climate change induced disasters.

#### **Biodiversity Vulnerabilities**

While not well documented, climate change is predicted to impact native biodiversity as weather patterns change.

In addition to impacts arising from climate change, biodiversity is impacted by the conversion of natural habitats for human use (hydro-power development, transmission lines, mining, forestry, roads, agriculture and livestock rearing) leading to the degradation and fragmentation of natural habitats and degradation of the intervening land corridors that connect natural habitats.

Direct threats to native biodiversity identified in the ProDoc include the following:

- Habitat fragmentation and degradation
- Forest fire
- Overharvesting of natural resources
- Poaching and illegal harvesting
- Human Wildlife Conflict

## 2.3 Project Overview

The project Enhancing Sustainability and Climate Resilience of Forest and Agriculture Landscapes and Community Livelihoods in Bhutan has a working title Resilient Communities, Effective Biological Corridors (RCEBC). The development challenges the RCEBC project seeks to address are the adverse impacts of climate change on rural livelihood security (SDG 13) and poverty (SDG 1), and the effects of sector-led development practices on the ecological integrity of biodiversity-rich forested landscapes (SDG 15).

The long-term goal envisaged by the project is:

*to have effective, climate resilient management of forest areas, including biological corridors and adjoining protected areas, in order to secure the ecosystem services that underpin livelihoods and local and national development and to contribute to Climate Change Adaptation (CCA).*

The barriers to achievement of the long-term goal include:

- 1) Insufficient institutional capacity for Integrated Landscape Management (ILM) and CCA;
- 2) Insufficient capacity to operationalize the biological corridor system;
- 3) Limited capacity, awareness and support for building livelihood resilience; and
- 4) Inadequate knowledge on natural resource status, ecosystem services and resilient livelihood options.

The RCEBC Project Objective is:

*To operationalize an integrated landscape approach through strengthening of biological corridors, sustainable forest and agricultural systems, and build climate resilience of community livelihoods.*

The RCEBC project has the following four Outcomes and associated Outputs:

**Outcome 1:** Enhanced institutional capacity for ILM and climate change resilience: This component will focus on building institutional capacities for ILM as well as enhancing climate resilience across rural communities.

**Output 1.1:** Strengthened policy and planning frameworks and institutional capacity for integrated forest and agricultural landscape management and climate change resilience within key national agencies.

**Output 1.2:** Strengthened monitoring systems for forest condition, biodiversity status and carbon stocks in DoFPS

**Output 1.3:** Sustainable financing system for the biological corridor and PA system and sector- oriented valuation policy and tools developed to measure ecosystem services benefits.

**Output 1.4:** Strengthened national systemic and institutional capacity for management of the biological corridor and PA system

**Output 1.5:** Enhanced planning and monitoring capacity for sustainable forest management in FMUs and LFMPs.

**Output 1.6:** Strengthened institutional mechanisms and tools for integration of Climate Change Adaptation (CCA) and environmental sustainability needs in the local development planning system at dzongkhag and gewog levels.

**Outcome 2:** Biological corridor governance and management established and demonstrated with management linkage to adjoining protected areas.

**Output 2.1:** Conservation management plans integrating CCA needs in place for the four BCs in the target project landscapes.

**Output 2.2:** Governance operationalized and management effectiveness enhanced for the targeted biological corridors, including strengthened personnel capacity.

**Output 2.3:** Law enforcement and biological monitoring capacity increased through SMART patrolling and strengthened biological monitoring systems for key ecosystems for threatened species in the target BCs and adjacent PAs.

**Output 2.4:** Sustainable human-wildlife conflict response strategies developed and systems strengthened through innovative mechanisms based on global best practices in the target BCs and Adjunct PAs.

**Outcome 3:** Livelihood options for communities are made climate-resilient through diversification, SLM and climate-smart agriculture and supported by enhanced climate-resilient infrastructure.

**Output 3.1:** Strengthened climate resilience and productivity of agricultural and livestock management.

**Output 3.2:** Community livelihoods strengthened and sources of income diversified and enhanced in the target landscapes

**Output 3.3:** Transformation of market access is demonstrated for selected rural communities to enhance their climate resilience

**Outcome 4:** Knowledge management system established to support sustainable management of forest and agricultural landscapes and climate-resilient communities.

**Output 4.1:** Institutionalized knowledge for ILM and Climate Change Resilience

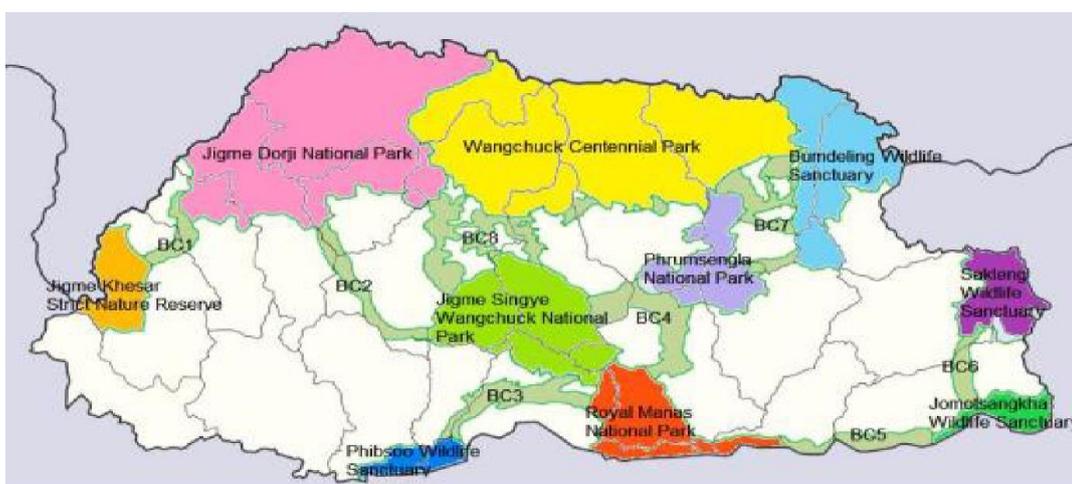
**Output 4.2:** Enhanced generation, documentation and sharing of knowledge and best practices in ILM and climate-resilient livelihood practices

**Output 4.3:** Project monitoring and evaluation system in place and used to inform project management decision-making

The total area covered by the project landscapes is 1,304,958 hectares (ha), or 13,049.58

km<sup>2</sup>, which is a little more than one-third of the country's total geographical area. The project landscape includes the following Protected Areas (PAs) and Biological Corridors (BC) (**Figure 1**):

- Jigme Khesar Strict Nature Reserve (JKSNR);
- Jigme Singye Wangchuck National Park (JSWNP);
- Phrumsengla National Park (PNP);
- BC1 that connects JKSNR to Jigme Dorji National Park (JDNP);
- BC2 that connects JDNP to JSWNP;
- BC8 that connects JSWNP to Wangchuck Centennial Park (WCP) and JDNP; and
- BC4 that connects JSWNP to PNP, and PNP to Royal Manas National Park (RMNP).



**Figure 1. Map of Bhutan showing protected areas and biological corridors. Project sites include Jigme Khesar Strict Nature Reserve, Jigme Singye Wangchuck National Park, Phrumsengla National Park, BC1 BC2, BC4 and BC8**

The RCEBC project operates in 12 Dzongkhags and 38 Gewogs (**Table 2**).

**Table 2. Regions, Dzongkhags and Gewogs where the RCEBC project is implemented**

Regions & Dzongkhags	Gewogs
<b>Western Region</b>	
Haa	Bji, Sangbey, Sama and Gakidling
Thimphu	Chang
Punakha	Kabjisa and Toebesa
Wangdue Phodrang	Atang, Bjena, Daga, Dagachu, Gasetshowom, Gangtoe, Kazhi, Nahi, Nyisho, Phobji and Sephu
Paro	Tsento
<b>Central Region</b>	
Bumthang	Tang, Chhumei and Ura
Trongsa	Korphu, Nubi, Tangsibji and Langthel
Zhemgang	Nankor, Shingkar and Trong
<b>Eastern Region</b>	
Mongar	Tsamang and Saleng
Lhuntse	Gangzur, Jarey and Metsho
<b>Southern Region</b>	
Tsirang	Phuentenchu and Sergithang
Sarpang	Chhudzom and Jigmechoeling

## 2.4 Key Stakeholders

Key stakeholders in the project include the following:

- Ministry of Finance (former Gross National Happiness Commission)
- Ministry of Agriculture and Livestock (MoAL)
- Department of Surface Transport (former Department of Road)
- Forest Resources Planning and Management Division (former Forest Resources Management Division (FRMD), Department of Forest and Park Services
- Watershed Management Division (now merged with Department of Water under Ministry of Energy and Natural Resources)
- Department of Agriculture (DOA), MoAL
- National Soil Services Center, DOA, MoAL
- Irrigation Division, DOA, MoAL
- Department of Livestock (DoL), MoAL
- National Biodiversity Centre, MoAF
- Department of Agricultural Marketing and Cooperatives, MoAL
- National Organic Programme (NOP), MoAL
- Nature Conservation Division (NCD), DoFPS
- Policy and Planning Division, Ministry of Works and Human Settlement (MoWHS)
- Agriculture Research Development Centres (ARDC)
- ARDC Yusipang
- National Animal Nutrition Center, Bumthang
- Dzongkhag Administrations, Divisional Forest Offices and Gewog Administrations falling under the project landscape
- Project beneficiaries

## 2.5 Theory of Change

The ProDoc outlines the following Theory of Change to achieve the project objective and impacts (Figure 2) analyzed in Section 3.1.1.

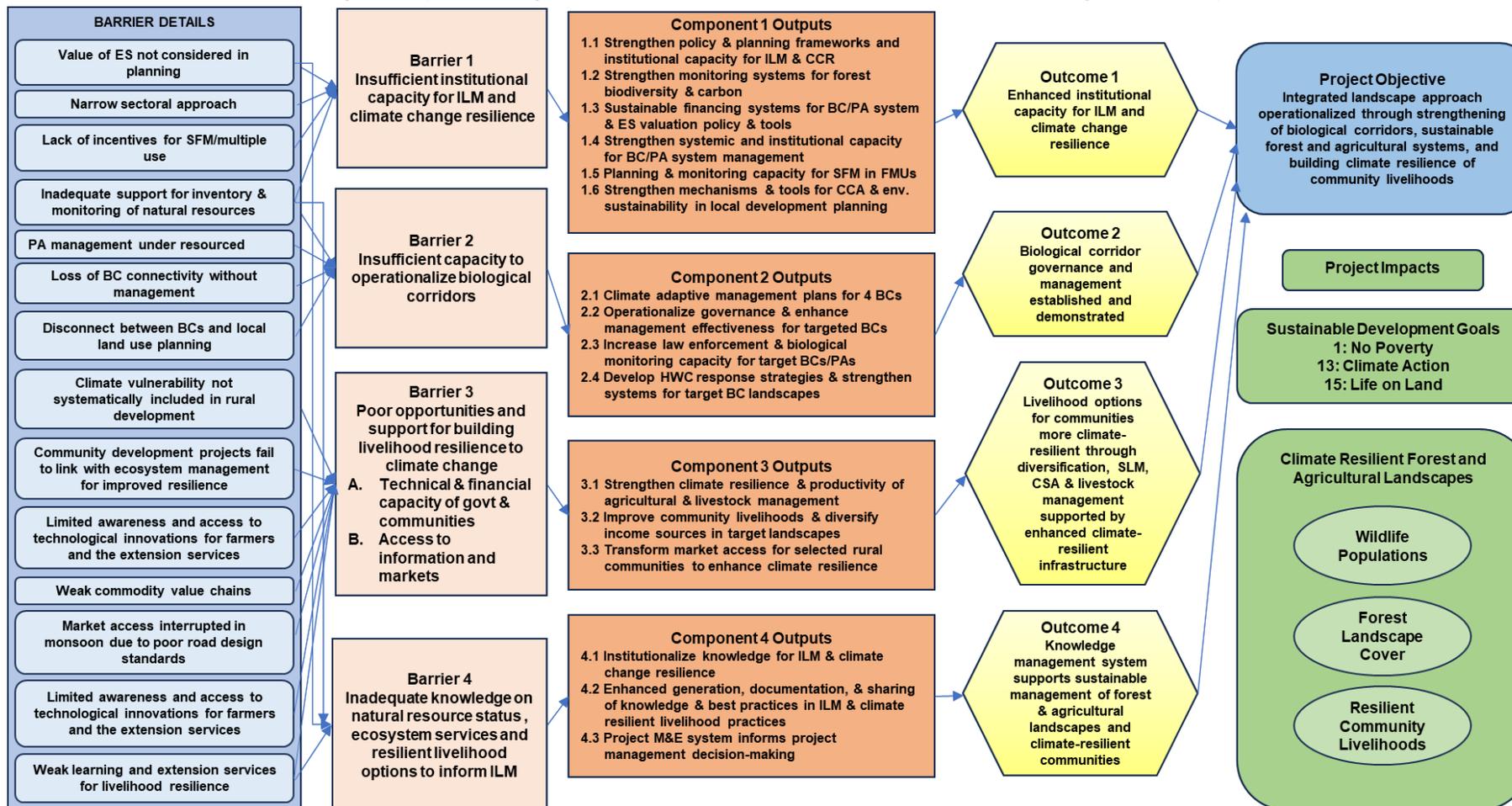


Figure 2. Project theory of change from ProDoc

### 3 Terminal Evaluation Findings

Table 3 provides a summary of TE ratings based on analysis provided in the associated sections of the report in **Section 3.2** Project Implementation and in **Section 3.3** Project Results.

**Table 3.** Summary of Terminal Evaluation Findings (see ratings used after table)

Monitoring and Evaluation	rating*	Implementing Agency (IA) & Executing Agency (EA) Execution	rating*
M&E design at entry	S	Quality of UNDP Implementation – Implementing Agency	S
M&E Plan Implementation	S	Quality of Execution - Executing Agency	HS
Overall quality of M&E	S	Overall quality of Implementation / Execution	HS
Assessment of Outcomes	rating*	Sustainability	rating*
Relevance	HS	Financial resources	L
Effectiveness	HS	Socio-political	L
Efficiency	HS	Institutional framework and governance	L
Overall Project Outcome Rating	HS	Environmental	L
		Overall likelihood of sustainability	L

\* HS highly satisfactory; S satisfactory; MS moderately satisfactory; U unsatisfactory HU highly unsatisfactory;

\* L likely; ML moderately likely; MU moderately unlikely; U unlikely.

#### 3.1 Project Design/Formulation

##### 3.1.1 Theory of Change

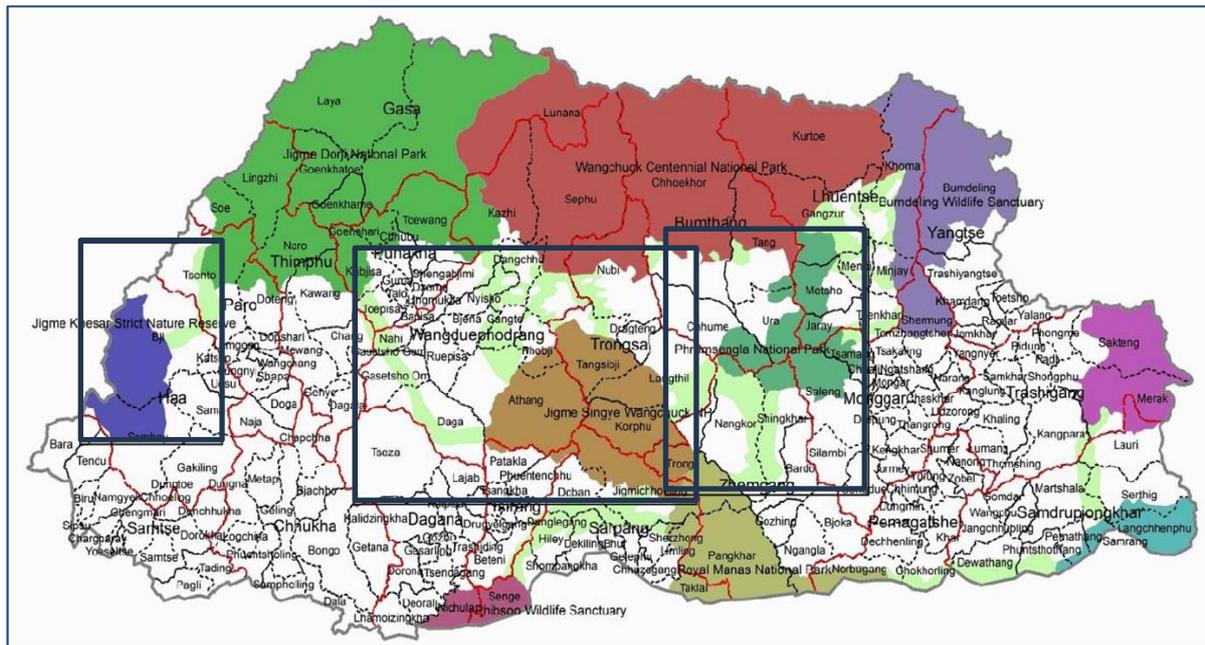
The Theory of Change (ToC) intervention logic has been assessed to determine if it is coherent and realistic. The ToC has been assessed in the context of ongoing project implementation and potential future implementation to assess if the intervention logic still holds or needs to be adjusted.

Analysis of the ToC has been undertaken through an assessment of Impact Drivers (ID) and Assumptions (A) associated with the project objective and outcomes as shown in **Annex 6 Table 6.1**. The ID and A are further assessed based on the status of project activities and the Intermediate State (IS) achieved (**Annex 6 Table 6.2**). The ToC analysis follows the methods and guidance provided in the Review of Outcomes to Impacts (ROtI) Handbook (2009).

The ToC is directed at the establishment of the foundational elements of SFM, ILM and CCR livelihoods contributing to a long-term goal of *Sustainable and Climate Resilience Forest and Agricultural Landscapes and Community Livelihoods within the Biological Corridors and Protected Areas of Bhutan*. The ToC ID and A focus on capacity building (training, infrastructure, financing) of relevant government stakeholders and beneficiaries to enable their participation and ongoing implementation of SFM, ILM and CCR. Within the project landscapes, the ToC has supported successful implementation of activities contributing to the establishment of the foundational elements of SFM, ILM and CCR. Despite the fact some outputs have not been fully achieved, the ToC intervention logic still holds as an approach to achieving the long-term goal.

The project has reached relevant government offices and local communities associated with selected landscapes with important BC and PA in Bhutan (**Figure 3**), there are additional government offices and local communities that were not involved in the project and they may

not yet have the capacity to implement SFM, ILM and CCR. The project could, therefore be scaled-up to reach all landscapes with Bhutan following the current ToC which has contributed to the success of the project.



**Figure 3.** Locations of the project landscapes (boxes) superimposed over the PA and BC network in Bhutan (figure taken from ProDoc)

The current ToC focuses on the establishment of foundational elements of SFM, ILM and CCR. Once these foundational elements are established, there is a need to consider revising the ToC to focus on the success of implementation and to work with government stakeholders and community beneficiaries to monitor success and to develop adaptive management strategies to refine current approaches and where appropriate and necessary add new activities that contribute to achievement of the long-term goal.

### 3.1.2 Analysis of Results Framework: project logic and strategy, indicators

The ProDoc and project Monitoring Plan identify 12 indicators for the project objective and outcomes. Five indicators have up to six additional indicators embedded within them, making a total of 25 indicators (see **Annex 7**).

Twenty of the 25 indicators meet SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) criteria. Four of the 25 indicators could be improved by providing greater detail on the specifics of what is to be measured, including the proposed target.

One of the 25 indicators was considered unlikely to be achievable. The indicator measure is an increase in women’s control over land and natural resources decision-making with a target of 75% over baseline. The baseline study report (undated) states:

- *There was equal participation of men and women in local meetings (zomdues). About 90% of them [women] have attended zomdue in the past one year.*
- *Relatively, more men make decisions related to crop production, livestock, household expenditure and day-to-day household affairs compared to women. [typical example of baseline data results shows for “always” involved in decision making for crop production is 40% for women, 49% for men]*

As a result of the project's transition to the GEF 7 core indicators, the monitoring and reporting on the following indicators was not required (see **Annex 7**) (UNDP pers comm):

- Indicator 3: Increased status of all indicators in the GEF Climate Change Adaptation Tracking Tool
- Indicator 6: Financing gap for sustainable management of the protected area and biological corridor system closed as indicated by improvement in GEF BD-1 Financial Sustainability Scorecard
- Indicator 8: Population size of key species.
- Indicator 9: Reduction in threat cases reported over the project period in project landscapes.
- Indicator 10: Gender-equitable livelihood options for at least 70% of population in project landscapes made more resilient to climate risks.
- Indicator 11: Sustainable land and water resource management instituted in targeted landscapes through community-based and gender-equitable SLM, SFM and climate-smart agriculture practices

### **3.1.3 Assumptions and Risks**

The ProDoc Risk Log identified and provided risk ratings for nine risks under the categories of operational, organizational, financial, strategic, environmental, strategic/operational and operational/social (**Annex 9 Table 9.1**).

The Social and Environmental Screening Procedure (SESP) (ProDoc Annex 6) identifies and provided risk ratings and management measures for four risks. (**Annex 9 Table 9.2**). The risks identified in the SESP are also covered in the ProDoc Risk Log. A comprehensive Environmental and Social Management Framework (ESMF) (ProDoc Annex 7) was also prepared and included a table of 22 project risks noting social and environmental impacts, the magnitude of impacts and mitigation measures. Twenty of the 22 risks were rated low risk, two were rated medium risk. Lessons from and linkages with other relevant projects.

### **3.1.4 Planned stakeholder participation**

The project's multi-focal approach of the ToC outcomes, outputs and activities and their implementation methods necessitated extensive engagement with a wide range of stakeholders and thousands of community beneficiaries. The ProDoc identifies the planned participation mandate and roles of stakeholder groups, including:

- ten national government agencies;
- local government (Dzongkhag/District and Gewog/County) administrations in the project landscapes;
- civil society organizations;
- training/research institutions;
- development partner organizations;
- local beneficiary population (approximately 97,000).

The ProDoc included a plan for the engagement of stakeholders during project implementation (ProDoc Annex 27). The plan identified stakeholders associated with each project output and outlined their responsibilities.

Working with stakeholders was initiated in the design phase of the project through the

engagement of stakeholders in the Program Preparation Grant (PPG) phase. Early engagement in the project design phase allows stakeholder needs and concerns to be considered, and establishes ownership and commitment to the project.

Maintaining effective coordination to sustain stakeholders' engagement was identified in the ProDoc risk analysis. The management recommendations included implementing project activities that built on and helped solve stakeholder needs, seeking a harmonized approach that addressed participating stakeholder mandates while also contributing to the project goal. As noted in **Section 3.1.4** working with stakeholders has made important contributions to the completion of activities and the sustainability of outputs.

### ***3.1.5 Linkages between project and other interventions within the sector***

The project collaborated with WWF Bhutan in the implementation of Bhutan for Life (BFL) work on the management of PAs and supporting people living in the PAs and BCs through job creation and income-generating opportunities. The project was in continuous dialogue with other development partners (World Bank, Asian Development Bank, Bhutan Trust Fund for Environmental Conservation, South Asian Association for Regional Cooperation (SAARC) fund) to complement other initiatives, leverage development results and enhance the impact of biodiversity conservation and improved community livelihoods.

### ***3.1.6 Gender responsiveness of project design***

The Project Preparation Grant (PPG) included a study on gender that revealed rural women are more likely to be vulnerable to the impact of climate change as a result of their role working in agricultural and managing the household. Women were shown to constitute 53% of the population engaged in agriculture, highlighting the importance of working with women to sustain and improve the resilience of rural livelihoods. The project design sought to revitalize the Environment, Climate Change and Poverty Mainstreaming Reference Group (MRG), established by the Prime Minister's Office in 2013. The MRG was formed to strengthen and facilitate the integration of cross-cutting issues in government decision-making processes and development policies, plans and programmes, including gender mainstreaming.

The project design promoted gender equality and women's empowerment, by intentional engagement of women in capacity development, user group formation, employment and informal labour opportunities.

Gender mainstreaming in the design of project outputs is reflected in the proposed inclusion of gender-friendly mechanization of labour-efficient and easy to use machinery and tools to reduce the work load for women undertaking post-harvest processing of maize, rice, wheat, buckwheat and barley and to introduce fuelwood efficient (or alternative fuel) cardamom driers. The project design specified that women should be proactively considered to participate in the proposed environmentally friendly road construction work. The project's work to improve the marketing of farm products recognized that large role women play in marketing and mainstreamed gender by taking into account of gender disaggregated needs such as communication and transportation.

### ***3.1.7 Social and Environmental Safeguards***

The project design included a comprehensive Social and Environmental Management Framework (ProDoc Annex 7) that reviewed potential human rights, gender and environmental issues and considered to ensure these were adequately addressed in the project design. Several tools were provided, including: Social Screening Checklist at the sub-project level; Social Action Plan at the sub-project level; Environmental Screening Checklist at the sub-project level; Environmental Management Plan at the sub-project level; Environmental

Compliance Monitoring at the sub-project level; Good Environmental Code and Practice in Rural Road Planning and Construction; Guidelines for group selection harvest in FMUs; and Marking rules for selection system and rural use.

### ***Human Rights***

The project design sought to uphold human rights, particularly in the context of RGoB's strong constitutional protection of human rights, and to implement human rights-based approach in implementation. The project design targeted to the poorest and most vulnerable communities living within protected areas and biological corridors to enhance and increase resilience of their livelihoods. The project design was intended to deliver improved ecosystem services, such as water for drinking and irrigation, to benefit poor rural communities.

### ***Gender Equality***

The findings of the gender analysis and gender action plan completed during project design were mainstreamed in the project to ensure gender-specific needs and priorities were captured. The SRF included gender indicators and gender disaggregated data to enable the monitoring of progress of gender mainstreaming during project implementation.

### ***Environmental***

The project design is based on achieving improved protection and management of PAs and BCs while also addressing issues related to the poverty-environment nexus. The potential environmental impact of proposed road transportation improvement was recognized and addressed in project design through an environmentally-friendly road construction approach.

## **3.2 Project Implementation**

### ***3.2.1 Adaptive management***

Reviewing Project Board (PB) meeting minutes revealed that there has been valuable, informed discussion and refinement of project activities among PB members which included representatives from national and local government sectors, members of the PMU and UNDP representatives. There is evidence of the PB listening to feedback from the local government representatives and the PMU and requesting in-depth review of some project activities. In some cases, the PB has approved the realignment of some Output activities to better achieve the most appropriate priorities identified at the local level. When the local priorities and needs are addressed, community members are more likely to accept, support and participate in project activities and to sustain outputs after the project ends.

One example has been the originally identified need for the development of crop and livestock insurance as highlighted in the ProDoc. The ProDoc included a report on Crop and Livestock Compensation/Insurance against climate induced disaster and wildlife incursions (ProDoc Annex 20). The report documented the prevalence of climate-induced crop losses, with some landscapes reporting 60% acreage lost. Wildlife incursions damaging crops and livestock depredation were also ranked very high. The report included recommendations to explore the introduction of crop and livestock insurance programs in project outputs and activities. During project implementation, however, there was much debate on the high cost of purchasing insurance, putting insurance out of reach of most farmers unless there were significant government subsidies. After much review and discussion, the project took an adaptive management approach that led to the re-allocation of project budget to activities that address problems through increased crop resilience and productivity, and project activities and infrastructure that would reduce HWC and the associated crop and livestock losses.

The construction of cold storage facilities were added at a later stage in the project having not been included in the original SRF, but, recognized an important to improved income generation from agricultural.

The PMU consulted PB and Technical Advisory and Coordination Committee (TACC) to assist adaptation of project implementation during the period of Covid-19 lockdowns and travel restrictions. The PIR (2022) reported the PB and TACC were proactively called upon through virtual meetings and presentations, to review anticipated risks to the progress of some of the activities and discussed mitigation measures accordingly. The PB approved deferring two activities reliant upon meetings and workshops that were impacted by restrictions and prioritized other activities such as construction and road climate proofing that were not impacted by restrictions.

### **3.2.2 Actual Stakeholder Participation and Coherence**

Stakeholder engagement and consultation was coordinated by the erstwhile Gross National Happiness Commission (GNHC) and the PMU. Following excerpts from PIR highlight the significance, complexity and success of stakeholder engagement.

*The leadership and implementation capacity at the PMU is worthy of commendation since they have to deal with multiple implementing agencies from the ministries, local governments, civil societies and communities. They have to deal with a multitude of stakeholders and build a good working relationship by building incentives and partnership mechanisms to deliver results at the community level. They are seen on a frequent monitoring visit. They have a very strong rapport with the UNDP colleagues here, which I believe is paramount to the success of such a complex and important project. Since the start of the project, there has been no issue of under delivery and any major issues in implementation. (2019 PIR page 38)*

*The bed rock for the success of this project very much lies on active collaboration, co-ordination and engagement of the stakeholders. ... Identified stakeholders continue to meet on quarterly basis to update progress, and discuss issues, and plan annual work plans together. Where feasible, joint implementation is being encouraged. (PIR 2021 page 37)*

TE field mission noted that effective stakeholder communication and engagement has led to collaboration among multiple stakeholders, with discussions on issues and shared learning and problem solving.

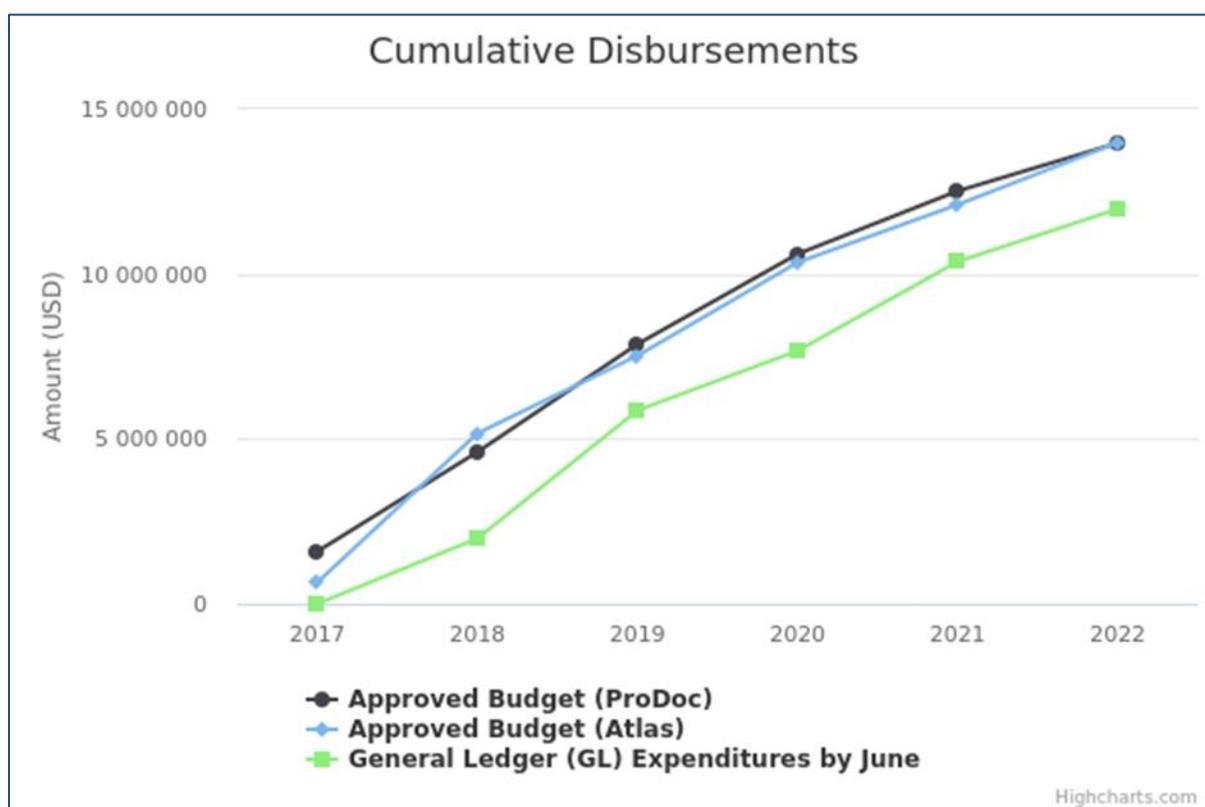
The ProDoc identified 15 landscape level initiatives operating in Bhutan that intersected with a variety of project outcomes and outputs. While the project landscapes (**Figure 3**) were selected to avoid overlap with other initiatives, during implementation the project communicated and collaborated with the other landscape level initiatives, finding opportunities for synergy (up-scaling) and knowledge sharing. These included:

- Working closely with Bhutan for Life (BFL) on shared approaches that scaled up some project activities such as work to address a finance strategy for PA management after project closure;
- Partnering with UNDP GEF Small Grant Program (SGP) and Bhutan Ecological Society in conducting national policy dialogue on ILM to share knowledge and experiences; and
- Supporting the Bhutan Tiger Center (BTC), which manages the UNEP funded project on “Vanishing Treasure,” in the formation of a Gewog Tiger Conservation Tshogpa/ Committee-GTCT in tiger hotspot areas within the project landscape.

### **3.2.3 Project Finance and Co-finance**

Year to year project expenditure has been consistent, with the average annual general ledger expenditures 86% of the annual approved budget (**Figure 4**). This reflects smooth and consistent implementation of planned project activities and puts the project in a good financial

position to effectively and efficiently complete all project tasks.



**Figure 4.** Cumulative spending of GEF and LDCF grants (figures in USD, data from 2022 PIR)

Cumulative project spending viewed against the four project Outcomes as of December 2022 is shown in **Table 4**. With a total cumulative expenditure of 93%, the remaining budget is sufficient but not excessive for an orderly completion of project tasks is expected.

**Table 4.** Project Budget (GEF grant and LDCF grant) allocation, expenditure from November 2017 to December 2022, % expenditure and remaining budget (figures in USD, source 8<sup>th</sup> Project Board Meeting).

Outcome	Allocation	Cumulative Expenditure	Cumulative Expenditure%	Remaining Budget
Outcome 1	1,554,000	<b>1,391,263.00</b>	90%	<b>162,737.00</b>
Outcome 2	1,900,000	<b>1,712,265.70</b>	90%	<b>187,734.30</b>
Outcome 3	9,154,000	<b>8,663,789.56</b>	95%	<b>490,210.44</b>
Outcome 4	715,000	<b>599,715.00</b>	84%	<b>115,285.00</b>
PMU	664,124	<b>621,821.00</b>	94%	<b>42,303.00</b>
<b>Totals</b>	<b>13,987,124</b>	<b>12,988,854.26</b>	<b>93%</b>	<b>930,269.00</b>

The ProDoc identified a large amount of co-financing to assist the project. The total of \$42,630,300 is over three times the amount of the combined GEF and LDCF grants. In addition, most of co-financing is in the form of grants totaling \$37,540,330, capable of making a substantial contribution to project activities (**Table 5**). The co-financing grants are made up of \$1,080,300 contributed by UNDP and the remainder contributed by the government of Bhutan including the erstwhile GNHC, the Ministry of Agriculture and Forests (MoAF -now Ministry of Agriculture and Livestock) and the Ministry of Works and Human Settlement

(MoWHS-now Ministry of Infrastructure and Transport). The “in-kind” co-financing provided by MoAF and MoWHS is \$5,090,000.

Co-financing data provided in the 2022 PIR (**Table 5**) shows all co-financing had materialized as of June 30<sup>th</sup>, 2022. No further information is provided in PIR or other project reports to document how co-financing contributed to the project.

**Table 5.** Project co-financing received by the project as of June 30, 2022 (figures in USD, source 2022 PIR)

Source of Co-financing	Type of Co-financing	Co-financing Mobilized(Jun 30, 2022)
UNDP	Grant	1,080,300
RGoB	Grant	36,460,000
RGoB	In Kind	5,090,000
<b>Totals</b>		<b>42,630,300</b>

### 3.2.4 Monitoring & Evaluation

#### Monitoring and Evaluation Design

The ProDoc included a comprehensive Monitoring and Evaluation (M&E) Plan that identified M&E responsibilities for the PMU, PB, Project Implementing Partner (PIM), UNDP CO and GEF. Annex 2 of the ProDoc is a table outlining monitoring based on the project strategic results framework indicators, noting the data source and collection methods, frequency for data collection, the responsible party (ies) for data collection, the means of verification and assumptions and risks. A version 2 of the M&E Plan was prepared in May 2021 providing additional information on a monitoring schedule and data collection tools. The TE considers the M&E Plan was well designed and the ProDoc provided a comprehensive budget table (see ProDoc Table 6) for all mandatory GEF M&E requirements sufficient to achieve implementation of M&E.

M&E prepared a comprehensive and statistically accurate Baseline Survey Report (Enhancing Sustainability and Climate Resilience of Forest and Agriculture Landscape and Community Livelihoods in Bhutan, undated) that provided a wide range of baseline information on social, environmental, and economic conditions and on gender. The baseline survey also defined methodologies to conduct mid-line and end-line surveys. The survey information served as a baseline for reporting on the progress of indicators in the SRF.

The M&E Plan established a comprehensive data collection and reporting system where required reports are prepared and shared with relevant stakeholders through the PMU. In addition, the UNDP CO performed a thorough analysis of project reports and M&E. Regular quarterly meetings ensured involvement of all project stakeholders in discussions of project progress, lessons learnt and other approaches to improve project performance. In some cases, further actions required were put up to the PB for approval. These systems and processes, were found to be effective in addressing issues that arose during project implementation.

The TE rating for the M&E design is satisfactory the completion of a comprehensive M&E Plan and the establishment of a Baseline Survey supporting the measurement of project indicators.

**Rating: Satisfactory (S)**

## **Monitoring and Evaluation Implementation**

Implementation of M&E was facilitated by regular field visits conducted by the project team and the preparation of required reports for decision-making and learning as noted in Annex 10. The Midterm Review (MTR) reported that data on GEF tracking tools for biodiversity (BD1 METT and sustainable financing scorecard), GEF SFM and GEF Climate Change Adaptation (CCA) were being updated and used in project management. An update of the GEF tracking tools is provided in **Annex 8**.

The TE team reviewed the four Project Implementation Reports (PIR) produced (2019, 2020, 2021, 2022). The 2019 PIR provided information about the progress of the development objectives, but failed to include some reporting requirements such as implementation status, risk assessment, progress on gender issues, rating and overall assessment of the objectives. The PIR 2020, rated the progress towards the development objective and progress in implementation including gender. The 2021 and 2022 PIR addressed all missing aspects pointed out for the PIR 2019.

The overall project rating of highly satisfactory report in the December 2020 PIR was consistent with the MTR which stated, *overall, the project has achieved most of the targets as outlined above, thus rated highly satisfactory*. The TE considers the December 2020 PIR and MTR ratings should be satisfactory as there was insufficient evidence of the project clearly exceeding expectations.

The project had effective internal communication through project level workshops and meetings both at the national and local levels to share the findings and implementation challenges of the project. As per the consultation with the stakeholders, they are mostly satisfied with the level and timeliness of information shared, along with the decisions being made. The project used regular memos, instructions or directions; in-person meetings, telephone conversations and the use of social media as tools to share the important project decisions. During the COVID-19 pandemic period, the project also used virtual tools to communicate among the stakeholders and local communities.

The TE rating for M&E implementation is satisfactory as M&E data collection was adequate for the required SRF indicators.

### **Rating: Satisfactory (S)**

**Table 6:** Overall quality of Monitoring and Evaluation

<b>Monitoring &amp; Evaluation (M&amp;E)</b>	<b>Rating</b>
M&E design at entry	S
M&E Plan Implementation	S
<b>Overall Quality of M&amp;E</b>	<b>S</b>

### **3.2.5 UNDP implementation/oversight and Implementing Partner execution, overall project implementation/execution, coordination, and operational issues**

#### **Quality of UNDP Implementation – Implementing Agency**

UNDP worked with the RGoB to facilitate in the preparation of a ProDoc approved for GEF funding to address important and highly relevant national and international issues related to the protection of biodiversity and sustainable livelihoods for communities. Throughout project implementation, UNDP participated in Project Board meetings thereby engaging with

government stakeholders, acknowledging the accomplishments of project progress and identifying ongoing strategic priorities for action.

The ProDoc sets out clear stakeholder roles for the project implementation process, UNDP as the Implementing Agency. The partners involved for the project, at both national and local levels, were appropriate from the perspective of their mandates and their relevance to the project. As a Nationally Implemented Project (NIM), the project is implemented in accordance with the National Execution Manual agreed between the RGoB and the MOU with UNDP. All management aspects of the project are the responsibility of the national authority which was accountable to the UNDP Country Office (UNDP CO) for production of the outputs, achievement of objectives, use of resources provided by UNDP, and financial/technical progress reporting. UNDP CO was accountable for the use of resources to the UNDP Executive Board and the project donors.

There was good rapport between UNDP and the Project Management Unit (PMU) established for the project, with regular communication and visits contributing to the success of the project. UNDP PIR provided comprehensive reporting on implementation progress towards the achievement of outcome targets. The PIR also reported on progress towards achieving gender equality women's empowerment and tracked relevant Social and Environmental Standards. UNDP coordinated the undertaking of a MTR and a TE.

### ***Rating: Satisfactory (S)***

#### ***Quality of Execution – Executing Agency***

The national authority is the erstwhile Gross National Happiness Commission-Secretariat (GNHC-S) within which the Development Cooperation Division (DCD) was the Executing Agency/Implementing Partner that managed the project (now within the Ministry of Finance). The Implementing Partner (IP) was responsible and accountable for managing the project as well as monitoring and evaluation of project interventions, achieving project outcomes, and effective use of UNDP resources. A PMU was established within the IP to conduct overall monitoring, management and evaluation of the project which presently lies within the Ministry of Finance after the government transformation.

A Project Board (PB) was established to provide high-level guidance and oversight to the project chaired by the Honorable Secretary of erstwhile GNHC. The PB is responsible for making consensus, management decisions when guidance is required by the PMU, including recommendation for UNDP/IP approval of project plans and revisions. The PB is made up of senior officials from various agencies. There is also Technical Advisory and Coordination Committee (TACC) consisting of a multi-disciplinary team of technical people from various government agencies and implementing partners to provide technical advice to the project. While the project assurance role was specifically assumed by the UNDP Bhutan CO including quality assurance by the UNDP Regional Hub for Asia and the Pacific whenever required.

There are various project partners accountable for implementation and reporting of the project activities as per the approved work plans and budgets. The approach of the project was to decentralize implementation of the project activities to the stakeholders at the field/ local level to build ownership of the project activities and capacity at the local level as well as to keep the national policy objective to increasing decentralize governance of development programs.

There is involvement of central government agencies which have the national-level programmatic, policy and administrative mandates related to forest management, agriculture, environmental assessments, and integration of CCA/environmental needs. They are responsible for implementation of activities associated with Outcome 1: Strengthening systemic and institutional capacity for integrated landscape management. These agencies

included DoFPS (MoRNR), PPD (MoAF), DLG now Department of Local Governance and Disaster Management, Ministry of Home and erstwhile GNHC-S. In terms of field-based agencies there are the Territorial Forestry Divisions (TFDs) and Protected Area Management Authorities (PAMAs).

For activities associated with Outcome 2: BC governance and management established, demonstrated and linked to the management of contiguous PAs. The TFDs with jurisdictions over the four BCs in the project landscapes are Paro TFD for BC 1, Wangduephodrang TFD for BC 2, and Zhemgang TFD for BC 4 while three TFDs – Bumthang, Wangduephodrang, and Zhemgang. Then the Dzongkhag Administrations which have the mandate for delivery of local development programs and associated public services.

For activities associated with Outcome 3: Livelihood options for communities are more climate-resilient through diversification, SLM and climate-smart agriculture and livestock management and supported by enhanced infrastructure. Upgradation of gewog connectivity roads (for improved market access and enhanced climate resilience) was implemented by the Department of Roads under the Ministry of Works and Human Settlement. The project involved 12 Dzongkhag Administrations that have gewog(s) inside the project landscapes. The coordination and consolidation of project activities for project Outcome 3 was done by the LDD, erstwhile GNHC-S, which has the mandate for overall monitoring and coordination of local development activities.

The commitment, coordination, and communication among all agencies noted above, including erstwhile GNHC, the PMU, the PB, the many national and local government agencies contributed to effective and efficient project implementation, including adaptation and adjustment to address challenges and ensure locally appropriate implementation methods and local needs were met.

**Rating: Highly Satisfactory (HS)**

**Overall quality of Implementation/Execution**

The PMU effectively managed implementation of the project through effective communication and engagement of committed stakeholders. There was orderly execution of project activities with efficient use of project funds leading to the completion of tasks and utilization of all available funds. UNDP provided oversight of the project, ensuring the project tasks and spending were on track. There were no reported conflicts between the implementing and executing agencies.

**Table 7:** Overall quality of project implementation and execution

<b>UNDP Implementation/Oversight &amp; Implementing Partner Execution</b>	<b>Rating</b>
Quality of UNDP Implementation/Oversight	S
Quality of Implementing Partner Execution	HS
<b>Overall quality of Implementation/Oversight and Execution</b>	<b>HS</b>

**3.2.6 Risk Management and Social and Environmental Standards**

**Risk Management**

The TE has reviewed risks and proposed risk treatment and management measures identified in the ProDoc, and determined if the project has effectively mitigated negative impacts that may have arisen from the risks identified (**Annex 9 Table 9.1**).

Operational and organizational risks were identified related to coordination and communication among stakeholders. The TE acknowledges the excellent work of the PMU in regard to coordination and communication and its contribution to the success of the project.

The financial sustainability risk identified has been effectively mitigated through the project's intentional establishment of financial sustainability mechanisms, including Payment for Ecosystem Services (PES), working with the Bhutan for Life initiative and securing funding from WWF.

The environmental risks identified have been effectively mitigate through project Sustainable Land Management (SLM) initiatives that have restored and enhanced the resilience of project landscapes to withstand extreme climate events and the development of 28 Local Forest Management Plans (LFMP) in 34 sites that will reduce the environmental impact of timber harvesting on natural forests and within reforestation areas. No environmental impacts were reported as a result of road construction and the effort to make the Gewog road climate resilient should reduce future environmental impacts such as erosion and landslides.

### ***Social and Environmental Standards***

The TE has also reviewed the risks and the proposed risk treatment and management measures identified in the SESP and determined the project has effectively mitigated negative impacts that may have arisen from the risks identified (Annex 9 Table 9.2).

Social risks related to gender equality and community access to resources and sustainable livelihoods were mitigated through effective engagement and participation of women in project activities and the improvement of livelihoods through the introduction of SLM practices and measures taken to reduce Human- Wildlife Conflicts (HWC).

During project implementation risks associated with Covid-19 lockdowns and travel restrictions arose. Covid-19 risks were identified by the PMU and well managed by the project through proactive engagement of stakeholders to discuss Covid-19 challenges and the development of appropriate mitigation measures (see **Section 3.2.1**)

## **3.3 Project Results**

### ***3.3.1 Progress towards the Objective and Expected Outcomes***

The TE has made a thorough assessment of progress towards the completion of output activities through a review of project documents and 33 days of field investigation conducting KII and FGD, and visiting and assessing project field sites. Detailed results of the TE assessment of all project activities for each project output is presented in **Annex 8 and Annex 10**.

The ratings for the project objective, outcomes and outputs based on the TE assessment (**Annex 10**) are shown in **Table 8** together with a summary assessment for each rating. With most the targets achieved, many Outputs have also exceeded the project target. Hence, the overall rating for progress towards the Objective and expected Outcomes is Highly Satisfactory.

***Rating: Highly Satisfactory (HS)***

**Table 8.** Summary of Terminal Evaluation assessment of progress towards the completion of project activities (Ratings used: **HS** highly satisfactory; **S** satisfactory; **MS** moderately satisfactory; **U** unsatisfactory **HU** highly unsatisfactory). For a complete assessment refer to **Annex 10**.

Project Objective, Outcomes & Outputs	Summary of TE Assessment	TE Rating
<b>Project Objective</b>	The achievement of activities associated with each project output were fully achieved and in some cases exceeded the end of project target. Some activities assessed were on the verge of completion, including the construction of cold storage facilities in Tingtibi, Zhemgang and Gangtay, Wangdue which are to be completed within the next 4 months.	<b>HS</b>
<b>Outcome 1</b> Enhanced institutional capacity for ILM and climate change resilience: This component will focus on building institutional capacities for ILM as well as enhancing climate resilience across rural communities.	Review of policy and planning frameworks along with capacity gaps identified, tool kits and guidelines developed, established national forestry inventory monitoring system, ecosystem valuation tools, innovating financing strategy, revised biological corridor regulations, HWC mitigation measures, awareness creation and other activities provided to the communities.	<b>S</b>
<b>Output 1.1</b> Strengthened policy and planning frameworks and institutional capacity for integrated forest and agricultural landscape management and climate change resilience within key national agencies.	Review of policy and planning frameworks were carried out and capacity gaps identified. Capacity gaps were accordingly addressed through various trainings. Although the capacity assessment report was developed, the toolkits and guidelines identified in output targets were not produced. At the output level the activities completed have achieved strengthened policy and planning frameworks and institutional capacity.	<b>S</b>
<b>Output 1.2</b> Strengthened monitoring systems for forest condition, biodiversity status and carbon stocks in DoFPS	The activities for national forest inventory and monitoring system were established including establishment of national protocols along with capacity building. End of project target exceeded, 237,719.83 ha forest area brought under sustainable and climate-resilient management practices through development of 28 Local Forest Management Plans (LFMP) and ten Forest Management Unit Plans	<b>HS</b>
<b>Output 1.3</b> Sustainable financing system for the biological corridor and PA system and sector-oriented valuation policy and tools developed to measure ecosystem services benefits.	An innovative financing mechanism strategy was developed. Ecosystem valuation tools were developed, capacity development in their use was conducted and assessments to support PES were completed.	<b>S</b>

Project Objective, Outcomes & Outputs	Summary of TE Assessment	TE Rating
<b>Output 1.4</b> Strengthened national systemic and institutional capacity for management of the biological corridor and PA system	Biological corridor rules and regulations 2007 were revised to 2017. Development of a strategic plan for strengthening governance and operationalizing the BC system was found to be not required and the activity was diverted to HWC mitigation measures. In terms of awareness on understanding the biological corridor systems, conservation and socioeconomic benefits, various reading materials were developed and distributed to the schools, awareness raising was conducted through national television, workshops and events held in the communities and with other stakeholders.	HS
<b>Output 1.5</b> Enhanced planning and monitoring capacity for sustainable forest management in FMUs and LFMPs.	Numerous activities were conducted for this output such as workshops and trainings on new data inventory management systems, revision of LFMP guidelines, training on Forest Management Information System, procurement of trail bikes for monitoring and patrolling, development of FMU plans and development of 32 Gewogs LFMPs fulfilling all requirements of the output. This Output has exceeded targets by providing 16 trail bikes (target was 8) and completing 10 FMU plans (target was 7)	HS
<b>Output 1.6</b> Strengthened institutional mechanisms and tools for integration of Climate Change Adaptation (CCA) and environmental sustainability needs in the local development planning system at dzongkhag and gewog levels.	Activities completed included the formation of the central Mainstreaming Reference Group (MRG), training on climate change mainstreaming, and development of Strategic Environment Assessment (SEA) for Thimphu Structure Plan that will be used for review of the structure/ development plan and related training.	S
<b>Outcome 2</b> Biological corridor governance and management established and demonstrated with management linkage to adjoining protected areas.	A climate-adaptive conservation management plan was prepared, SMART patrolling mechanism conducted, social surveying protocol for the biodiversity monitoring system, Human Wildlife Strategy for Bhutan (2018-28) developed, training conducted on HWC mitigation measures and awareness programs among others.	HS
<b>Output 2.1</b> Conservation management plans integrating CCA needs in place for the four BCs in the target project landscapes.	In order to assess the boundaries and ecosystems of BCs, workshops were conducted and a baseline survey was completed. Evidence from the BC assessment led to the creation of new boundary maps for BCs. Training on climate change mitigation and adaptation were conducted and a biodiversity survey was completed. A climate-adaptive conservation management plan was prepared for BC 8, as well as BC Management Plans for BC 1, 2 and 4.	S

Project Objective, Outcomes & Outputs	Summary of TE Assessment	TE Rating
<p><b>Output 2.2</b> Governance operationalized and management effectiveness enhanced for the targeted biological corridors, including strengthened personnel capacity.</p>	<p>The activities included development of PA Infrastructure Guidelines, procurement of equipment for patrolling, installation of signage for awareness raising, development of new tracking, raising awareness raising of BC and PA concept, goals, regulations, updating of biodiversity TTs (tracking tools) and sustainable forest management TTs for all biological corridors and protected areas</p>	<p><b>HS</b></p>
<p><b>Output 2.3</b> Law enforcement and biological monitoring capacity increased through SMART patrolling and strengthened biological monitoring systems for key ecosystems for threatened species in the target BCs and adjacent PAs.</p>	<p>The activities such as refresher course on SMART patrolling mechanism was conducted, procurement of communication equipment, construction of Gagtongzam check post, social surveying protocol for the biodiversity monitoring protocols and preparation of training materials including training of tourist guides in monitoring and reporting of biodiversity conditions and threats were conducted. The activity also included institution of “local scientists” for community-based monitoring and reporting on the status of biodiversity and threats.</p>	<p><b>HS</b></p>
<p><b>Output 2.4</b> Sustainable human wildlife conflict response strategies developed, and systems strengthened through innovative mechanisms based on global best practices in the target BCs and adjunct PAs.</p>	<p>The Human Wildlife Strategy for Bhutan (2018-28) was developed through various consultative meetings. A workshop was conducted to develop a wildlife disease surveillance guideline. Wildlife rescue equipment was procured and training was conducted on HWC mitigation measures and awareness to enhance local communities’ ability to manage and respond to HWC. The HWC mapping was carried in 2021 and the report is made available in November 2021. The awareness on the HWC SAFE system approach was also carried out in the community as well as the Media personnel.</p>	<p><b>HS</b></p>
<p><b>Outcome 3</b> Livelihood options for communities are made climate-resilient through diversification, SLM and climate-smart agriculture and supported by enhanced climate-resilient infrastructure.</p>	<p>About 1806 Ha covered for SLM including 1,060 Ha directly from the project and the remaining from irrigation and co-financing assistance. Climate resilient rice crop varieties were introduced and tested, construction/ maintenance of 58.04 kms of irrigation, 659 Ha brought under pasture development, installation of electric fencing, value added farming equipment was procured and supplied to farmers, PES, climate resilient road, 5 DAVIS automatic weather stations, infrastructure development for agriculture and marketing.</p>	<p><b>S</b></p>

Project Objective, Outcomes & Outputs	Summary of TE Assessment	TE Rating
<p><b>Output 3.1</b> Strengthened climate resilience and productivity of agricultural and livestock management.</p>	<p>A total of 1806 Ha across 6 Dzongkhags and 18 Gewogs were covered for SLM including 1,060 Ha directly from the project and the remaining from irrigation and co-financing assistance. Some research centers were equipped with basic soil testing laboratory, construction of insect proof hi-tech green house for seedling production of citrus in Tashiyangtse, procurement of high spec camera for microscopic insects and pest and diseases, climate resilient rice crop varieties were introduced and tested, and construction/ maintenance of 58 kilometers of irrigation schemes were completed. Also 659 Ha were brought under pasture development across 12 Dzongkhags, including installation of electric fencing to protect 9 Ha of pasture land. The activity included awareness workshops to the farmers on bioengineering practices (SLM) and brought 12 Ha of land under stone bunds and hedge row cultivation along with training on climate smart livestock management for the officials.</p>	<p><b>HS</b></p>
<p><b>Output 3.2</b> Community livelihoods strengthened and sources of income diversified and enhanced in the target landscapes</p>	<p>Value added farming equipment was procured and supplied to farmers, various consultative workshops and trainings were conducted to link agriculture products to potential markets, product diversification including branding and certification were completed. Support provided to various organic groups/cooperatives with the supply of equipment. Bhutan Organic Certification Guidelines were published, developed Gewog Tiger Conservation Tshogpas in various areas in place of community-based crop and livestock insurance schemes which were not considered feasible. Officials trained on watershed management and PES along with its implementation. As part of the conservation activities for economic returns, ecotourism activities such as trail development, maintenance of camps, training of eco guides was conducted. The rating was given satisfactory, although nature ecotourism has been developed there was no agro tourism and there is little promotional activities as well as community forests earning from environment services except the PES.</p>	<p><b>S</b></p>
<p><b>Output 3.3</b> Transformation of market access is demonstrated for selected rural communities to enhance their climate resilience</p>	<p>Climate resilient road infrastructure was developed and DoR officials trained, road crib walls and other climate resilient road (17 kms Nimsong to Shingkhar) was completed. As part of marketing infrastructure improvement, farm houses, market sheds and processing units were established in various locations and wooden boxes were supplied to assist farmers packaging mandarins for export. To generate and maintain weather data to assist agricultural decision making, five (5) DAVIS automatic weather stations were established. An awareness program on the marketing of agriculture products has been created through the National Television (BBS).</p>	<p><b>S</b></p>

Project Objective, Outcomes & Outputs	Summary of TE Assessment	TE Rating
<p><b>Outcome 4</b> Knowledge management system established to support sustainable management of forest and agricultural landscapes and climate-resilient communities.</p>	<p>Upgraded the biodiversity portal and uploaded new information on BCs and PAs. Success stories of irrigation scheme, climate resilient road and other case studies were made available. The success stories of Lull organic village, youth group in Zhemgang and other stories were made available in the newsletters of the agriculture ministry. Accordingly, satisfactory was rated based on the availability of information on stakeholder websites (see <b>Annex 8</b> Indicator 12)</p>	<p><b>S</b></p>
<p><b>Output 4.1</b> Institutionalized knowledge for ILM and Climate Change Resilience</p>	<p>Documentation of information for ILM was dropped due to duplication of the activity since similar activity was already being carried out by PPD under Outcome 1. To strengthen knowledge management and long-term studies on biodiversity the project by upgraded the biodiversity portal and uploaded new information on BCs and PAs. The rating was given satisfactory as there are not many case studies being documented to show best practices and lessons learnt to support the indicators. Further, there are no evidence to show details of updated GIS maps of BCs including other related information.</p>	<p><b>S</b></p>

Project Objective, Outcomes & Outputs	Summary of TE Assessment	TE Rating
<p><b>Output 4.2</b> Enhanced generation, documentation and sharing of knowledge and best practices in ILM and climate-resilient livelihood practices</p>	<p>A story on the irrigation scheme in Tsirang and climate resilient road in Zhemgang were documented. The top three stories developed in a knowledge management write shop have been selected for publication. A case study on biological corridors was submitted to the National Environment Commission as an example of best practices. Information on the NAPA III Project was published in Happy Journal and distributed to schools in Bhutan. Similarly, Success story of Lull village venturing into Integrated Landscape based Organic Agriculture Production, “First of its kind in Bhutan” and a youth-led group engaged in climate-smart green forage production and sustainable dairy farming in Zhemgang was also published. In addition to that success of organic agriculture was repeatedly published in the newsletter of the Ministry. Besides, there was formation of Core Knowledge Management Team, development of knowledge management approach along with a conduct of weeklong KM workshop.</p> <p>So much has been done in this output but it was not possible to conduct national and regional focus group discussions on climate change adaptation and integrated landscape management, including sustainable community livelihoods and HWC and innovative conservation approaches although officials have undergone for training to learn on ILM approaches. This was mainly due to travel restrictions imposed during the COVID period; however, it was also observed the project had not taken much initiative to fulfill this indicator.</p>	<p><b>S</b></p>
<p><b>Output 4.3</b> Project monitoring and evaluation system in place and used to inform project management decision-making</p>	<p>As part of the project inception workshop conducted some project indicators were revised. An M&amp;E Plan was prepared and implemented, a baseline survey at household level was conducted and finalized in a baseline report, a Midterm review was completed in December 2020, and the TE constitutes one of the final activities to be completed. M&amp;E and Reporting, Quarterly Coordination and Review Meetings (QCRM), TACC and Board Meetings are held on a regular basis during which progress were updated and issues (if any) were resolved.</p> <p>An Impact assessment is being conducted and the first finding was reported/ presented during the 11th QCRM</p>	<p><b>S</b></p>

### 3.3.2 Relevance

At the time of development and in the current context the project is highly relevant to local, national and international priorities with activities aimed at achieving equitable and resilient livelihoods, supporting diverse and sustainable economic development and managing natural resources sustainably to ensure the long-term protection of native biodiversity.

The project is aligned with the National Climate change Adaptation Policy (NAPA), Biodiversity Policy (NBSAP) and the commitments of the Royal Government to retain 60% of the country under forest cover and to achieve carbon neutral development. The project primarily addresses NAPA priority of community-based food security and climate resilience. It also contributes to NBSAP 2014 in terms of the following:

- Target 2 Establishing national capacity for valuation and integration of biodiversity and ecosystem services in the national development planning;
- Target 7 Managing areas under agriculture and forestry through adoption of sustainable practices ensuring biodiversity conservation
- Target 10 Identifying potential impacts of climate change on vulnerable ecosystems and strengthening adaptation measures; and
- Target 11 Maintaining current PA system with enhanced management effectiveness and financial sustainability.

The project is also very much in line with the objective of the 11th FYP (2013-2018) which is “Self-Reliance and Inclusive Green Socio-economic Development” to promote carbon-neutral and environmentally sustainable development and mainstreaming of environment, climate change and disaster risk reduction as cross-cutting issues along with gender and poverty reduction. There are 16 National Key Result Areas (KRAs) of the 12th FYP (2018-2023) where the project contributes to several KRAs specifically:

- NKRA 5 (healthy ecosystem services maintained);
- NKRA 6 (carbon-neutral and climate and disaster-resilient development enhanced);
- NKRA 8 (water, food and nutrition security ensured).

The project also contributes to the NKRA 13 (democracy and decentralization strengthened) through a decentralized project implementation approach for development of community-based climate-resilient livelihood practices and mainstreaming of climate change and environmental considerations in local development planning.

The project is also relevant as per the INDC and 2<sup>nd</sup> Nationally Determined Contribution (NDC) to UNFCCC where Bhutan has declared to remain carbon neutral. The project objectives are also aligned to the National Environment Strategy (NES) which focus on low-carbon and climate resilient development to address climate change mitigation and adaptation.

The project also supports the Bhutan Water Vision and Policy advocates integrated water resource management to address existing and emerging water issues including those emanating from climate change, through watershed conservation and integrated landscape management including efficient agricultural irrigation systems.

The project will contribute directly towards three SDGs that have been prioritized by the RGoB, including:

- SDG 1: No poverty / end poverty in all its forms everywhere – through support to climate-smart agriculture (CSA) practices, improved value chains and access to markets, community forestry and resource user groups, and enhanced security of ecosystem

service provision;

- SDG 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture – through promoting CSA and SLM;
- SDG 3 Good health and well-being – as a result of sustainable ecosystem services from the management of forest and agricultural landscapes and improved livelihoods;
- SDG 5 Achieve gender equality and empower all women and girls – through capacity building for equal participation and equitable sharing of benefits from the implementation of project interventions; and
- SDG 13: Climate Action - Take urgent action to combat climate change and its impacts – through ecosystem-based adaptation associated with operationalization of the BC system and support for SFM in project landscapes, support for adoption of CSA in project landscapes, climate-proofing of rural roads and enhanced access to markets and market and weather information; and
- SDG 15: Life on land - Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss – through operationalization of the BC system and support for SFM in FMUs, LFMPs and CFs, and recognition of biodiversity and ecosystem service values in integrated landscape planning. In addition, the project will contribute towards

The project also worked to support the 12th FYP to create a “Just, Harmonious and Sustainable Society through Enhanced Decentralization”. The PB recognized it was a very strategic and unique opportunity to deepen and enhance decentralization by devolving project activities and budget to the local governments as per the Division of Responsibilities Framework (DoRF). The PMU went to Dzongkhags and to work on AWP to ensure local needs and priorities were incorporated into the activities and budget at the local level.

The project has been relevant in the context of the United Nations Development Assistance Framework (UNDAF) for Bhutan, particularly Outcome 1 (Sustainable Development) which states:

*By 2018, sustainable and green economic growth that is equitable, inclusive, climate and disaster resilient and promotes poverty reduction, and employment opportunities particularly for vulnerable groups enhanced.*

The project has increased the capacity of participating local communities to undertake SLM that increases resilience to the impact of climate change and enhances livelihoods, thereby reducing poverty.

The project is relevant in regard to the UNDP’s Country Program that includes outcomes to increase the capacity of sub-national institutions and individuals to develop sustainable, integrated solutions to natural resource management resilient to climate change-induced and other disaster risks.

The project is aligned with GEF-7, through the implementation of activities that have contributed to greater security of rural livelihood food production, SLM that has restored degraded lands and sustainable forest management. The project is also aligned with GEF-8 as project activities contribute to enhanced conservation of biodiversity and increased capture of greenhouse gases.

The project design was coherent, having considered other initiatives in Bhutan, to ensure strategic coordination and synergy with related landscape level initiatives and avoidance of geographical overlap. The project landscapes were selected to complement other initiatives, such as the World Wildlife (WWF) Trans-boundary Manas Conservation Area (TRAMCA) project in southern regions, the World Bank High Altitude Northern Areas (HANAS) work in northern regions and the International Fund for Agricultural Development - Commercial Agriculture and Resilient Livelihoods Enhancement Programme (CARLEP) in eastern regions of Bhutan. During project implementation there was coordination and collaboration with Bhutan for Life which will contribute to project sustainability

The TE rating for relevance is highly satisfactory based on the relevance of project activities in relation to UNDP and GEF strategic priorities, national priorities and international commitment of the RGoB, meeting the needs of the participating local communities and project coherence with other initiatives in Bhutan.

**Rating: Highly Satisfactory (HS)**

### **3.3.3 Effectiveness**

The effective information and communication channels established between stakeholders and the PMU have contributed to smooth implementation of the project. This proactive approach has resulted in minimal issues and challenges throughout the project duration. The stakeholders were well-informed about the project activities, objectives, and timelines, which helped in fostering a collaborative working environment. Any potential issues were addressed promptly through open dialogue and coordination among the stakeholders, ensuring timely resolution and successful project outcomes.

From the outset the project adopted an implementation approach working through local government. This approach has contributed to effectiveness by ensuring the project is working within the local context, thereby understanding local issues and needs, including targeting the poorest most in need, thereby providing relevant activities that encourage local ownership and sustainability.

Despite having some minor challenges, the implementation of project activities was carried out effectively with adaptive management. Some minor restrictions imposed by the Covid 19 impacted field monitoring and evaluations. The project convened national stakeholder workshops to share the project learning, with success stories and best practices made available on agency websites, journals and through other events to share learning from the project to a wider audience.

TE assessment of the project indicators (**Annex 8**) shows end of project targets were met by all indicators. The TE of progress towards results (**Section 3.3.1**) also highlights the effectiveness of completing the wide range of activities with a complex group of stakeholders that were implemented by the project.

There are several successful project activities that have proven to be effective in improving agricultural productivity (crops and livestock) and increasing the resilience of agriculture, supporting enhanced rural livelihoods. These include activities associated with improved SLM and reduced HWC (see **Section 3.3.5 Impact**).

The project has been effective in achieving gender equality, in part due to the existing culture of women's involvement in agriculture and the agriculture-related project activities that provided opportunities for women to participate. In addition, the project. The project has also made an effective contribution to women's empowerment through their participation in workshops and contribution to decision making on topics of SLM and HWC and through

opportunities to participate in activities targeting improved income generation.

All end of project target indicators have been achieved and several indicators have exceeded their end of project targets (**Annex 8**, Indicators 1, 2, 5, & 7) leading to a highly satisfactory rating.

**Rating: Highly Satisfactory (HS)**

### **3.3.4 Efficiency**

The implementation of the project was based on extensive engagement with stakeholders at all levels across the project landscapes. The project stakeholders were provided with specific roles and responsibilities during the implementation process. At a broad level, participation and representation of stakeholders were conducted as per the project governance structure which was put in place by the project at the national and local/field levels (e.g., central-level departments and agencies, Territorial Forestry Divisions, Protected Area Management Authorities, and Dzongkhag Administrations).

Project efficiency resulted from the stakeholder engagement and communication approach that ensured all stakeholders at the central, local, and community levels were consulted and engaged, and provided training and awareness raising allowing them to:

- fully understand project outcomes;
- promote stakeholder ownership of the project activities;
- participate in planning and implementation;
- engage in the monitoring of the project interventions;
- participate in ongoing communication;
- access to support services.

For many of the project interventions, detailed analysis and studies were carried out in terms of policy reviews, socio-economic surveys to come up with potential policy gaps in order to focus on relevant priorities. Similarly, capacity building programs were conducted based on needs assessments and gaps including the priorities of local community need specific to project interventions. A number of awareness raising activities were conducted in terms of making the communities understand about the conservation activities, HWC mitigation measures, organic crop production, integrated farming, land development, pasture development and other market linkage establishments. These interventions have led to a change in mindset of the people where they have already felt the importance of BCs and PAs towards their conservation, management, and livelihood improvement through their dependence on healthy natural ecosystems and their contribution to the protection of Bhutan's national biodiversity.

The local livelihood interventions were based on community priorities identified through a participatory consultative process and integrated into the gewog and dzongkhag annual plans as well as sectoral plans. In this way the project prioritized communities which are vulnerable to poverty working in remote areas and higher altitudes fit into both government and project planning priorities. In addition, it was convenient to carry out project activities as per the government annual plans based on the government's fiscal year which is 12 months while the project followed 18 months fiscal year, this allowed for adjustment within the 6 month overlap to complete project activities.

An example of efficiency supported by the project were activities with turmeric producers. Before the project, there was a turmeric group in place that faced several challenges that

hindered its progress. One of the major issues was the lack of proper recognition and mechanization of the turmeric processing process. The processing of turmeric was done manually, which was time-consuming and labor-intensive. This manual processing method resulted in inconsistent quality and quantity of the produce, affecting the overall market value.

In addition, the turmeric group members lacked adequate training in food hygiene and packaging standards resulting into products that did not meet the required quality and safety standards. This also impacted on their pricing and market demand leading to an inability to attract customers and reduced profitability. However, it was a great relief to the group with the timely support of mechanization and training which led to quality improvement and brought about positive impact on the income of the group members and improved their livelihoods.

With project support a washing machine for turmeric processing was provided that had a significant positive impact. The washing machine has improved the efficiency of the cleaning process, saved time and labor, and ensured better cleanliness and hygiene of the turmeric. Thus, the efficiency of the group has been improved a lot and the project investment has resulted provided increased turmeric group profits.

Another example of efficiency is the support of SMART patrolling, a software platform for data collection and reporting. This software has allowed officials to systematically gather and analyze data related to the socio-economic conditions of the local communities residing in the project area providing efficient evidence-based decision making to take corrective actions.

Project support to the restoration and development of pasture lands and fodder plantations has also been an efficient investment. In Bumthang, Ura-Shingkhari, the project has benefited 45 households, covering an area over 20 Ha. In Tsirang, Sergithang, 82 households were involved, covering an area over 25 Ha. In Phuentschu, the project supported 133 households and encompassed an area over 22 Ha. These project investments will help to provide sustainable livelihoods and income generating opportunities.

Review of the project finances also supports a highly efficient project implementation, with consistent year-to-year project budget utilization effectively completing tasks within proscribed timelines. The project is also efficient in the context of the large amount of co-financing (**Section 3.2.3** over 3x the GEF and LCDF grants) that has been mobilized to implement project activities.

The TE is assigning a rating of highly satisfactory for efficiency based on completion of project activities on time, the balanced use of financial resources over the project period, the operation of the PMU working with UNDP, local governments and beneficiaries and the gender equality achieved.

**Rating: Satisfactory (HS)**

**Table 9:** Overall Assessment of Project Outcome

Assessment of Outcomes	Rating
Relevance	HS
Effectiveness	HS
Efficiency	HS
<b>Overall Project Outcome</b>	<b>HS</b>



### **3.3.5 Sustainability**

#### ***Financial Sustainability***

The outcome of the project and its impact are dependent on the availability of financial resources. All of the project results are linked to the need for sustainable financing either through government funding or through some international donors and development partners in order to continue the project interventions on the management of BCs and PAs and the climate-resilient activities and livelihoods enhancement activities within BCs.

In order to establish alternative and sustainable financing, the project engaged external technical assistance to develop innovative financing strategies for the management of the biological corridors and associated PAs. Discussion with stakeholders has found there are opportunities to collaborate with other programs and international projects to obtain support for future interventions in the PAs and BCs. There are also opportunities to work with the BFL, WWF-Bhutan and the Global Climate Fund (GCF). These initiatives can provide assurance for financial assistance to continue the support for the project.

The project intervention has had a positive impact on the livelihoods of the beneficiaries participating in the project in terms of enhancing agriculture production (organic as well as livestock production) with better land management, better quality and quantity of fodder, improved access to the market with certification and branding, formation of youth, women and other user groups which has enabled an increase in the income of the farmers as well those who manage those associated facilities and programs.

PES is another area where there is already a sustainable payment system generated from protected environment (watersheds) and an associated benefit-sharing mechanism.

There are other examples potential improvements in economic livelihoods through project interventions of HWC management that reduces the cost of crop damage and livestock depredation and SLM management to stabilize and regain topsoil for improved production. However, these developments are in the initial stages and under observation in terms of production increase and livelihood improvement through HWC mitigation.

***Rating: Likely (L)***

#### ***Socio-economic Sustainability***

There are no major social or political risks which may affect the sustainability of project outcomes or results. In fact, there is a high level of stakeholder engagement mainly in terms of community involvement and the respective Gewogs. Based on the field consultations, it is evident that the project has addressed some of the most pertinent issues of the people such as agricultural development with provision of equipment, involvement of cooperatives or

farmer groups mainly those of youth and women towards income generating activities, conversion of barren land to cultivable land through SLM management, fodder or pasture development and HWC mitigation activities.

An example from the project is a youth-led group engaged in climate-smart green forage production and sustainable dairy farming in Zhemgang. Zhemgang located in one of the remotest districts was able to improve livelihoods and tackle HWC and biodiversity losses. Initially, large swathes of farmland remained fallow as the remote community grappled with a lack of irrigation facilities along with livestock depredation by wild animals. Many livestock owned by the villagers were unproductive local breeds. Shingkhar had 60 empty households, the highest among the eight gewogs in the district but things have been changing over the six years of the project and the community is now teeming with life. This is because in 2018, a group comprising 23 young people (19 women and 4 men) ventured into climate-smart green forage production and sustainable dairy farming. The group was provided with fodder seeds, fencing and cattle shed construction materials. The members were provided training in fodder development, production, and conservation technologies. They were able to bring 14 Ha of fallow land under green forage production leading to harvesting of more than 315,000 kilograms of fodder every year.

With fodder production they do not need have cattle grazing in forests which leads to less HWC and less impact of cattle on natural forests. Currently, the farmers group produces 80-90 litres of milk every day and value-added dairy products made from the milk are sold to schools in the community. The farmers group earns around Nu. 12,000 (USD \$146) every month from the sale of dairy products in addition to the monthly income of around Nu. 3000 (USD \$37) per member from the sale of milk to the Milk Processing Unit. The project intervention has helped to address numerous pressing social, economic, and environmental challenges facing the remote community. Thus, the project benefits will continue even after its completion.

The continuity of activities, such as farm mechanization, is crucial after the project phases out. Currently, villages face difficulties in hiring power tillers as the charges from Dzongkhag or Gewog to remote locations are expensive. It is evident that merely developing the land will not fully realize the benefits of farm mechanization. Thus, addressing the accessibility and affordability of farm machinery remains a significant challenge that needs attention. Without adequate support from the government, there is a concern that activities may remain idle, hindering the progress made during the project implementation. To ensure sustained progress, a well-thought-out plan for continued farm mechanization must be in place, addressing the unique challenges faced by each village and fostering self-reliance in accessing mechanization services.

**Rating: Likely (L)**



### ***Institutional framework and governance sustainability***

The sustainability of the project results will also depend on the institutional policy, frameworks and governance related to the project interventions. It is evident that there are no legal frameworks, policies and governance structures which may pose risks to the project benefits. However, as per the policy review of 2<sup>nd</sup> Nationally Determined Contribution, National Adaptation Plan 2023 and the first draft 13<sup>th</sup> FYP suggested that there is innovative and technology-based solutions identified to further strengthen and upscale provisions related to ILM and other climate resilience activities.

Although, during the process of consultation and discussions held with the stakeholders, concerns were raised over issues related to the institutional and technical capacity mainly to those at the community level which may deter operation and maintenance of some of the facilities provided through the project, such risk can be minimized through continuous dialogues and collaboration with the implementing partners, Dzongkhag administration and conducting further training and sensitization programs to the community.

***Rating: Likely (L)***

### ***Environmental Sustainability***

Project outcomes are directed at enhancing the environment through a variety of interventions such SLM practices, SFM, reduced HWC, CSA and increased resilience of road infrastructure. While there are no significant environmental risks associated with introducing these interventions, in the long run if they are not adequately managed or maintained the environmental benefits they provide may be lost.

Given the support and participation shown by communities in project activities, and the awareness programs on conservation and the benefits of Protected Areas (PAs), it is expected the environmental benefits will be sustained. Sustainability is dependent upon the continued collaboration and cooperation within communities, as well as the ongoing support from the local government.

***Rating: Likely (L)***

***Overall Sustainability Rating: Likely (L)***

### ***3.3.6 Country Ownership***

The project success is attributable to the support provided by national and local government stakeholders. This includes over \$42M in grants and in-kind support and the leadership and commitment provided by a wide range of government stakeholders. The project acknowledged the 12<sup>th</sup> FYP that promotes the devolution of functions and budget to local government. This created greater country ownership of the project while also strengthening local government capacity and ensuring the implementation of locally appropriate methods to meet priority needs.

Beneficiary engagement throughout the project and activities directed at priority needs has resulted in ownership by communities which will contribute to the sustainability of outputs.

### ***3.3.7 Gender***

In terms of the UNDP Gender Marker, the project has been rated GEN 2 on the basis of the gender analysis undertaken, reflecting that both general and specific gender needs and priorities are mainstreamed in the project's activities with gender disaggregated data and

indicators at the outcome level for tracking project progress on gender equality and women's empowerment.

Consistent efforts were made to increase women's representation in project related decision making including in the Project Board was made as evident from the discussions of Project Board meeting. Issues related to low women's representation in the PB for instance has been highlighted and interventions suggested by PB members. Efforts were also made to increase women's representation in the TACC as well as their participation in all stages of project implementation based on directives of the PB.

TE observed that gender equality considerations including ensuring gender balance in project staff composition; collection of sex-disaggregated data, and inclusion of gender indicators and targets in the project performance monitoring amongst others were made during the project implementation.

During the initial preparatory phase of the project, gender analysis was carried out to ensure an inclusive approach towards equal participation of women and men to access the project resources and receive fair social and economic benefits. In addition, a gender action plan was also developed for the project to mainstream gender equality and women's empowerment in the project design in line with the BPPS Integrated Work Plan Enabling Action.

Some of the interventions that contributed to advancement of gender equality results through the project were as follows:

- Considering the men and women's needs and priorities for transformational change in gender relations, the project interventions aim to influence access to and control of land, agricultural, livestock, and forest resources. As per the interactions with the project stakeholders and local beneficiaries including women, it was found that in most of the project interventions including training, community group meetings, user group formations and employment generation, impact on women was considered. As result, women's agricultural outputs increased, post-harvest processing work was reduced and with greater access to markets provided by the project income generation would expected to be greater.
- The project promoted energy and labor-saving technologies to reduce the disproportionate workload for women. For example, electric/solar fence installation helped to reduce women's crop-guarding time; gender-friendly farm mechanization (such as harvesting, post-harvest and cardamom drying) minimized the long hour and stressful labor requirements for women; introduction of drip irrigation system which can be operated through the use of smart phones have allowed women to engaged in other household activities without having to physically go to the site. The project has given focus to those with poor and economically disadvantaged/without adequate financial capacity women and their families and accordingly the interventions have significantly reduced drudgery, improved income and increased access to and control over resources (see **Annex 10**). As a result, the participation of women in community services and decision-making roles has increased over time.
- The project interventions enabled women to actively participate in the NRM decision-making processes. Some of the specific examples included: participation of women in SLM activities (49 percent participation); pasture development and improved cattle rearing (46 percent); and farmhouse 49 percent participation).
- The Pro Doc has aimed to reduce women's unpaid domestic work with increased socio-political roles; support equitable distribution of land and natural resources and benefits between men and women; increase women's participation and executive role in decision-making by 50 percent in commodity user groups and project's technical/coordination committee, and provide gender-equitable livelihood options for at least 70 percent of the

population in project landscapes.

Some of the gender specific representations in the project consultations, trainings and other involvements are as follows:

- About 673 men and 194 women have attended various trainings under the project from all relevant stakeholders from the agencies;
- The beneficiaries for the SLM consists of 3,934 male and 4,030 female and specifically for the terracing, there are about 945 male and 684 female.
- In terms of various trainings and workshops provided to the farmers, there are about 2,691 male and 736 female. While in terms of land brought under the SLM development consists of 2,245 male and 1,836 female.
- As per the pasture development, 482 male and 223 female benefitted and 3,204 male and 2,952 female benefitted from the fodder development.
- The farm house beneficial consists of 2,335 male and 2,062 female. While in terms of various supports provided by the project, about 757 male and 475 female are benefitted.
- Similarly for other areas such as biogas, resources received from the project in terms of resources like the equipment, seeds and others consists of 2,691 male and 736 female.

### **3.3.8 UNDP and GEF Additionality**

GEF support to the collaborative design of the project engaging a wide range of stakeholders and the development of a monitoring and evaluation system based on the strategic results framework are foundational elements important to the success of the project. Technical support activities that are a part of the project has enabled the strengthening of national and local government institutions in regard to the management of financial resources and enhanced human resource capacity in knowledge management both of which are important to successful integrated and sustainable climate-resilient forest and agricultural landscape management.

The project has made a significant effort to review and synthesize existing knowledge, identify knowledge resource gaps, and develop strategies to fill gaps and strengthen digital repositories of biodiversity information on PAs and BCs. This knowledge has translated into several success stories and lessons learnt documents such as progress reports, publication in journals, surveys, and project feasibility reports. In this way, the project has enhanced the documentation and sharing of best practices and knowledge in sustainable management of forest and agricultural landscapes and climate resilient livelihoods to different stakeholders.

As a basis for integrated landscape management there is a need to have a stronger information base and easy access to information on the status and trends of Bhutan's forests, wetlands, water resources and biodiversity, ecosystem services, the value of ecosystem services and the threats these resources. Against this, project training provided both to the officials and communities on survey methodologies and the use of technology to gather, store and analyze information is an important first step.

As a GEF project innovation has been included to support an improvement in understanding nature and the significance of ecosystem-based adaptation to support resilience of rural communities and the conservation of key species. Rural communities were exposed to new technologies and engaged in the assessment and reporting of the biodiversity information. There was also the introduction of climate smart agriculture technologies such as drip irrigation including time saving and efficient access and operation through the use of smart phones.

Information sharing among project groups utilized social media such as WeChat and Telegram.

The UNDP project reporting requirements included regular quarterly review meetings to take stock of progress and constraints and adoption of adaptive management and coordination between the various project components. In addition to meeting reporting requirements, these regular meetings create a space to share progress and lessons learnt among the stakeholders to enhance adaptive management, shared learning and potential replication and up-scaling.

The information and knowledge accumulated and documented by this GEF project can be used to support the replication and scaling-up of similar project results.

### **3.3.9 Catalytic/Replication Effect**

Farmers are generally conservative and reluctant to quickly adopt new approaches or technologies which they are unfamiliar with and which they have not observed successfully implemented. The project approach which developed pilot plots for some activities encouraged farmers to adopt new practices. Future projects can introduce new communities to project sites through exchange visits allowing farmers to see successful implementation of SLM practices and discuss with local farmers the opportunities and challenges encountered.

Controlling HWC in one community may result in an increase of HWC in adjacent communities. To avoid this potential unintended consequence, HWC projects should adopt a regional approach, whereby all communities within a region included in the installation of HWC fencing controls.

The project did not have a formal exit strategy. Nonetheless specific actions were taken to ensure the sustainability of project outputs, including the establishment of PES and collaboration with Bhutan for Life to provide ongoing financial support.

The project was successful because of the local rural context of subsistence livelihoods impacted by environments where steep slopes susceptible to overuse, erosion and degradation and forests can be degraded through livestock grazing and browsing. Forests also are the habitat for animals involved in HWC. Restoring and enhancing land productivity and adopting HWC methods that remove livestock from forests both improves livelihoods and native habitats necessary for the protection of biodiversity and carbon sequestration.

Replication and scaling up is dependent on procuring the financial resources needed for HWC infrastructure (e.g., electric fencing) and having extension officers with the capacity to introduce SLM to farmers.

UNDP and government stakeholders participating in the project have documented project results and best practices on their respective websites (see **Annex 8** Indicator 12). To better promote SLM and the associated best practices and stories, it would be preferable to have all information organized in one location, or at a minimum create a website with an outline of the available information and links to other stakeholder websites where information is located.

Scaling-up and/or replication should acknowledge the potential direct impact on women's livelihoods. Reducing HWC impacts to crops and wildlife and enhancing productivity through SLM, including land restoration and pasture development, can target women to provide significant benefits that can reduce workloads and increase income generation.

### **3.3.10 Impact**

The project has impacted lives of many farmers through the implementation of project

activities. The following are 12 examples of the project's impact on local communities:

1. A ray of hope emerged for the farmers in the form of electric fencing or other forms of fencing. This innovative solution has proven to be an effective means of deterring wild animals from encroaching on agricultural lands and damaging crops. This, in turn has led to increased agricultural productivity and better livelihoods for the villagers.
2. The watershed management initiatives have had a significant impact on the local communities, particularly in terms of reviving water sources and addressing concerns related to drying of water sources in the villages. For example, two lakes in the areas known as Dhaps in Lahyul have been successfully revived, and two are ongoing initiatives in Khandal and Ashini areas. The revival of these lakes have greatly benefited 148 households. Previously, there was a genuine concern among the villagers regarding the drying water sources in their communities, and there was a lack of knowledge on how to effectively conserve and manage watersheds. It has provided sustainable and reliable source of water for various purposes, such as drinking, irrigation, and livestock rearing. This has significantly improved the livelihoods and well-being of the households in the area. The other case is in terms of ecological benefits was the successful diversion of water from an erosion-prone area behind Lhayul Village. This diversion played a crucial role in mitigating the swelling of Maukhola River and reducing the risk of flooding in the Gelephu town. By addressing the root cause of the erosion and redirecting the water flow through trenching, the project not only prevented further damage to the riverbanks and nearby areas but also contributed to the overall ecological balance of the region. The reduced sedimentation and stabilization of the riverbanks have resulted in improved water quality and enhanced biodiversity in the affected area.
3. Previously, farmers were engaged in individual farming activities, but with the project's support, a collective organic group was formed comprising 36 members. This initiative brought several benefits to the farmers, including access to equipment, training opportunities, and the use of organic pesticides and composts. In addition to their agricultural activities, the organic group has also ventured into integrated farming practices, specifically poultry and dairy farming. The village has allocated 40 acres of land to support these activities, further diversifying their income sources and enhancing the overall sustainability of their farming operations.



**Figure 5.** Model organic village in Chuzom, Sarpang

4. Before the formation of the vegetable group, villagers had limited knowledge and experience in selling vegetables in large quantities. However, with the establishment of the group, there was an increased understanding of the marketing aspects of vegetables and the potential for income generation. Prior to this, the youth in the villages were mainly involved in household chores and small-scale farming activities that did not provide significant income opportunities. By recognizing the potential of vegetable farming as a

profitable venture, the group members were able to scale up their production, improve the quality of their vegetables, and explore larger markets beyond their immediate vicinity. This increased focus on commercial farming allowed them to generate more income and establish sustainable livelihoods.

5. Communities have involved into fodder plantation activities and pasture development which contributed towards enhancement of the community forest ecosystem, increasing biodiversity, providing habitat for wildlife, and supporting overall ecosystem health. Additionally, the grasses have been replaced with improved breeds, which provided better nutrition to the cattle. As a result, the milk production of the cattle has increased, leading to improved cheese and butter production. The availability of fenced grazing areas and improved feed has eliminated the need to search for grasses in the jungle. This has not only saved time for the farmers but has also ensured that the cattle receive a consistent and balanced diet
6. In the past, the villagers of Berti relied heavily on firewood for their heating and cooking needs due to the limited affordability of LPG gas. This dependency on firewood posed challenges in terms of deforestation, indoor air pollution, and the time-consuming process of collecting firewood. However, with the introduction of the biogas project, the villagers now have a reliable and sustainable source of energy. Biogas, which is produced from the anaerobic digestion of cow dung and other organic waste, has become a viable alternative for meeting the energy requirements of the community. It has reduced their dependency on firewood, thereby conserving local forests and mitigating the harmful effects of indoor air pollution. The convenience and efficiency of biogas as an energy source have also contributed to time savings and improved cooking practices in the community.



**Figure 6:** Bio-gas in Berti, Zhemgang.

7. The project's initiatives such as bench terracing, land consolidation and processing units have directly contributed towards improving food security. Bench terracing and land consolidation techniques optimize land use, increase agricultural productivity, and enhance the availability of nutritious food crops. The processing units supported value addition, allowing farmers to diversify their products and access higher-value markets, thereby improving income and food security for the local communities. It has also helped somewhat for rural-urban migration. One of the significant impacts is engagement of school dropouts and unemployed youths in farming activities within their villages. By staying in the village and participating in farming, they can utilize their skills and knowledge, thereby enhancing productivity and sustainability in the agricultural sector.
8. Human-Wildlife Conflict (HWC) is a significant issue in agricultural areas where wildlife encroachment damages crops and livestock threatening livelihoods. The project's intervention has protected agricultural fields and livestock from wildlife intrusion, reduced conflicts, minimizing HWC losses for farmers. By addressing HWC, the project helped create a more conducive environment for agricultural activities and supported rural livelihoods. Previously, farmers experienced a loss of 60% of their harvest due to wildlife

intrusion but now the farmers are optimistic on reducing loss and to retain 100% of their harvest.

9. The project has played a crucial role in enhancing the capacity of forest officials in various aspects, including research survey design, data analysis, and interpretation. Through training and skill development programs, forest officials have gained valuable knowledge and expertise in conducting research surveys related to conservation and natural resource management. They are also being equipped with the necessary skills to effectively analyze and interpret collected data, allowing for evidence-based decision-making and informed policy development. This capacity building has strengthened the capabilities of forest officials and improved their overall effectiveness in carrying out their duties and responsibilities.
10. For many years, the 17 households in Jarey gewog, Lhuntse, have been engaged in vegetable cultivation but their farming practices were primarily traditional, relying on rainwater for irrigation and lack of utilization of modern technologies. As a result, they faced various challenges in sustaining their livelihoods. However, with the introduction of greenhouses, it has revolutionized the way farmers cultivate their vegetables. The controlled environment within the greenhouse allows them to regulate temperature, humidity, and other environmental factors, providing optimal conditions for plant growth. This has resulted in significant yield improvements, especially in their chili cultivation. The farmers are amazed by the positive impact of the greenhouse technology, as it has enabled them to extend the growing season, protect crops from harsh weather conditions, and enhance overall crop productivity. Further, farmers were trained to create effective and environmentally friendly pest control solutions using natural ingredients. By reducing reliance on chemical pesticides, the farmers are able to protect the environment, maintain the health of their crops, and ensure safety of their produce.
11. In Ura, Bumthang, the formation of the all-women group has been instrumental in providing new income opportunities for its members. By cultivating a variety of seasonal vegetables such as chilies, potatoes, tomatoes, carrots, and onions, the group has been able to meet the demand of nearby schools. They serve as a reliable supplier of fresh and locally sourced produce to the school, contributing to the provision of nutritious meals for the students.
12. The people of Ura-Shingkar gewog faced challenges for several decades as their registered lands remained fallow and unproductive, preventing them from engaging in progressive farming. However, with the introduction of climate resilient farm road has allowed to change the situation with easy access to market. Through these interventions, the community can now engage in progressive farming practices, including the development of pasture lands for livestock rearing. This not only improves the productivity of the land but also contributes to the overall livelihoods of the people by enhancing livestock nutrition, promoting agricultural sustainability, and creating income-generation opportunities

## 4 Main Findings, Conclusions, Recommendations & Lessons

### 4.1 Main Findings

Despite the challenges of Covid-19 and staff turnover in the PMU and among stakeholders, the project has successfully achieved targets contributing towards achievement of the objective to operationalize an integrated landscape approach through the strengthening of biological corridors, sustainable forest and agricultural systems, and building climate resilience of community livelihoods. The summary of TE findings (**Table 3**) has provided an overall project outcome rating of satisfactory.

The project was well designed with input from stakeholders and beneficiaries contributing to excellent engagement and support by stakeholders and beneficiaries during implementation. The ToC of change is logical and remains valid to support similar initiative going forward. The project is relevant on many levels, including national priorities and global commitments and more importantly it is highly relevant to local governments and the communities they serve.

The executing agency, PMU and the many national and local government implementing partners were well coordinated, met and communicated regularly, effectively adapted to challenges as they occurred leading to successful implementation of a long list of project activities (**Annex 10**). Beneficiaries were meaningfully engaged, whereby regular communication ensured their voices were heard, helping to shape locally appropriate activities for which they took ownership.

As a result of the project PAs and BCs are more effectively managed sustainably leading to enhanced protection of native biodiversity, improved livelihoods for communities and greater climate change resilience of natural areas and areas of agricultural production.

Strong support and ownership by government stakeholders and beneficiaries will contribute to social and institutional sustainability. The project has collaborated with BFL and others to develop sustainable financing mechanisms to help to sustain and upscale project activities.

There are other regions in Bhutan where the project could be replicated and scaled-up to work with local governments and communities that require similar interventions to address issues of SFM and SLM, climate-resilient livelihoods, protection of native biodiversity and improved livelihoods.

### 4.2 Challenges

1. The impact of Covid-19 did have an impact on the smooth implementation of some project activities. Temporary travel restrictions hampered the ability of the project to monitor and evaluate work progress in some areas.
2. The community members often encounter challenges in terms of providing labor inputs as they have limited household members due to rural urban migration, particularly men. This constraint is further exacerbated by the additional responsibilities they have in managing their households and farms. As a result, there are instances where some members are unable to participate in the project activities. The uneven distribution of labor input among households may create a sense of inequity and burden among those who are consistently engaged in the activity, including women and the elderly. There were some issues encountered during the implementation of Sustainable Land Management (SLM) activities. One major challenge was the cost escalation resulting from the hiring of machinery, particularly in distant gewogs. The transportation and logistics involved in bringing machinery to remote areas contributed to the increase in costs, making it difficult for farmers to receive equal benefits.

- Due to the attrition of project officials from the PMU, the workload of the existing/new officials increased. However, there was no impact on the overall project coordination and implementation. Most of the activities were completed prior to the resignation of the earlier PMU Officials. A challenge faced during project implementation was the lack of technical expertise in engineering in the gewog, particularly in relation to construction and related activities and had to depend on expertise from central agencies.

### 4.3 Recommendations

Recommendations	Entity Responsible	Time Frame
<b>Sustainable Livelihoods</b>		
1. Further improvements and beautification of market sheds should be undertaken to enhance its functionality to better serve the community. Extending and enhancing the market shed will provide additional space to accommodate more vendors and provide better facilities for both farmers and customers. Consultation with women should be undertaken given the major role women have in marketing.	DAMC, RDCs, Dzongkhag, Gewog	MT
2. Conduct a comprehensive market value chain study for strawberry cultivation in all four project gewogs. This study should assess the entire value chain, from production to consumption, and identify potential opportunities for value added opportunities at different stages. Assessment of the role and needs of women in the market value chain should be included. There is a need to provide insights into market demand, consumer preferences, distribution channels, and pricing strategies. Farmers lack an understanding of price dynamics and market mechanisms when selling their produce. Many farmers tend to sell their products individually without considering the prevailing market prices. Local market prices may be higher, but farmers do understand the supply chain between vendors and farmers.	DAMC, DOA, RDCs, Dzongkhag, Gewog	LT
3. There is a need to introduce the concept of biosecurity measures to the farmers aimed at preventing the introduction and spread of harmful pest and disease organisms within the farming systems. Biosecurity should include maintaining hygienic practices, managing waste properly, monitoring for potential pests and diseases and pest and disease control.	RDCs, DOA, Dzongkhag, Gewog	MT
<b>Human-Wildlife Conflicts</b>		
4. There is a need to explore potential funding sources to continue supporting the HWC mitigation measures. This could include government grants, agricultural development programs, or collaboration with conservation organizations which are specifically dealing with wildlife conservation and HWC mitigation.	DoFPS, RDCs, Dzongkhag, Gewog	LT

Recommendations	Entity Responsible	Time Frame
5. Conduct assessment of HWC mitigation measures to document successful strategies to use in other areas. Assessment should include the type of wildlife, behavior patterns, terrain, and existing agricultural practices. Combined with feasibility studies in new areas, the results will help determine appropriate HWC strategy specifications, dimensions, and quantities of infrastructure required including technology aspects.	DoFPS, RDCs, Dzongkhag, Gewog	LT
6. Explore funding options to install HWC protective fencing in unprotected areas of villages where project HWC was undertaken. When some households in the project villages are left unprotected they become more vulnerable to HWC.	DoFPS, RDCs, Dzongkhag, Gewog	LT
7. Provide regular training of Water Users Groups on operation and maintenance of the irrigation systems.	DoFPS, RDCs, Dzongkhag, Gewog	LT
8. Local cultural and spiritual beliefs related to lakes need to be acknowledged and incorporated into the planning and implementing activities related to watershed management activities	DoFPS, RDCs, Dzongkhag, Gewog	LT
<b>Knowledge Management</b>		
9. Compile and make available in an accessible format the following knowledge products from the project: <ul style="list-style-type: none"> <li>Information sources, best practices, lessons learned on ILM, SLM, CCR and HWC in Bhutan.</li> <li>Case studies presenting project-supported best practices and traditional knowledge.</li> </ul>	DoFPS, DOA, RDCs, Dzongkhag, Gewog	MT
10. Upload information to the Biodiversity Portal on PAs and BCs in line with the revised GIS boundaries for BCs prepared by the project	NBC, DoFPS, Dzongkhag, Gewog	MT

#### 4.4 Lessons Learned

1. With continuous awareness raising programs with the communities, people can understand the importance of integrated watershed management, environmental and biodiversity conservation, land management, pasture development and HWC management and the importance of their involvement. With such awareness and advocacy programs, the communities recognize the value of preservation and protection of water sources, biodiversity conservation and other project initiatives.
2. Initially, the farmers were hesitant to embrace innovative ideas and approaches related to land development but to overcome their reluctance, it was necessary to showcase the potential benefits through one or two pilot projects or demonstrations. These pilot projects served as practical examples to demonstrate the positive outcomes of technology and helped them to understand the potential advantages.
3. Especially in infrastructure projects, regular consultation, communication and community involvement is essential to develop a shared understanding and ownership of infrastructure projects and support from all stakeholders.

4. Some villagers claim that the remaining unprotected areas are now more vulnerable to wildlife attacks. When completing HWC mitigation measures, it is vital to work with all community members to ensure the burden of HWC is not shifted to other nearby communities.
5. In order to enhance sustainability and promote effective communication, farmers have established social media groups such as Telegram groups in collaboration with the Gewog Agriculture Officer. The Telegram group is serving as an effective platform for farmers to engage in discussions, share information, and seek solutions for their needs and issues.
6. It was crucial for the project to emphasize on the importance of demonstration and participatory learning through practical demonstrations and field trials to showcase the benefits and effectiveness of innovative agricultural practices. In that way, farmers were able to witness positive impacts of the techniques in their own local context to build confidence and trust in the new methods.
7. It was important for the project to involve community and local leaders from the beginning of the project (even during design or planning phase) to make them understand about the objectives and to develop willingness to participate in the project.
8. It was felt crucial that the project took a multi-stakeholder approach that engaged field implementers and community members in the process of site selection and identifying project beneficiaries. This is especially important in activities such as plantation and management, where the geographical location of a particular chiwog or area may require additional budgetary considerations for effective implementation. Failure to take these factors into account can lead to inadequate budget allocation and potential challenges during project execution.
9. As a long-term project (six years) implementation was enhanced as a result of the opportunity to learn from mistakes and adjust the activities in adaptive management. Regular meetings (quarterly), good coordination and planning within the project group and technical assistance from the TACC also contributed to adaptive management.
10. By including various stakeholders, such as local community members, farmer groups, government officials, and agricultural experts in the decision-making process, the project benefited from diverse perspectives, local knowledge, and expertise. This collaborative approach allowed for the identification of specific needs, challenges, and opportunities within the target communities by ensuring that the project's activities were relevant and tailored to the local context.
11. It was difficult for some farmers to follow the cost-sharing mechanism for implementation of some of the project activities. This was introduced by the government to build sense of ownership within the farmers. However, this could be implemented on a case by case basis depending on the financial situation of the farmers.
12. While funding from the GEF was not an issue, the process of routing it through RGOB ministries and departments was not well understood by all stakeholders. The TE received comments suggesting there were delays, however, the UNDP and the RGOB followed standard financial practices that ensured proper financial tracking and transparency. Providing an explanation of standard financial practices to stakeholders will avoid any misunderstanding in regard to the time required for routing project funds for project activity implementation.
13. To achieve sustainability, it is important for the beneficiaries to embrace a mindset of continuous learning and improvement. Beneficiaries can be provided tools to build upon

the knowledge and experiences gained through the project, to continually enhance their daily practices and decision-making. Fostering ongoing knowledge building, beneficiaries can enhance and maximize the benefits derived from the project and effectively manage and sustainably maintain the outputs of the project.

## Annex 1. Terms of Reference for Terminal Evaluation

### International Consultant - Terminal Evaluation Terms of Reference (ToR) for UNDP-supported GEF-finance projects

**Location:** *Home based*

**Application Deadline:** *7<sup>th</sup> April 2023*

**Type of Contract:** *Individual*

**Assignment Type:** *Terminal Evaluation*

**Languages Required:** *English*

**Starting Date:** *14<sup>th</sup> April 2023*

**Duration of Initial Contract:** *20 working days*

**Expected Duration of Assignment:** *Spanned over 15 weeks*

### **BACKGROUND**

#### **1. Introduction**

In accordance with UNDP and GEF M&E policies and procedures, all full- and medium-sized UNDP-supported GEF- financed projects are required to undergo a Terminal Evaluation (TE) at the end of the project. This Terms of Reference (ToR) sets out the expectations for the TE of the *full-sized* project titled “**Enhancing Sustainability and Climate Resilience of Forest and Agriculture Landscape and Community Livelihoods in Bhutan**” funded by GEF-LDCF (PIMS 5713) implemented through the Local Development Division, Department of Planning, Budget and Performance, Ministry of Finance (erstwhile Gross National Happiness Commission-GNHC). The project started on 30<sup>th</sup> October 2017 and is in its *sixth* year of implementation. The TE process must follow the guidance outlined in the document ‘Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects’ [http://web.undp.org/evaluation/guideline/documents/GEF/TE\\_GuidanceforUNDP-supportedGEF-financedProjects.pdf](http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf) (insert hyperlink).

#### **2. Project Description**

With the working title of the Project as “Resilient Communities, Effective Biological Corridors” the development challenge that this project seeks to address concerns the adverse impacts of climate change on rural livelihood security (SDG 13) and poverty (SDG 1), and the effects of sector-led development practices on the ecological integrity of biodiversity-rich forested landscapes (SDG 15).

The long-term solution envisaged by the project is to ensure the effective climate resilient management of forest areas including biological corridors and adjoining protected areas, securing ecosystem services that underpin livelihoods, local and national development and climate change adaptation (CCA). However, there are several barriers that need to be overcome: 1) Insufficient institutional capacity for integrated landscape management (ILM) and CCA; 2) Insufficient capacity to operationalize the biological corridor system; 3) Limited capacity, awareness and support for building livelihood resilience; and 4) Inadequate knowledge on natural resource status, ecosystem services and resilient livelihood options. These barriers will be removed through four project components that will lead to achievement of the Project Objective, which is to operationalize an integrated landscape approach through strengthening of biological corridors, sustainable forest and agricultural systems, and build climate resilience of community livelihoods. The project outcomes are as follows:

**Outcome 1:** Enhanced institutional capacity for ILM and climate change resilience: This component will focus on building institutional capacities for ILM as well enhancing climate resilience across rural communities.

**Outcome 2:** Biological corridor governance and management established and demonstrated with management linkage to adjoining protected areas.

**Outcome 3:** Livelihood options for communities are made climate-resilient through diversification, SLM and climate- smart agriculture and supported by enhanced climate-resilient infrastructure.

**Outcome 4:** Knowledge management system established to support sustainable management of forest and agricultural landscapes and climate-resilient communities.

The project was developed aligning with the RGOB’s Eleventh FYP (2013-2018) the objective of which was “SelfReliance and Inclusive Green Socio-economic Development” by promoting carbon-neutral and environmentally sustainable development, and mainstreaming of environment, climate change and disaster risk reduction as cross-cutting issues along with gender and poverty reduction. The project was also developed in such a way that it contributed to the objectives of the Twelfth FYP (2018-2023) most specifically to National Key Result Area (NKRA) 5 (healthy ecosystem services maintained), NKRA 6 (carbon-neutral and climate- and disaster-resilient development enhanced), and NKRA 8 (water, food and nutrition security ensured). Furthermore, through a decentralized project implementation approach to development of community-based climate-resilient livelihood practices and mainstreaming of climate change and environmental considerations in sub-national/ local development planning, the project will contribute to the NKRA 13 (democracy and decentralization strengthened).

The project landscapes contain some of the finest representational samples of a continuum of ecosystems, connecting the largely subtropical zone of southern Bhutan and the predominantly sub-alpine/ alpine zone of northern Bhutan. These landscapes, with proper conservation management plans in operation and sustainable livelihoods in practice, will cushion the adverse impacts of climate change to key development sectors and local livelihoods and enhance the ecological resilience to changing climate and associated risks.

The total area covered by the project landscapes is 1,304,958 hectares (ha), or 13,049.58 km<sup>2</sup>, which is a little more than one-third of the country’s total geographical area. The following areas fall within the project landscape:

Three Protected Areas (PAs): Jigme Khesar Strict Nature Reserve (JKSNR), Jigme Singye Wangchuck National Park (JSWNP) and Phrumsengla National Park (PNP).

Four Biological Corridors (BCs): BC1 that connects JKSNR to Jigme Dorji National Park (JDNP), BC2 that connects JDNP to JSWNP, BC8 that connects JSWNP to Wangchuck Centennial Park (WCP) and JDNP, BC4 that connects JSWNP to PNP, and PNP to Royal Manas National Park (RMNP).

Twelve Dzongkhags and 38 Gewogs:

Dzongkhag	Gewog
Haa	Bji, Sangbey, Sama and Gakidling
Paro	Tsento
Thimphu	Chang
Punakha	Kabjisa and Toebesa
Trongsa	Korphu, Nubi, Tangsibji and Langthel
Wangduephodrang	Atang, Bjena, Daga, Dagachu, Gasetshowom, Gangtoe, Kazhi, Nahi, Nyisho, Phobji and Sephu
Bumthang	Tang, Chhumei and Ura
Mongar	Tsamang and Saleng
Lhuntse	Gangzur, Jarey and Metsho
Tsirang	Phuentenchu and Sergithang
Sarpang	Chhudzom and Jigmechoeling
Zhemgang	Nangkor, Shingkhari and Trong

<b>Project title:</b> Enhancing Sustainability and Climate Resilience of Forest and Agricultural Landscape and Community Livelihoods		
<b>Country:</b> Bhutan	<b>Implementing Partner:</b> Erstwhile Gross National Happiness Commission (Local Development Division, Department of Planning, Budget and Performance, Ministry of Finance w.e.f. 9 <sup>th</sup> December 2022)	<b>Management Arrangements:</b> National Implementation Modality (NIM)

### Project Summary Table

#### UNDAF/Country Programme Outcome:

Outcome 1 (Sustainable Development): By 2018, sustainable and green economic growth that is equitable, inclusive, climate and disaster resilient and promotes poverty reduction, and employment opportunities particularly for vulnerable groups enhanced.

UNDP Strategic Plan Environment and Sustainable Development Primary Outcome: Strengthened capacities of developing countries to mainstream climate change adaptation policies into development plans.

**UNDP Strategic Plan Output: Output 1.3:** Solutions developed at national and sub-national levels for Sustainable management of natural resources, ecosystem services, chemicals and waste.

UNDP Social and Environmental Screening  
Category: **Moderate**

Atlas Project ID/Award ID number:  
00080725

GEF ID number: **9199**

UNDP-GEF PIMS ID number: **5713**

**LPAC date:** 14th November 2016

UNDP Gender Marker:

**Start date:** 30th October 2017

**End date:** October 2023

#### FINANCING PLAN

GEF Funds

USD 3,467,124

LDCF Funds

USD 10,500,000

Total Budget administered by UNDP

USD 13,967,124

Parallel co-financing (all other co-financing that is not cash co-financing administered by UNDP)

UNDP USD 1,080,300

Government

USD 41,550,000

Total co-financing

USD 42,630,300

Grand-Total Project Financing (1) +(2)

USD 56,597,424

### 3. TE Purpose

The TE report will assess the achievement of project results against what was expected to be achieved, and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE report promotes accountability and transparency, and assesses the extent of project accomplishments. The TE is part of UNDP Bhutan Country Office Evaluation Plan (2019-2023).

Detailed objectives of the terminal evaluation are as follows:

- Assess to what extent the project has contributed to address the needs and problems identified during programme design, i.e. to Enhance Sustainability and Climate Resilience of Forest and Agricultural Landscape and Community Livelihoods”
- Assess how effectively the project has achieved its stated development objective or purpose;
- Measure how efficiently the outcomes were realized, and outputs delivered in attaining the development objective/purpose of the project;

- Assess both negative and positive factors that have hampered and facilitated, respectively the progress in achieving the project outcomes, including external factors/environment, weakness in design, management and resource allocation;
- Assess the extent to which the application of the rights-based approach and gender mainstreaming are integrated within the planning and implementation of the project;
- Identify and document substantive lessons learned, good practices and also opportunities for scaling up in future;
- Provide forward-looking programmatic recommendations for the project and the relevant portfolio of UNDP

The evaluation will focus on six key evaluation criteria: relevance, efficiency, effectiveness, potential impact, sustainability, and coherence. The evaluation should provide credible, useful, evidence-based information which enables timely incorporation of its findings, recommendations and lessons into decision making processes of UNDP and key stakeholders. It will also assess the potential of the next phase of the project. The evaluation will cover the time span from October 30, 2017 (date of commencement of the project) to date.

The primary users of the evaluation results will be UNDP and GEF, but the evaluation results will equally be useful to the relevant ministries of the Government of Bhutan, development partners and donors. The TE will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects.

## **DUTIES AND RESPONSIBILITIES**

### **4. TE Approach & Methodology**

The TE report must provide evidence-based information that is credible, reliable and useful.

The international consultant in coordination with the national consultant will review all relevant sources of information including documents prepared during the preparation phase (i.e. PIF, UNDP Initiation Plan, UNDP Social and Environmental Screening Procedure/SESP) the Project Document, project reports including annual PIRs, project budget revisions, lesson learned reports, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based evaluation. The TE team (international consultant and national consultant) will review the baseline and midterm GEF focal area Core Indicators/Tracking Tools submitted to the GEF at the CEO endorsement and midterm stages and the terminal Core Indicators/Tracking Tools that must be completed before the TE field mission begins.

The TE team is expected to follow a participatory and consultative approach ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), Implementing Partners, the UNDP Country Office(s), the Regional Technical Advisor, direct beneficiaries and other stakeholders.

Engagement of stakeholders is vital to a successful TE. Stakeholder involvement should include interviews and focus group discussions with stakeholders who have project responsibilities, including but not limited to Ministry of Finance (erstwhile Gross National Happiness Commission), UNDP, Ministry of Agriculture and Livestock, Department of Surface Transport (erstwhile Department of Road), Department of Forest and Park Services, Watershed Management Division (now merged with Department of Water under Ministry of Energy and Natural Resources), District Administrations and Gewog Administrations falling under the project landscape, etc; executing agencies, senior officials and task team/component leaders, key experts and consultants in the subject area, Project Board, project beneficiaries, academia, local government and CSOs, etc. Additionally, the international consultant is expected to guide the local consultant on data collection through the field missions to Haa, Trongsa, Tsirang, Wangduephodrang, Zhemgang, Lhuntse, Sarpang Dzongkhags/Districts including the project sites falling within these Dzongkhags as well as the three protected areas (PAs) and four Biological Corridors (BCs).

The specific design and methodology for the TE should emerge from consultations between the TE team and the above- mentioned parties regarding what is appropriate and feasible for meeting the TE purpose and objectives and answering the evaluation questions, given limitations of budget, time and data. The TE team must use gender-responsive methodologies and tools and ensure that gender equality and women's empowerment, as well as other

cross-cutting issues and SDGs are incorporated into the TE report.

The final methodological approach including interview schedule, field visits and data to be used in the evaluation must be clearly outlined in the TE Inception Report and be fully discussed and agreed between UNDP, stakeholders and the TE team.

The final report must describe the full TE approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the evaluation.

## 5. Detailed Scope of the TE

The TE will assess project performance against expectations set out in the project's Logical Framework/Results Framework (see TOR Annex A). The TE will assess results according to the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects

<http://web.undp.org/evaluation/guideline/documents/GEF/TE-financedProjects.pdf>

[GuidanceforUNDP-supportedGEF-](#)

*. (The scope of the TE should detail and include aspects of the project to be covered by the TE, such as the time frame, and the primary issues of concern to users that the TE needs to address.*

The Findings section of the TE report will cover the topics listed below. A full outline of the TE report's content is provided in ToR Annex C.

The asterisk “(\*)” indicates criteria for which a rating is required.

Findings

### i. Project Design/Formulation

- National priorities and country driven-ness
- Theory of Change
- Gender equality and women's empowerment
- Social and Environmental Safeguards
- Analysis of Results Framework: project logic and strategy, indicators
- Assumptions and Risks
- Lessons from other relevant projects (e.g. same focal area) incorporated into project design
- Planned stakeholder participation
- Linkages between project and other interventions within the sector
- Management arrangements

### ii. Project Implementation

- Adaptive management (changes to the project design and project outputs during implementation)
- Actual stakeholder participation and partnership arrangements
- Project Finance and Co-finance
- Monitoring & Evaluation: design at entry (\*), implementation (\*), and overall assessment of M&E (\*)
- Implementing Agency (UNDP) (\*) and Executing Agency (\*), overall project oversight/implementation and execution (\*)
- Risk Management, including Social and Environmental Standards

### iii. Project Results

- Assess the achievement of outcomes against indicators by reporting on the level of progress for each objective and outcome indicator at the time of the TE and noting final achievements
- Relevance (\*), Effectiveness (\*), Efficiency (\*) and overall project outcome (\*)
- Sustainability: financial (\*), socio-political (\*), institutional framework and governance (\*), environmental (\*), overall likelihood of sustainability (\*)

- Country ownership
- Gender equality and women’s empowerment
- Cross-cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation, disaster prevention and recovery, human rights, capacity development, South-South cooperation, knowledge management, volunteerism, etc., as relevant)
- GEF Additionality
- Catalytic Role / Replication Effect
- Progress to impact

iv. Main Findings, Conclusions, Recommendations and Lessons Learned

- The TE team will include a summary of the main findings of the TE report. Findings should be presented as statements of fact that are based on analysis of the data.
- The section on conclusions will be written in light of the findings. Conclusions should be comprehensive and balanced statements that are well substantiated by evidence and logically connected to the TE findings. They should highlight the strengths, weaknesses and results of the project, respond to key evaluation questions and provide insights into the identification of and/or solutions to important problems or issues pertinent to project beneficiaries, UNDP and the GEF, including issues in relation to gender equality and women’s empowerment.
- Recommendations should provide concrete, practical, feasible and targeted recommendations directed to the intended users of the evaluation about what actions to take and decisions to make. The recommendations should be specifically supported by the evidence and linked to the findings and conclusions around key questions addressed by the evaluation.
- The TE report should also include lessons that can be taken from the evaluation, including best practices in addressing issues relating to relevance, performance and success that can provide knowledge gained from the particular circumstance (programmatic and evaluation methods used, partnerships, financial leveraging, etc.) that are applicable to other GEF and UNDP interventions. When possible, the TE team should include examples of good practices in project design and implementation.
- It is important for the conclusions, recommendations and lessons learned of the TE report to include results related to gender equality and empowerment of women.

The TE report will include an Evaluation Ratings Table, as shown in the ToR Annex.

## 6. Expected Outputs and Deliverables

The international consultant in collaboration with the national consultant shall prepare and submit:

#	Deliverable	Description	Timing	Responsibilities
1	TE Inception Report	TE team clarifies objectives, methodology and timing of the TE	No later than 2 weeks before the TE mission: (by 12 <sup>th</sup> April 2023)	TE team submits Inception Report to Commissioning Unit and project management
2	Presentation	Initial Findings	End of TE mission: (by 9 <sup>th</sup> May 2023)	TE team presents to Commissioning Unit and project management
3	Draft TE Report	Full draft report (using guidelines on report content in ToR Annex C) with annexes	Within 3 weeks of end of TE mission: (by 19 <sup>th</sup> May 2023)	TE team submits to Commissioning Unit;
				reviewed by RTA, Project Coordinating Unit, GEF OFP

5	Final TE Report* + Audit Trail	Revised final report and TE Audit trail in which the TE details how all received comments have (and have not) been addressed in the final TE report ( <i>See template in ToR Annex H</i> )	Within 1 week of receiving comments on draft report: by 3 <sup>rd</sup> July 2023	TE team submits both documents to the Commissioning Unit
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\*The final TE report must be in English. If applicable, the Commissioning Unit may choose to arrange for a translation of the report into a language more widely shared by national stakeholders.

All final TE reports will be quality assessed by the UNDP Independent Evaluation Office (IEO). Details of the IEO's quality assessment of decentralized evaluations can be found in Section 6 of the UNDP Evaluation Guidelines.<sup>1</sup>

## 7. TE Arrangements

The principal responsibility for managing the TE resides with the Commissioning Unit. The Commissioning Unit for this project's TE is UNDP Country Office.

The Commissioning Unit will contract the consultants and ensure the timely provision of per diems and travel arrangements within the country for the TE team. The Project Team will be responsible for liaising with the TE team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

## 8. Duration of the Work

The total duration of the TE will be approximately (*average 20 working days*) over a time period of (*15 weeks*) starting (*3<sup>rd</sup> April 2023*) and shall not exceed five months from when the TE team is hired. The tentative TE timeframe is as follows:

Timeframe	Activity
7 <sup>th</sup> April -23	Application closes
8-14 <sup>th</sup> April -23	Selection of TE team
14 <sup>th</sup> April -23	Preparation period for TE team (handover of documentation)
16 <sup>th</sup> April – 19 <sup>th</sup> April 2023 (6 Days)	Document review and preparation of TE Inception Report
19 <sup>th</sup> April – 22 April 2023 (3 days)	Finalization and Validation of TE Inception Report; latest start of TE mission
22 April – 2 <sup>nd</sup> May 2023 (15 days)	TE mission: prep meeting, stakeholder meetings, interviews, field visits, etc. ( <b><i>The international consultant is not expected to join the field mission, however, virtually join the prep meetings with national consultant</i></b> )
9 <sup>th</sup> – May-23	Mission wrap-up meeting & presentation of initial findings; earliest end of TE mission
10 <sup>th</sup> May – 17 <sup>th</sup> May 2023 (8 days)	Preparation of draft TE report
19 <sup>th</sup> -May -23	Circulation of draft TE report for comments
5 <sup>th</sup> June -23	Incorporation of comments on draft TE report into Audit Trail & finalization of TE report

<sup>1</sup> Access at: <http://web.undp.org/evaluation/euideline/section-6.shtml>

19 <sup>th</sup> -Jun-23	Preparation and Issuance of Management Response
26 <sup>th</sup> -June -23	Concluding Stakeholder Workshop
3 <sup>rd</sup> -Jul-23	Expected date of full TE completion

**Note: The international consultant is expected to work virtually to provide expert views, assist the national consultant in the preparation and review of reports and attend meetings and discussions.**

## 9. Duty Station

The international consultant will be working virtually while the national consultant will be based in Thimphu with the field missions to Haa, Trongsa, Tsirang, Wangduephodrang, Zhemgang, Lhuntse, Sarpang Dzongkhags/Districts including the project sites falling within these Dzongkhags as well as the three protected areas (PAs) and four Biological Corridors (BCs).

### **Travel:**

- International travel will not be required to visit project sites in Bhutan;

## **REQUIRED SKILLS AND EXPERIENCE**

### **10. TE Team Composition and Required Qualifications**

The international Consultant with experience and exposure to projects and evaluations in other regions) will be guiding the local (national) Consultant as a team leader. The international consultant will provide the overall guidance and be responsible for the overall design and writing of the TE report, etc. The international consultant jointly with the national consultant will assess emerging trends with respect to regulatory frameworks, budget allocations, capacity building, work with the Project Team in developing the TE itinerary, coordinate and facilitate stakeholders & focus group meetings, collection of reports and data, support preparation of reports, recording discussions/meetings etc.)

The international consultant should not have participated in the project preparation, formulation and/or implementation (including the writing of the project document), must not have conducted this project's Mid-Term Review and should not have a conflict of interest with the project's related activities.

The selection of international consultant will be aimed at maximizing the overall qualities in the following areas:

#### **Qualifications for the International Expert (Team Leader)**

##### Education

- Master's degree in Climate Change, Forest and Biodiversity, Agriculture, Natural Resource Management, Sustainable Development, Environment or other closely related field;

##### Experience

- Relevant experience with results-based management evaluation methodologies;
- Experience applying SMART indicators and reconstructing or validating baseline scenarios;
- Competence in adaptive management, as applied to biodiversity and climate change;
- Experience in evaluating projects;
- Experience working with Bhutan and/or other South Asian region such as Nepal;
- Experience in relevant technical areas for at least 7 years;
- Demonstrated understanding of issues related to gender, biodiversity and climate;

- Experience in gender responsive evaluation and analysis;
- Excellent communication skills;
- Demonstrable analytical skills;
- Project evaluation/review experience within United Nations system will be considered an asset.

The selection of the best offer will be based on Combined Scoring method - where the technical evaluation with the maximum score of 70% will be combined with the maximum financial evaluation score of 30% as detailed under:

<b>Criteria</b>	<b>Maximum point</b>	<b>Weight</b>
<b>Technical assessment:</b>		<b>70</b>
Academic qualification/background	10	
Relevant work experience and competency with results-based management evaluation methodologies and evaluating projects <ul style="list-style-type: none"> <li>- Evaluating projects (5);</li> <li>- Experience in relevant technical areas for at least 7 years(10);</li> <li>- Demonstrated understanding of issues related to gender, biodiversity and climate change, gender responsive evaluation and analysis (5)</li> </ul>	20	
Prior experience of working in Bhutan or similar countries or region	10	
Quality of the technical proposal & methodology <ul style="list-style-type: none"> <li>- The proposed methodology is clear and demonstrates proper understanding of TE methods/criteria (10).</li> <li>- Excellent quality of technical proposal and workplan (10).</li> <li>- Fully addresses all aspects of TOR and demonstrates no weaknesses (5).</li> <li>- The proposed timeline is in line with the TOR timelines and supported by clear evidence to demonstrate feasibility (5).</li> </ul>	30	
<b>Sub-total (A) - Technical</b>	<b>70</b>	
<b>Financial</b>	30	<b>30</b>
<b>Sub-total (B) - Financial</b>	<b>30</b>	
<b>Total (A+B)</b>	<b>100</b>	

### Language

- Fluency in written and spoken English.

## **11. Evaluator Ethics**

The TE team will be held to the highest ethical standards and is required to sign a code of conduct upon acceptance of the assignment. This evaluation will be conducted in accordance with the principles outlined in the UNEG 'Ethical Guidelines for Evaluation'. The evaluator must safeguard the rights and confidentiality of information providers, interviewees and stakeholders through measures to ensure compliance with legal and other relevant codes governing collection of data and reporting on data. The evaluator must also ensure security of collected information before and after the evaluation and protocols to ensure anonymity and confidentiality of sources of information where that is expected. The information knowledge and data gathered in the evaluation process must also be solely used for the evaluation and not for other uses without the express authorization of UNDP and partners.

## **12. Payment Schedule**

- 20% payment upon satisfactory delivery of the final TE Inception Report and approval by the Commissioning Unit

- 40% payment upon satisfactory delivery of the draft TE report to the Commissioning Unit
- 40% payment upon satisfactory delivery of the final TE report and approval by the Commissioning Unit and RTA (via signatures on the TE Report Clearance Form) and delivery of completed TE Audit Trail

Criteria for issuing the final payment of 40%

- The final TE report includes all requirements outlined in the TE TOR and is in accordance with the TE guidance.
- The final TE report is clearly written, logically organized, and is specific for this project (i.e. text has not been cut & pasted from other MTR reports).
- The Audit Trail includes responses to and justification for each comment listed.

## **APPLICATION PROCESS**

- *(Adjust this section if a vetted roster will be used)*

### **13. Scope of Price Proposal and Schedule of Payments**

#### **Financial Proposal:**

- Financial proposals must be “all inclusive” and expressed in a lump-sum for the total duration of the contract. The term “all inclusive” implies all cost (professional fees, travel costs, living allowances etc.);
- For duty travels, the UN’s Daily Subsistence Allowance (DSA) rates are (fill for all travel destinations), which should provide indication of the cost of living in a duty station/destination (*Note: Individuals on this contract are not UN staff and are therefore not entitled to DSAs. All living allowances required to perform the demands of the ToR must be incorporated in the financial proposal, whether the fees are expressed as daily fees or lump sum amount.*)
- The lump sum is fixed regardless of changes in the cost components.

### **14. Recommended Presentation of Proposal**

- a) **Letter of Confirmation of Interest and Availability** using the [template](#) provided by UNDP;
- b) **CV and a Personal History Form (P11 form)**;
- a) **Brief description of approach to work/technical proposal** of why the individual considers him/herself as the most suitable for the assignment, and a proposed methodology on how they will approach and complete the assignment; (max 1 page)
- b) **Financial Proposal** that indicates the all-inclusive fixed total contract price and all other travel related costs (such as flight ticket, per diem, etc.), supported by a breakdown of costs, as per template attached to the [Letter of Confirmation of Interest template](#). If an applicant is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the applicant must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

All application materials should be submitted to the address (insert mailing address) in a sealed envelope indicating the following reference “Consultant for Terminal Evaluation of the project titled “Enhancing Sustainability and Climate Resilience of Forest and Agriculture Landscape and Community Livelihoods in Bhutan” or by email at the following address ONLY: [procurement.bt@undp.org](mailto:procurement.bt@undp.org) [procurement.bt@undp.org](mailto:procurement.bt@undp.org) *insert email address*) by (12:00 midnight and 7<sup>th</sup> April 2023). Incomplete applications will be excluded from further consideration.

### **15. Criteria for Selection of the Best Offer**

Only those applications which are responsive and compliant will be evaluated. Offers will be evaluated according to the Combined Scoring method – where the educational background and experience on similar assignments will be weighted at 70% and the price proposal will weigh as 30% of the total scoring. The applicant receiving the

Highest Combined Score that has also accepted UNDP's General Terms and Conditions will be awarded the contract.

## **16. Annexes to the TE ToR**

- ToR Annex A: Project Logical/Results Framework
- ToR Annex B: Project Information Package to be reviewed by TE team
- ToR Annex C: Content of the TE report
- ToR Annex D: Evaluation Criteria Matrix template
- ToR Annex E: UNEG Code of Conduct for Evaluators
- ToR Annex F: TE Rating Scales and TE Ratings Table
- ToR Annex G: TE Report Clearance Form
- ToR Annex H: TE Audit Trail template

## Annex 2. Evaluation Matrix

The table below provides questions that will be provide direction when hosting stakeholder Key Informant Interviews (KSI) and group discussions. Stakeholder consultations will follow ethical guidelines to ensure safe, non-discriminatory, respectful engagement of stakeholders following UNEG 'Ethical Guidelines for Evaluations'. Those who participate in the evaluation will be informed of the purpose of the evaluation, that their participation is voluntary and that all information is confidential. The engagement approach will go beyond simple questioning as it will attempt to include self-reflection and action-oriented learning among participating stakeholders. Evaluation findings will therefore be reinforced among participating stakeholders, contributing to the strengthening and sustainability of project outputs and impacts.

Evaluation Questions	Sub-Questions/Indicators	Sources	Methods/Informants
<b>1. Relevance:</b> The extent to which program objectives and design meet the needs of the country/recipient and continue to do so if circumstances change; the degree of alignment with country needs, UNDP, GEF mandates, existing national strategies and policies, international conventions and SDGs. Was project design/conception appropriate to reach intended results?			
<b>Question 1.1:</b> Has the program responded to the country's main development priorities as defined in the country's development National Key Result Area of 12 <sup>th</sup> FYP (NKRA) 5 (healthy ecosystem services maintained), NKRA 6 (carbon-neutral and climate- and disaster- resilient development enhanced), and NKRA 8 (water, food and nutrition security ensured), UNDP-GEF mandates, SDGs, sectoral policies and international conventions?	1a. Was the project design appropriate to achieve the intended results? 1b. Was the project design consistent with the GEF focal area objective and program, country priorities, and the UNDP portfolio of actions in Bhutan? 1c. Was the project design consistent with the SDGs?	<ul style="list-style-type: none"> <li>• Project documents, Inception reports</li> <li>• National policy documents</li> <li>• GEF strategic goals and objectives</li> </ul>	<ul style="list-style-type: none"> <li>• Documentary review and thematic analyses</li> </ul>
Question 1.2: Did the project respond to needs of beneficiaries and evolving context?	1d. Was the project design relevant to the final beneficiaries? 1e. Have there been any changes in the relevance of the project since the mid-term evaluation that affect the relevance of the project objectives and goals?	<ul style="list-style-type: none"> <li>• Interviews and FGDs with beneficiaries and stakeholders</li> <li>• MTR report</li> <li>• Progress reports</li> </ul>	<ul style="list-style-type: none"> <li>• Thematic analysis of primary data from interviews and FGDs</li> <li>• Content analysis of MTR and progress reports</li> </ul>

Evaluation Questions	Sub-Questions/Indicators	Sources	Methods/Informants
Question 1.3: Is the programme sensitive to gender development concerns?	1f. To what extent has the program addressed immediate and long-term gender development concerns?	<ul style="list-style-type: none"> <li>• Gender action plan</li> <li>• Results framework</li> <li>• Project stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Documentary</li> <li>• Review:</li> <li>• Interviews with beneficiary groups and stakeholders</li> </ul>
<b>2. Effectiveness: To what extent has the intervention met or is expected to meet its objectives and outcomes</b>			
Question 2.1: How has or will the project objective be achieved?	<p>2a. To what extent and how effectively has the project objective “to operationalize an integrated landscape approach through strengthening of biological corridors, sustainable forest and agricultural systems and build climate resilience of community livelihood “been achieved?</p> <p>2b. Did the project produce any positive or negative unintended/unexpected results? (Applicable equally to each outcome)?</p> <p>2c. What is the added value of the project's approach?</p> <p>2d. To what extent can the achievement of these outcomes (including any spillover effects) be attributed to the GEF funding: GEF additionality)?</p>	<ul style="list-style-type: none"> <li>• PIRs</li> <li>• MTR</li> <li>• Project teams, partners, beneficiaries</li> </ul>	<ul style="list-style-type: none"> <li>• Documentary review:</li> <li>• comparison of project targets (indicators) and level of realization</li> <li>• Interviews and FGDs</li> </ul>
Question 2.2: Does the project add value to ongoing efforts at the country level, and to what extent?	<p>2e. Were there synergies between the project and other initiatives in the same country and/or region? If so, to what extent and how did the project take advantage of them (e.g., by establishing partnerships)?</p> <p>2f. What other contextual factors and actors contributed to the results achieved and how?</p>	<ul style="list-style-type: none"> <li>• Prodoc</li> <li>• Stakeholder engagement plan</li> <li>• PIRs, progress reports</li> <li>• Project stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

Evaluation Questions	Sub-Questions/Indicators	Sources	Methods/Informants
	2g. Did the project develop or adopt innovative solutions to achieve its results?		
<b>Results, Outcome level</b>			
Question 1: Has the project addressed awareness, misperception and capacity gaps and constraints regarding integrated landscape management (ILM) and climate change resilience?	2h. To what extent has the project contributed to raising awareness, addressing misperceptions and strengthening local capacity for ILM and climate resilience?	<ul style="list-style-type: none"> <li>• PIRs</li> <li>• Progress reports</li> <li>• MTR</li> <li>• Project stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Documentary review</li> <li>• Interviews:</li> <li>• FGDs</li> </ul>
Question 2: Has the project contributed to the establishment of biological corridor governance and management systems.	2i. Did the project contribute to the establishment of biological corridor governance and management systems		
Question 3: Has the project increased livelihood options for communities through diversification and made climate resilient?	2j. How effective has the project been in strengthening investment		
<b>Question 4:</b> Has the project established knowledge management system to support sustainable management of forest and agricultural lands cape	2k. Did the project establish knowledge management system to support sustainable management of forest and agricultural landscape		
<b>3. Efficiency: To what extent was the project delivered in an efficient manner in terms of outcomes, outputs and goals</b>			
Question 3.1: How did government agencies deliver on their mandates and what was the impact of their actions (inaction)?	3a. To what extent did the government deliver on their roles and responsibilities in terms of management and project management.	<ul style="list-style-type: none"> <li>• MOAL, MOF and relevant government agencies</li> </ul>	<ul style="list-style-type: none"> <li>• Documentary review</li> <li>• Interviews:</li> <li>• FGDs</li> </ul>
Question 3.1: How did government agencies deliver on their mandates and what was the impact of their actions (inaction)?	3b. To what extent was the project implemented in an efficient and valuable manner?		

Evaluation Questions	Sub-Questions/Indicators	Sources	Methods/Informants
Question 3.2: How did the project adapt to evolving external context and how did this affect implementation?	3c. To what extent was the leadership able to adapt to changing context to improve on the efficiency of delivery?	<ul style="list-style-type: none"> <li>• Project team members</li> <li>• Financial reports</li> <li>• Project stakeholders - Community members</li> <li>• Dzongkhag and Gewog administration</li> </ul>	<ul style="list-style-type: none"> <li>• Efficiency analysis comparing burn rate and output achievement rate</li> </ul>
Question 3.4: Were the human and material resources sufficient in quality and quantity and how did this inform delivery?	3a. Did the project team have sufficient technical, financial and human resources?	<ul style="list-style-type: none"> <li>• Prodoc</li> <li>• Stakeholder engagement plan</li> <li>• PIRs, progress reports</li> <li>• Project stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews:</li> <li>• Efficiency analysis comparing burn rate and output achievement rate</li> </ul>
4. Sustainability: To what extent are project achievements likely to continue beyond the project and what risks could constrain extension, replicability and up scaling of this project			
Question 4.1: Are project achievements likely to live beyond the project initial period?	4a. What results, lessons or experiences have been replicated? 4b. What level of ownership has been demonstrated by the national government and is this likely to continue?	<ul style="list-style-type: none"> <li>• Government agencies</li> <li>• Project team and GEF focal point</li> <li>• UNDP team</li> </ul>	<ul style="list-style-type: none"> <li>• Documentary review –</li> <li>• Interviews:</li> <li>• Focus group discussions</li> </ul>
Question 4.3: Does the government demonstrate ownership and commitment to securing project gains?	4c. To what extent can the government of Bhutan ensure wider adoption of project activities and results (through sustaining progress, scaling up, mainstreaming, replication and market change) after the project ends? (Applies to all results)?	<ul style="list-style-type: none"> <li>• Project stakeholders</li> <li>• Project reports</li> <li>• MTR report</li> </ul>	

Evaluation Questions	Sub-Questions/Indicators	Sources	Methods/Informants
Question 4.4: What factors are likely to impact the sustenance of project achievements?	4e. What are the main risks that may affect the sustainability of the project benefits (considering financial, socio-economic, institutional and environmental and governance aspects)?		
5. Factors affecting performance: To what extent did the M&E design and implementation, and management and supervision mechanisms affect project performance? How did the project document best practices, manage knowledge and ensure inclusive participation of beneficiaries and stakeholders			
Question 5.1: To what extent did the M&E design and implementation, and management and supervision mechanisms affect project performance? How did the project document best practices, manage knowledge and ensure inclusive participation of beneficiaries and stakeholders?	<p>Monitoring and evaluation (M&amp;E)</p> <p>5a Was the monitoring and evaluation plan practical and sufficient?</p> <p>5b. Did the monitoring and evaluation system function according to the M&amp;E plan? Was information systematically collected and used to make timely decisions and promote learning during project implementation?</p> <p>5c. Were the recommendations provided by the MTR implemented and what was the impact of this implementation (or lack of it) in the implementation of the project?</p>	<ul style="list-style-type: none"> <li>• Prodoc</li> <li>• M&amp;E Plan and results framework</li> <li>• MTR report</li> <li>• MTR management response</li> <li>• Interviews with project teams</li> </ul>	<ul style="list-style-type: none"> <li>• Documentary review</li> <li>• Interviews:</li> </ul>
	<p>Project supervision, implementation role:</p> <p>5d. To what extent did UNDP provide project identification, concept preparation, appraisal, preparation, approval and start-up, monitoring and supervision (technical, administrative and operational)?</p>	<ul style="list-style-type: none"> <li>• Project team</li> <li>• Prodoc</li> <li>• MTR</li> <li>• Stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Documentary report:</li> <li>• Interviews:</li> </ul>
	<p>Project implementation and management:</p> <p>5e. How effectively did UNDP carry out its role and responsibilities in the management and administration of the project? What were the main challenges in terms of project</p>	<ul style="list-style-type: none"> <li>• Project team</li> <li>• Stakeholders</li> <li>• Progress reports, PIRs, prodoc</li> </ul>	<ul style="list-style-type: none"> <li>• Documentary report:</li> <li>• Interviews:</li> </ul>

Evaluation Questions	Sub-Questions/Indicators	Sources	Methods/Informants
	Management and administration? To what extent were risks identified and managed?		
	Financial management and mobilization of expected co-financing: 5f. To what extent did the expected co-financing materialize and did this affect the project results? 5g. What funding management challenges did the project face?	<ul style="list-style-type: none"> <li>• Co-financing table</li> <li>• Project team</li> <li>• UNDP team</li> </ul>	<ul style="list-style-type: none"> <li>• Review:</li> <li>• Interviews with all stakeholders on the funding management challenges of the project</li> </ul>
	Knowledge management, communication and public awareness 5h. How does the project evaluate, document and share its results, lessons learned and experiences? 5i. To what extent are communication products and activities likely to support the sustainability and scaling up of project results?	<ul style="list-style-type: none"> <li>• PIR reports, training reports, MTR, publications, studies, project website (if exist)</li> </ul>	<ul style="list-style-type: none"> <li>• Documentary report:</li> <li>• Interviews:</li> </ul>
	Project partnership and stakeholder engagement (including the degree of stakeholder ownership of project results): 5j. Which stakeholders were involved in the design and/or implementation of the project? What was the effect of this involvement on the project results and to what extent do the project results belong to the stakeholders involved??	<ul style="list-style-type: none"> <li>• Project document, PIR, MTR report</li> </ul>	<ul style="list-style-type: none"> <li>• Review:</li> <li>• Interviews with all stakeholders</li> </ul>
6. Social and environmental safeguards: To what extent were environmental safeguard concerns effectively identified and addressed during project implementation?			

Evaluation Questions	Sub-Questions/Indicators	Sources	Methods/Informants
Question 6.1: To what extent were environmental safeguard concerns effectively identified and addressed during project implementation?	6a. To what extent were environmental and social concerns taken into account in the design and implementation of the project? 6b. where there are unintended impacts created by this project? 6c. Was there a complaints and redress mechanism and how did it work?	<ul style="list-style-type: none"> <li>Project document, PIR, MTR report</li> </ul>	<ul style="list-style-type: none"> <li>Review:</li> <li>Interviews with all stakeholders</li> </ul>
7. Gender and rights based approaches: To what extent were gender, vulnerable or marginalized groups involved in project implementation?			
Question 7.1: To what extent were gender, vulnerable or marginalized groups involved in project implementation?	7a. To what extent have gender equality and women's empowerment considerations been taken into account in the design and implementation of the project, and has the project been implemented in a way that ensures equitable participation and benefits for both sexes? 7b. Were there any missed opportunities or lessons learned with regard to gender mainstreaming? 7c. To what extent were vulnerable and marginalized groups involved in the project? 7d. Has there been any unintended effects on women, men and vulnerable groups	<ul style="list-style-type: none"> <li>Project document, PIRs, MTR report</li> <li>Project stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Documentary review</li> <li>Interviews</li> <li>Focus group discussions</li> </ul>
To what extent were disabled persons involved in project implementation?	7e. Were people with disabilities consulted and meaningfully involved in project planning and implementation? 7f. What proportion of the project beneficiaries were persons with disabilities 7.g What barriers did the project face in this process and what actions were undertaken by the project		
8. Progress to Impacts: What evidence exists that the project is contributing to project and GEF strategic goals and targets			

Evaluation Questions	Sub-Questions/Indicators	Sources	Methods/Informants
Question 8.1: What evidence exists that the project is contributing to project and GEF strategic goals and targets?	8a. Is the project contributing to expected impacts?	<ul style="list-style-type: none"> <li>• GEF tracking tools</li> <li>• PIRs</li> <li>• Prodoc</li> <li>• MTR report</li> </ul>	<ul style="list-style-type: none"> <li>• Compare trends regarding GEF indicators</li> </ul>
9. Lessons to be learned to inform future programming: To what extent have the lessons learned been documented and available to inform future project design?			
Question 9.1: To what extent have the lessons learned been documented and available to inform future project design?	9a. What lessons learned from the design and implementation of the project could be useful for improving the implementation and/or design of future projects?	<ul style="list-style-type: none"> <li>• Project stakeholders</li> <li>• Project teams</li> <li>• PIRs, progress reports</li> <li>• MTR reports</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews:</li> <li>• Documentary review</li> </ul>

### **Annex 3. List of Documents Reviewed**

- Project Identification Form (PIF)
- UNDP Initiation Plan
- Final UNDP-GEF Project Document with all annexes
- CEO Endorsement Request
- UNDP Social and Environmental Screening Procedure (SESP) and associated management plans (if any)
- Inception Workshop Report
- Mid-Term Review report and management response to MTR recommendations
- All Project Implementation Reports (PIRs)
- Progress reports (quarterly, semi-annual or annual, with associated workplans and financial reports)
- Oversight mission reports
- Minutes of Project Board Meetings and of other meetings (i.e. Project Appraisal Committee meetings)
- GEF Tracking Tools (from CEO Endorsement, midterm and terminal stages)
- GEF/LDCF/SCCF Core Indicators (from PIF, CEO Endorsement, midterm and terminal stages); for GEF-6 and GEF-7 projects only
- Financial data, including actual expenditures by project outcome, including management costs, and including documentation of any significant budget revisions
- Co-financing data with expected and actual contributions broken down by type of co-financing, source, and whether the contribution is considered as investment mobilized or recurring expenditures
- Audit reports
- Electronic copies of project outputs (booklets, manuals, technical reports, articles, etc.)
- Sample of project communications materials
- Summary list of formal meetings, workshops, etc. held, with date, location, topic, and number of participants
- Other documents identified during the evaluation of the TE and requested for review.

## Annex 4 Field Mission Schedule

Terminal Evaluation Field Mission Schedule	
Dates	Stakeholder Consultations and Site Visits
18/05/2023	Dzongkhag administration, Mongar; District Forestry Office, Mongar and Agriculture and Research Development Centre, Wengkhar
19/05/2023	Yakpogang watershed, farm shop at Tshamang and market shed in lingmethang at Mongar
20/05/2023	Dzongkhag administration, Sunday market and irrigation at Gangzur at Lhuntse,
21/05/2023	Visit to organic village and other beneficiaries at Lhuntse
22/05/2023	Mongar to Bumthang , Phumsengla National Park (PNP), Ura
23/05/2023	District Forestry Office and Dzongkhag administration at Bumthang, Pasture development (Wobthang farm) at Tang
24/05/2023	Visit to pasture development and group farming in Chumey
25/05/2023	Bumthang to Trongsa, Dzongkhag administration and district forestry office at Trongsa
26/05/2023	Jigme Singye Wangchuck National Park (JSWNP), Trongsa, Wooden crib wall and cement crib wall along Wangdigang Korphu GC Road, Irrigation intake at Korphu
27/05/2023	Visit to processing units and its beneficiaries
28/05/2023	Trongsa to Zhemgang, Dzongkhag administration
29/05/2023	District forest office, Climate resilient road at Shingkar
30/05/2023	Biogas plant at Berti and cold storage at Zhemgang
31/05/2023	Visit to farm shops within the Dzongkhag
01/06/2023	Visit to processing plants and farmer youth groups
02/06/2023	Zhemgang to Gelephu
03/06/2023	Agriculture and Research Development Centre, Samtenling
04/06/2023	District Forestry Office and Dzongkhag administration at Sarpang, market shed at Jigmecholing
05/06/2023	PES implementation site and water user groups
06/06/2023	Sarpang to Tsirang, District Forestry Office and Dzongkhag administration at Tsirang
07/06/2023	Visit to irrigation at Sergithang
08/06/2023	Visit to water user groups, lake revival and other groups
09/06/2023	Tsirang to Thimphu
10/06/2023 to 15/06/2023	Meeting with central stakeholders in Thimphu including site visits and agencies
16/06/2023	Thimphu to Wangdue, District Forestry Office and Dzongkhag administration at Wangdue, Agriculture and Research Development Centre, Bajo
17/06/2023	Visit to cold storage at Gangtay
18/06/2023	Meeting with other beneficiaries at Wangdue
19/06/2023	Wangdue to Punakha, District Forestry Office and Dzongkhag administration at Punakha, irrigation at Toebisa
20/06/2023	Punakha to Thimphu
21/06/2023	Thimphu to Haa, District Forestry Office and Dzongkhag administration at Haa,
22/06/2023	Visit to irrigation system, youth groups and farmer's groups
23/06/2023	Back to Thimphu

## Annex 5. UNEG Code of Conduct

### Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.
8. Must ensure that independence of judgement is maintained and that evaluation findings and recommendations are independently presented.
9. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated.

### Interim Evaluation Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of Consultants: **Yeshe Dorji and Brent Tegler**

Name of Consultancy Organization (where relevant):

**I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.**



Signature \_\_\_\_\_ on 31/7/2023 \_\_\_\_\_ (Date)

## Annex 6. Theory of Change Analysis Tables

**Table 6-1: Theory of Change Impact Drivers, Assumptions, Intermediate States and Impact**

Objective/ Outcomes Impacts	Impact Drivers & Assumptions	Intermediate States	Impact
<p><b>OBJECTIVE:</b> To operationalize an integrated landscape approach through the strengthening of biological corridors, sustainable forest and agricultural systems, and build climate resilience of community livelihoods</p>	<p><b>ID:</b> Effective integrated landscape management of biological corridors Climate resilient and diverse livelihoods Effective monitoring and enforcement</p>	<p><b>IS:</b> Good progress made working towards sustainable and integrated landscape management that supports climate resilient livelihoods and protection of native biodiversity</p>	<p><b>Long Term Goal:</b> <i>Sustainable and Climate Resilience Forest and Agricultural Landscapes and Community Livelihoods within the Biological Corridors and Protected Areas of Bhutan</i></p>
	<p><b>A:</b> Sufficient government capacity (staff &amp; resources) engaged in project implementation Communities support ILM and willing to adopt diverse, climate resilient livelihoods</p>		
<p><b>OUTCOME 1</b> Enhanced institutional capacity for integrated landscape management (ILM) and climate change resilience (CCR).</p>	<p><b>ID:</b> Increase government's capacity (policies, planning, financing, monitoring, delivery tools) for ILM and CCR</p>	<p><b>IS:</b> Enhanced ILM and CCR making a measurable change in the project landscape</p>	
	<p><b>A:</b> With project support government staff will acquire new skills and resources to initiate ILM and CCR</p>		
<p><b>OUTCOME 2</b> Biological corridor (BC) governance and management established and demonstrated</p>	<p><b>ID:</b> With project support develop integrated management plans for BC, human-wildlife conflict (HWC) strategies an increase government monitoring and enforcement</p>	<p><b>IS:</b> Comprehensive BC management plans and HWC strategies being implemented with support from participating communities</p>	
	<p><b>A:</b> Existing land users will participate in government initiatives targeting improved BC management Government staff capacity and resources sufficient</p>		
<p><b>OUTCOME 3</b> Livelihood options for communities are more climate- resilient through</p>	<p><b>ID:</b> Project introduces CCR agricultural and livestock management practices, diverse alternative income generating activities and improved market access</p>	<p><b>IS:</b> Rural communities demonstrate successful CCR practices and more diverse income generating activities with improved</p>	

**Table 6-1: Theory of Change Impact Drivers, Assumptions, Intermediate States and Impact**

Objective/ Outcomes Impacts	Impact Drivers & Assumptions	Intermediate States	Impact
diversification, SLM and climate-smart agriculture and livestock management and supported by enhanced infrastructure	<b>A:</b> Local communities receptive to innovative and new livelihood activities CCR practical, successful and adopted markets can be developed for income generation	household income and more sustainable local landscapes	
<b>OUTCOME 4.</b> <i>M&amp;E and Knowledge management system established to support sustainable management of forest and agricultural landscapes and climate-resilient communities.</i>	<b>ID:</b> Project enhances governments collection, analysis and access to information on the landscapes they are responsible to manage Project enhances government documentation, sharing and access to knowledge on ILM and CCR	<b>IS:</b> A comprehensive, meaningful and accessible data warehouse is established and is being regularly updated and used to achieve improved sustainable land management	
	<b>A:</b> Data are available or can be acquired within the project timeframe to create the necessary knowledge base Government and other relevant stakeholders have the knowledge to access and utilize an enhanced knowledge base effectively		

**Table 6-2: Impact Assessment of the Theory of Change**

Theory of Change Component	Qualitative Analysis	Rating <sup>2</sup>
<b>Objective:</b> <i>To operationalize an integrated landscape approach through the strengthening of biological corridors, sustainable forest and agricultural systems, and build climate resilience of community livelihoods</i>		
<b>ID:</b> Effective integrated landscape management of biological corridors Climate resilient and diverse livelihoods Effective monitoring and enforcement	•	

<sup>2</sup> see description of rating scale provided at the end of **Table 6-2**

<b>A:</b> Sufficient government capacity (staff & resources) engaged in project implementation Communities support ILM and willing to adopt diverse, climate resilient livelihoods	•	
<b>IS:</b> Good progress made working towards sustainable and integrated landscape management that supports climate resilient livelihoods and protection of native biodiversity	•	
<b>Outcome 1: Enhanced institutional capacity for integrated landscape management (ILM) and climate change resilience.</b>		
<b>ID:</b> Increase government's capacity (policies, planning, financing, monitoring, delivery tools) for ILM and CCR	•	
<b>A:</b> With project support government staff will acquire new skills and resources to initiate ILM and CCR	•	
<b>IS:</b> Enhanced ILM and CCR making a measurable change in the project landscape	•	
<b>Outcome 2: Biological corridor governance and management established and demonstrated</b>		
<b>ID:</b> With project support develop integrated management plans for BC, human-wildlife conflict (HWC) strategies an increase government monitoring and enforcement	•	
<b>A:</b> Existing land users will participate in government initiatives targeting improved BC management Government staff capacity and resources sufficient	•	
<b>IS:</b> Comprehensive BC management plans and HWC strategies being implemented with support from participating communities	•	
<b>Outcome 3: Livelihood options for communities are more climate- resilient through diversification, SLM and climate-smart agriculture and livestock management and supported by enhanced infrastructure.</b>		
<b>ID:</b> Project introduces CCR agricultural and livestock management practices, diverse alternative income generating activities and improved market access	•	

<b>A:</b> Local communities receptive to innovative and new livelihood activities CCR practical, successful and adopted markets can be developed for income generation	•	
<b>IS:</b> Rural communities demonstrate successful CCR practices and more diverse income generating activities with improved household income and more sustainable local landscapes	•	
<b>Outcome 4:</b> <i>M&amp;E and Knowledge management system established to support sustainable management of forest and agricultural landscapes and climate-resilient communities.</i>		
<b>ID:</b> Project enhances governments collection, analysis and access to information on the landscapes they are responsible to manage Project enhances government documentation, sharing and access to knowledge on ILM and CCR	•	
<b>A:</b> Data are available or can be acquired within the project timeframe to create the necessary knowledge base Government and other relevant stakeholders have the knowledge to access and utilize an enhanced knowledge base effectively	•	
<b>IS:</b> comprehensive, meaningful and accessible data warehouse is established and is being regularly updated and used to achieve improved sustainable land management	•	
<b>Overall project summary findings:</b>		

### ROtl rating scale used in Table-2-2

Not achieved (0) - the ToC component was not explicitly or implicitly identified by the project, and/or very little progress has been made towards achieving the interim target of the ToC component, and the conditions for future progress are not in place.

Poorly achieved (1) very little progress has been made towards achieving the interim target of ToC component, but the conditions are in place for future progress should support be provided to complete this component.

Partially achieved (2) the ToC component is explicitly recognized and the mechanisms set out to achieve it are appropriate but insufficient to ensure successful completion and sustainability upon project closure and meaningful progress towards achievement of the long-term goal.

Fully achieved (3) the ToC component is explicitly recognized and appropriate activities are underway with interim targets achieved. Mechanisms are in place that show progress towards achievement of the ToC component and there is assurance of substantial contribution towards achievement of the long-term goal.

## Annex 7: SMART Review of Project Indicators

**Table 7.1** SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) Review of Project Indicators

Project Objective/ Outcome Indicators	End of Project target	TE Review					TE Review Comments
		S	M	A	R	T	
<b>Project Objective: To operationalize an integrated landscape approach through the strengthening of biological corridors, sustainable forest and agricultural systems, and build climate resilience of community livelihoods</b>							
1. Number of new partnership mechanisms with funding for sustainable management solutions of natural resources and ecosystem services at the national and/or sub national level.	<ul style="list-style-type: none"> <li>Increased partnership mechanisms in form of functional MRG system that is strengthened and operating sustainably with increased funding at central and dzongkhag level (12 dzongkhags)</li> </ul>						<ul style="list-style-type: none"> <li>Indicator meets all SMART criteria</li> </ul>
2. Number of direct project beneficiaries	Number of direct project beneficiaries: <ul style="list-style-type: none"> <li>46,600 women</li> <li>49,800 men benefited</li> <li>Total of 96,400 beneficiaries</li> </ul>						<ul style="list-style-type: none"> <li>Indicator meets all SMART criteria</li> <li>data are gender disaggregated</li> </ul>
3. Increased status of all indicators in the GEF Climate Change Adaptation Tracking Tool	<ul style="list-style-type: none"> <li>Achievement of Targets set at CEO Endorsement in the updated GEF CCA TT for TE</li> </ul>						<ul style="list-style-type: none"> <li>Indicator does not provide a specific target for achievement</li> </ul>
<b>Outcome 1. Enhanced institutional capacity for integrated landscape management (ILM) and climate change resilience.</b>							
4. Status of Biological Corridor system delineation	<ul style="list-style-type: none"> <li>BC system mapped in detail based on results of delineation review</li> </ul>						<ul style="list-style-type: none"> <li>Indicator meets all SMART criteria</li> </ul>
5. Area under sustainable and climate-resilient management practices indicated by the SFMTT	Updated GE SFM TT For MTR <ul style="list-style-type: none"> <li>100,000ha forest area brought under sustainable and climate-resilient management practices.</li> </ul>						<ul style="list-style-type: none"> <li>Indicator meets all SMART criteria</li> </ul>
6. Financing gap for sustainable management of the protected area and biological corridor system closed as indicated by improvement in GEF BD-1 Financial Sustainability Scorecard	GEF BD1 Tracking Tool Target Score: <ul style="list-style-type: none"> <li>75%</li> </ul> Financing gap closed and management of PAs/BCs more self-reliant through use of at least two new financial sources.						<ul style="list-style-type: none"> <li>Indicator meets all SMART criteria</li> </ul>
<b>Outcome 2. Biological corridor governance and management established and demonstrated</b>							

Project Objective/ Outcome Indicators	End of Project target	TE Review					TE Review Comments
		S	M	A	R	T	
7. Percentage increase in METT Score for three protected areas and four Biological Corridors	End of Project METT targets: <ul style="list-style-type: none"> <li>JKSNR:75</li> <li>JSWNP:75</li> <li>PNP:80</li> <li>BC1:65</li> <li>BC2:65</li> <li>BC3:65</li> <li>BC8:65</li> </ul>						<ul style="list-style-type: none"> <li>Indicator meets SMART criteria</li> </ul>
8. Population size of key species: <ul style="list-style-type: none"> <li>Tiger in lower elevation, Snow Leopard Musk deer in the higher elevation of PAs and</li> <li>Sightings of animal or evidence of movement of animals in the BCs:</li> </ul>	<ol style="list-style-type: none"> <li>Key species population increased from MRT level in PAs.</li> <li>Sighting of animals or indirect sign of animal (droppings, pug marks etc.) using BCs increased compare to MTR level</li> </ol>						<ul style="list-style-type: none"> <li>Two indicators included</li> <li>Both indicators meet SMART criteria</li> </ul>
9. Reduction in threat cases reported over the project period in project landscapes: <ul style="list-style-type: none"> <li>% decrease in the annual number of human-wildlife conflict cases for sample areas totaling 2,000 ha;</li> <li>% decrease in the annual number of poaching and illegal wildlife trade cases;</li> <li>% decrease in the annual number and area of forest fires.</li> </ul>	<p>HWC:</p> <ol style="list-style-type: none"> <li>The proportion of HHs affected by crop and livestock depredation reduced by at least 50% of baseline in targeted areas;</li> </ol> <p>Poaching:</p> <ol style="list-style-type: none"> <li>Poaching cases reduced by at least 50% of baseline</li> </ol> <p>Forest Fires:</p> <ol style="list-style-type: none"> <li>Number and area reduced by at least 50% of baseline.</li> </ol>						<ul style="list-style-type: none"> <li>Three indicators included</li> <li>All indicators meet SMART criteria</li> </ul>
<b>Outcome 3 Livelihood options for communities are more climate- resilient through diversification, SLM and climate-smart agriculture and livestock management and supported by enhanced infrastructure.</b>							
10. Gender-equitable livelihood options for at least 70% of population in project landscapes made more resilient to climate risks, indicated by: <ul style="list-style-type: none"> <li>change in annual household income for selected sample communities attributable to project interventions</li> </ul>	<ol style="list-style-type: none"> <li>Livelihood program reached at least 70% population of the project area.</li> <li>At least 25% increase in annual household incomes associated with project interventions over baseline;</li> </ol>						<ul style="list-style-type: none"> <li>Four indicators included</li> <li>All indicators meet SMART criteria</li> </ul>
11. Gender-equitable livelihood options for at least 70% of population in project landscapes made more resilient to climate risks, indicated by: <ul style="list-style-type: none"> <li>change in annual household income for selected sample communities attributable to project interventions</li> </ul>	<ol style="list-style-type: none"> <li>Livelihood program reached at least 70% population of the project area.</li> <li>At least 25% increase in annual household incomes associated with project interventions over baseline;</li> </ol>						<ul style="list-style-type: none"> <li>Four indicators included</li> <li>All indicators meet SMART criteria</li> </ul>

Project Objective/ Outcome Indicators	End of Project target	TE Review					TE Review Comments
		S	M	A	R	T	
<ul style="list-style-type: none"> <li>number of people adopting sustainable livelihood activities associated with conservation management and processing of renewable natural resources (gender disaggregated) for selected sample communities</li> <li>quantity of climate resilient infrastructure including irrigation systems (types by area covered), climate-proofed roads (length in km), post-harvest storage and agricultural extension facilities (numbers and capacity)</li> </ul>	5. At least 30% increase over baseline number of people adopting sustainable livelihood activities 6. At least 50% increase over baseline quantity of climate resilient infrastructure						
12. Sustainable land and water resource management instituted in targeted landscapes through community-based and gender-equitable SLM, SFM and climate-smart agriculture practices indicated by: <ul style="list-style-type: none"> <li>Area of agricultural land under SLM</li> <li>Number of community SFM groups (CF/NWFP), with gender disaggregated membership data</li> <li>Number of water sources protected</li> <li>Soil erosion rates in one sample site for each of 3 landscapes</li> <li>Improved gender equity in land and natural resources decision-making and benefits between men and women</li> <li>Increased women's participation and executive role in decision-making in commodity user groups and project committees</li> </ul>	1. 2000ha under SLM 2. Total 38 SFM groups (100,000ha forest) 3. Increased no. of water sources protected 4. Erosion rate values for reference plots (bare), traditional practices and SLM practices (t/ha/yr) at each site 5. Women's access and control of land and natural resources decision-making and benefits increased by 75% over baseline. 6. Women's participation in commodity user groups, project meetings, training and development activities reaches 60% of total participants						<ul style="list-style-type: none"> <li>Six indicators included</li> <li>#1, #2 &amp; #6 meet SMART criteria</li> <li>#3 increased no. of water sources protected should specify target increase</li> <li>#4 erosion rate does not specify target value</li> <li>#5 women's access and control likely not achievable due to historical cultural and social norms and the high degree of access, control and participation of women that existed at the time of the baseline study</li> </ul>
<b>Outcome 4 M&amp;E and Knowledge management system established to support sustainable management of forest and agricultural landscapes and climate-resilient communities.</b>							

Project Objective/ Outcome Indicators	End of Project target	TE Review					TE Review Comments
		S	M	A	R	T	
<p>13. Effective sharing of knowledge, lessons learned and project results enable replication and up-scaling of the project approach including:</p> <ul style="list-style-type: none"> <li>• Status of knowledge on information sources, best practices, lessons learned &amp; mapping of knowledge gaps on existing ILM/CCR practices in Bhutan</li> <li>• # of case studies presenting project-supported best practices and traditional knowledge of ILM /CCR</li> <li>• Biodiversity portal with updated comprehensive information on the PAs and BCs, including detailed GIS maps of the BCs.</li> </ul>	<ol style="list-style-type: none"> <li>1. Information sources, best practices, lessons learned &amp; remaining knowledge gaps on ILM/CCR practices in Bhutan including all project results available online.</li> <li>2. Series of case studies presenting project-supported best practices and traditional knowledge of ILM /CCR</li> <li>3. Biodiversity portal with updated comprehensive information on the PAs and BCs, including GIS maps of BCs.</li> </ol>						<ul style="list-style-type: none"> <li>• Three indicators included</li> <li>• #1 &amp; #3 indicators meet SMART criteria</li> <li>• #2 does not specify target number of case studies</li> </ul>

## Annex 8. Terminal Evaluation of Strategic Results Framework Indicator Target Achievement

**Table 8.1.** Terminal evaluation of Strategic Results Framework Indicator Target Achievement (Target Achieved, Target Partially Achieved, Reporting not required under GEF 7 core indicators, however based on the available information these targets have been achieved)

Project Objective/ Outcome Indicators	Baseline level	Midterm target	End of Project target	TE Assessment	Rating
<b>To operationalize an integrated landscape approach through the strengthening of biological corridors, sustainable forest and agricultural systems, and build climate resilience of community livelihoods</b>					
1. Number of new partnership mechanisms with funding for sustainable management solutions of natural resources and ecosystem services at the national and/or sub national level.	<ul style="list-style-type: none"> <li>Limited partnership mechanism with funding for sustainable management solutions.</li> <li>Mainstreaming Reference Group (MRG) system not yet operational – central level not functional, dzongkhag level still being established.</li> <li>Bhutan for Life initiative aims to develop improved governance and sustainable financing for PA/BC system. Project will synergize and support this initiative.</li> </ul>	<ul style="list-style-type: none"> <li>Increased partnership mechanisms in form of functional MRG system at central and dzongkhag level (12 dzongkhags) including clear national and dzongkhag leadership</li> </ul>	<ul style="list-style-type: none"> <li>Increased partnership mechanisms in form of functional MRG system that is strengthened and operating sustainably with increased funding at central and dzongkhag level (12 dzongkhags)</li> </ul>	<ul style="list-style-type: none"> <li>Local MRGs are fully functional in twenty districts.</li> <li>Revitalized the central MRG. The cluster planning team based in the Office of Cabinet Affairs and Strategic Coordination will function as the Central MRG.</li> <li>The cluster planning team will ensure that the Gender, Environment, Climate Change, Disaster and Poverty (GECCDP) is included in the policies and planning.</li> <li>The role of cluster planning team to ensure mainstreaming of GECCDP in National plans and Policies</li> <li>Collaboration with the Bhutan for Life project has also provided sustainable financing solutions for Protected Area and Biological Corridor Systems.</li> </ul>	
2. Number of direct project beneficiaries	Number of direct project beneficiaries: <ul style="list-style-type: none"> <li>None or very few</li> </ul>	Number of direct project beneficiaries: <ul style="list-style-type: none"> <li>19,350 women</li> <li>20,650 men</li> <li>Total of 40,000 beneficiaries</li> </ul>	Number of direct project beneficiaries: <ul style="list-style-type: none"> <li>46,600 women</li> <li>49,800 men benefited</li> <li>Total of 96,400 beneficiaries</li> </ul>	<ul style="list-style-type: none"> <li>Project target exceeded number of direct project beneficiaries:               <ul style="list-style-type: none"> <li>48,183 women</li> <li>54,212 men benefited</li> <li>Total of 102,395 beneficiaries</li> </ul> </li> </ul>	

Project Objective/ Outcome Indicators	Baseline level	Midterm target	End of Project target	TE Assessment	Rating
3. Increased status of all indicators in the GEF Climate Change Adaptation Tracking Tool	See baselines in the GEF CCA TT (Annex 4b)	<ul style="list-style-type: none"> <li>At least 40% progress towards targets set at CEO Endorsement in the updated GEF CCA TT For MTR</li> </ul>	<ul style="list-style-type: none"> <li>Achievement of Targets set at CEO Endorsement in the updated GEF CCA TT for TE</li> </ul>	<ul style="list-style-type: none"> <li>Due the transition to GEF 7 core indicators, the MTR recommended reporting on this indicator was no longer required.</li> <li>At MTR indicator was reported on track.</li> <li>As a result of the project implementation there has been a reduction in climate vulnerability and an increase in resilience in areas where the project has been implemented. In addition, climate change and resilience have been mainstreamed in national plans and policies, and enabling conditions for more effective climate change adaptation.</li> </ul>	
<b>Outcome 1. Enhanced institutional capacity for integrated landscape management (ILM) and climate change resilience.</b>					
4. Status of Biological Corridor system delineation	<ul style="list-style-type: none"> <li>BC system neither operationalized nor reviewed</li> </ul>	<ul style="list-style-type: none"> <li>BC system delineation reviewed against criteria</li> </ul>	<ul style="list-style-type: none"> <li>BC system mapped in detail based on results of delineation review</li> </ul>	<ul style="list-style-type: none"> <li>Delineation review completed and new shape files created for boundary delineation</li> </ul>	
5. Area under sustainable and climate-resilient management practices indicated by the SFM TT	<ul style="list-style-type: none"> <li>National protocols for monitoring habitats and biodiversity in BC/PA systems lacking.</li> <li>No systematic consideration of climate resilience in management plans.</li> <li>DoFPS and relevant agencies. See GEF SFMTT</li> </ul>	<p>Updated GE SFM TT For MTR</p> <ul style="list-style-type: none"> <li>50,000 ha forest area brought under sustainable and climate-resilient management practices.</li> </ul>	<p>Updated GE SFM TT For MTR</p> <ul style="list-style-type: none"> <li>100,000 ha forest area brought under sustainable and climate-resilient management practices.</li> </ul>	<ul style="list-style-type: none"> <li>End of project target exceeded</li> <li>237,719.83 ha forest area brought under sustainable and climate-resilient management practices through development of 28 Local Forest Management Plans (LFMP) and ten Forest Management Unit Plans</li> </ul>	

Project Objective/ Outcome Indicators	Baseline level	Midterm target	End of Project target	TE Assessment	Rating
6. Financing gap for sustainable management of the protected area and biological corridor system closed as indicated by improvement in GEF BD-1 Financial Sustainability Scorecard	<p>GEF BD1 Tracking Tool:</p> <ul style="list-style-type: none"> <li>Total Score 44%</li> <li>Financing gap of US\$4,447,000 to achieve basic management of targeted PAs/BCs.</li> </ul> <p>Bhutan for Life (BFL) initiative by RGoB and WWF aims to provide a sustained flow of finance to maintain the country's PAs and BCs, currently in development phase to secure financing</p>	<p>GEF BD1 Tracking Tool Targeted Score:</p> <ul style="list-style-type: none"> <li>60%</li> <li>Specific policy, planning, regulatory and fiscal barriers to sustainable PA/BC financing removed.</li> </ul>	<p>GEF BD1 Tracking Tool Target Score:</p> <ul style="list-style-type: none"> <li>75%</li> <li>Financing gap closed and management of PAs/BCs more self-reliant through use of at least two new financial sources.</li> </ul>	<ul style="list-style-type: none"> <li>Due the transition to GEF 7 core indicators, the MTR recommended reporting on this indicator was no longer required.</li> <li>GEF-BD1 Tracking Tool Target Score met MTR target of 60%</li> <li>Commercial activities are restricted in PAs/BCs as per Forest and Nature Conservation Act of Bhutan 2021 and Forest and Nature Conservation Rules and Regulations 2017.</li> <li>Developed innovative financing strategies for the management of PAs/Biological Corridors.</li> <li>The project has worked with BFL in partnership with WWF, DoFPS and the Ministry of Finance. to source innovative financing mechanisms for long-term sustainable financing for the management of PAs and BCs by the Bhutan for Life project (2016-2030)</li> </ul>	
<b>Outcome 2. Biological corridor governance and management established and demonstrated</b>					
7. Percentage increase in METT Score for three protected areas and four Biological Corridors	<p>Baseline METT score:</p> <ul style="list-style-type: none"> <li>JKSNR:62</li> <li>JSWNP:66</li> <li>PNP:73</li> <li>BC1:35</li> <li>BC2:26</li> <li>BC3:32</li> <li>BC8:20</li> </ul>	<p>Mid-term METT targets:</p> <ul style="list-style-type: none"> <li>JKSNR:68</li> <li>JSWNP:70</li> <li>PNP:77</li> <li>BC1:45</li> <li>BC2:40</li> <li>BC3:45</li> <li>BC8:35</li> </ul>	<p>End of Project METT targets:</p> <ul style="list-style-type: none"> <li>JKSNR:75</li> <li>JSWNP:75</li> <li>PNP:80</li> <li>BC1:65</li> <li>BC2:65</li> <li>BC3:65</li> <li>BC8:65</li> </ul>	<ul style="list-style-type: none"> <li>METT scores exceeded MTR targets</li> <li>TE updated METT scores: <ul style="list-style-type: none"> <li>JKSNR:75</li> <li>JSWNP:76</li> <li>PNP:80</li> <li>BC1:70</li> <li>BC2:66</li> <li>BC4:79</li> <li>BC8:67</li> </ul> </li> </ul>	

Project Objective/ Outcome Indicators	Baseline level	Midterm target	End of Project target	TE Assessment	Rating
<p>8. Population size of key species:</p> <ul style="list-style-type: none"> <li>• Tiger in lower elevation, Snow Leopard Musk deer in the higher elevation of PAs and</li> <li>• Sightings of animal or evidence of movement of animals in the BCs:</li> </ul>	<p>Tiger:</p> <ul style="list-style-type: none"> <li>• JKSNR=0 but found in BC</li> <li>• JSWNP= TBC*(9 Tigers confirmed in 2020 update)</li> <li>• PNP= TBC* (2 Tigers confirmed in 2020 update)</li> </ul> <p>Musk deer:</p> <ul style="list-style-type: none"> <li>• all PAs/BCs, data will be available once the analysis is completed by the Wildlife Conservation Division</li> </ul> <p>Snow Leopard:</p> <ul style="list-style-type: none"> <li>• JKSNR=9 (10 = 2020 updated);</li> <li>• JSWNP and PNP updated in 2020 baseline study*.</li> <li>• JSWNP 1 Snow Leopard</li> <li>• PNP 1 Snow Leopard PNP</li> </ul> <p>Animal sign information in BCs added after 2020 baseline survey:</p> <ul style="list-style-type: none"> <li>• BC 4: 6 Tigers</li> <li>• BC 2: 1 Tiger</li> <li>• BC 1: 5 Tigers; 5 Snow Leopards; 7 Musk Deer</li> </ul>	<ul style="list-style-type: none"> <li>• Populations of key species stable or increased over the baseline in PAs.</li> <li>• Sighting of animals or signs of animals (droppings marks etc.) using the BCs stable or increased compared to a baseline level.</li> </ul>	<ul style="list-style-type: none"> <li>• Key species population increased from MRT level in PAs.</li> <li>• Sighting of animals or indirect sign of animal (droppings, pug marks etc.) using BCs increased compare to MTR level</li> </ul>	<ul style="list-style-type: none"> <li>• Due the transition to GEF 7 core indicators, the MTR recommended reporting on this indicator was no longer required.</li> <li>• Tiger (Total-57): Paro FD: 1 Thimphu FD: 3 Wangdue FD: 6 Zhemgang FD: 14 Bumthang FD: 21 JSWNP: 8 PNP: 3 JKSNR: 1</li> <li>• Snow Leopard (Total- 27): JKSNR: 12 Paro FD: 11 Thimphu FD: 4</li> <li>• Capture of musk deer in camera traps common in JKSNR, BC1, BC 4, BC8, JSWNP, and PNP</li> <li>• Key Biodiversity Area Assessment for Conservation of Pallas's Fish, Eagle (Haliaeetus leucorphus) along Kurichu basin at Gyalpoizhing</li> </ul>	

Project Objective/ Outcome Indicators	Baseline level	Midterm target	End of Project target	TE Assessment	Rating
<p>9. Reduction in threat cases reported over the project period in project landscapes:</p> <ul style="list-style-type: none"> <li>• % decrease in the annual number of human-wildlife conflict cases for sample areas totaling 2,000 ha;</li> <li>• % decrease in the annual number of poaching and illegal wildlife trade cases;</li> <li>• % decrease in the annual number and area of forest fires.</li> </ul>	<p>Human Wildlife Conflict (HWC):</p> <ul style="list-style-type: none"> <li>• 100% of respondents affected by crop depredation and 61.8% by livestock depredation;</li> </ul> <p>Poaching:</p> <ul style="list-style-type: none"> <li>• 13 cases of megafauna poaching detected;</li> </ul> <p>Forest Fire:</p> <ul style="list-style-type: none"> <li>• 2015 baseline: 9 forest fire incidents covering 12,265.33 acres</li> </ul>	<p>HWC:</p> <ul style="list-style-type: none"> <li>• The proportion of HHS affected by crop and livestock depredation reduced by at least 25% of baseline in targeted areas;</li> </ul> <p>Poaching:</p> <ul style="list-style-type: none"> <li>• Poaching cases reduced by at least 25% of baseline</li> </ul> <p>Forest Fires:</p> <ul style="list-style-type: none"> <li>• Number and area reduced by at least 25% of baseline.</li> </ul>	<p>HWC:</p> <ul style="list-style-type: none"> <li>• The proportion of HHS affected by crop and livestock depredation reduced by at least 50% of baseline in targeted areas;</li> </ul> <p>Poaching:</p> <ul style="list-style-type: none"> <li>• Poaching cases reduced by at least 50% of baseline</li> </ul> <p>Forest Fires:</p> <ul style="list-style-type: none"> <li>• Number and area reduced by at least 50% of baseline.</li> </ul>	<ul style="list-style-type: none"> <li>• Due the transition to GEF 7 core indicators, the MTR recommended reporting on this indicator was no longer required.</li> </ul> <p>HWC:</p> <ul style="list-style-type: none"> <li>• The HWC cases has drastically reduced by about 50% of the baseline in the targeted landscape due to provision of about 400 Km of Fencing (chainlink, electric fencing, corals, live fencing), provision of dairy sheds, breeding improvement, Pasture land development of 243.45 acres, formation of Quick Response Team in the community, awareness and advocacy capmaigns.</li> </ul> <p>Poaching:</p> <ul style="list-style-type: none"> <li>• Incidence of poaching offences has increased as reported in the MTR due to SMART patrolling. However, in the past 2 years, the poaching has decreased due to the consistent and heightened SMART patrolling as well as use of Drones for monitoring.</li> </ul> <p>Forest Fires:</p> <ul style="list-style-type: none"> <li>• Forest Fires: number and area reduced by at least 50% of baseline due to regular monitoring</li> <li>• Dzongkhag Forest Fire Response Team was formed for quick action.</li> </ul>	

Project Objective/ Outcome Indicators	Baseline level	Midterm target	End of Project target	TE Assessment	Rating
<b>Outcome 3 Livelihood options for communities are more climate- resilient through diversification, SLM and climate-smart agriculture and livestock management and supported by enhanced infrastructure.</b>					
<p>10. Gender-equitable livelihood options for at least 70% of population in project landscapes made more resilient to climate risks, indicated by:</p> <ul style="list-style-type: none"> <li>• change in annual household income for selected sample communities attributable to project interventions</li> <li>• number of people adopting sustainable livelihood activities associated with conservation management and processing of renewable natural resources (gender disaggregated) for selected sample communities</li> <li>• quantity of climate resilient infrastructure including irrigation systems (types by area covered), climate-proofed roads (length in km), post-harvest storage and agricultural extension facilities (numbers and capacity)</li> </ul>	<p>Baseline to be quantified in year 1 through the baseline study findings</p> <p>2020 updated Baseline:</p> <p>Household income for the selected sample is BTN 150,000 [equivalent to US\$ 2,149]</p> <p>Roles of men and women vary in agricultural production:</p> <ul style="list-style-type: none"> <li>• Vegetable production, kitchen garden and marketing of processed products and livestock are dominated by women.</li> <li>• Ploughing, cardamom production and marketing are dominated by men.</li> </ul> <p>Women's participation in HH decision making is 34%.</p>	<ul style="list-style-type: none"> <li>• Livelihood program reached 35% of the population of the project area</li> <li>• At least 10% increase in annual household incomes associated with project interventions over baseline;</li> <li>• At least 10% increase over baseline number of people adopting sustainable livelihood activities</li> <li>• At least 20% increase over baseline quantity of climate resilient infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Livelihood program reached at least 70% population of the project area.</li> <li>• At least 25% increase in annual household incomes associated with project interventions over baseline;</li> <li>• At least 30% increase over baseline number of people adopting sustainable livelihood activities</li> <li>• At least 50% increase over baseline quantity of climate resilient infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Due the transition to GEF 7 core indicators, the MTR recommended reporting on this indicator was no longer required.</li> <li>• The MTR did not report on the four targets identified for this indicator.</li> <li>• The livelihood programs such as the sustainable land management, Irrigation schemes, HWC mitigation measures, capacity building and training programs, climate resilient road, vegetable market sheds, pasture land, water-shed management interventions and revival of lakes/water source, formation of water user association, establishment of turmeric and ginger powdering units for women group, development of FMU Plan and LFMP for allowable timber extraction, livestock management practices for breed improvement &amp; biogas plant, dairy production and management training, bee-keeping program, organic agriculture programs etc. have reached all the 100% beneficiaries in the project landscape.</li> <li>• Climate Resilient Irrigation Schemes completed – total -58 kms (6 schemes); benefiting</li> </ul>	

Project Objective/ Outcome Indicators	Baseline level	Midterm target	End of Project target	TE Assessment	Rating
				852 Households with Agricultural command area of over 1900 Acres. <ul style="list-style-type: none"> <li>• Gewog connectivity road from Nyimshong-Shingkar in Zhemgang – 31 kms; benefitting 720 Households</li> </ul>	
11. Sustainable land and water resource management instituted in targeted landscapes through community-based and gender-equitable SLM, SFM and climate-smart agriculture practices indicated by: <ul style="list-style-type: none"> <li>• Area of agricultural land under SLM</li> <li>• Number of community SFM groups (CF/NWFP), with gender disaggregated membership data</li> <li>• Number of water sources protected</li> <li>• Soil erosion rates in one sample site for each of 3 landscapes<sup>67</sup></li> <li>• Improved gender equity in land and natural resources decision-making and benefits between men and women</li> <li>• Increased women's participation and executive role in decision-making in commodity user groups and project committees</li> </ul>	<ul style="list-style-type: none"> <li>• 112.5ha under SLM (to be confirmed)</li> </ul> 5 SFM groups <ul style="list-style-type: none"> <li>• No of water sources protected</li> <li>• Soil erosion plots to be established in Year 1 at each site</li> <li>• Access and control of men is higher in agriculture machinery and forest product collection</li> <li>• 61% of political decisions are made by both genders. Men's participation is higher in government organized trainings, meetings and other programs</li> </ul>	<ul style="list-style-type: none"> <li>• 1000ha under SLM</li> <li>• 25 SFM groups</li> <li>• Increased no. of water sources protected *</li> <li>• Erosion rate values for reference plots (bare), traditional practices and SLM practices (t/ha/yr) at each site</li> <li>• Women's access and control over agricultural machinery and forest product collection increased by 50% over baseline.</li> <li>• Gender parity of participation in commodity user groups, project-supported meetings, trainings and field activities</li> </ul>	<ul style="list-style-type: none"> <li>• 2000ha under SLM</li> <li>• Total 38 SFM groups (100,000ha forest)</li> <li>• Increased no. of water sources protected</li> <li>• Erosion rate values for reference plots (bare), traditional practices and SLM practices (t/ha/yr) at each site</li> <li>• Women's access and control of land and natural resources decision-making and benefits increased by 75% over baseline.</li> <li>• Women's participation in commodity user groups, project meetings, training and development activities reaches 60% of total participants</li> </ul>	<ul style="list-style-type: none"> <li>• Due the transition to GEF 7 core indicators, the MTR recommended reporting on this indicator was no longer required.</li> <li>• 2,004004054.64 ha of land brought under SLM benefitting 3599 households</li> <li>• About 70% of the respondents mention that household decisions is made by both male and female; about 21% by Female and 9% by Male</li> <li>• About 74% of the respondents mention that political decision is made by both male and female; about 18% by Female and 8% by Male</li> </ul>	

Project Objective/ Outcome Indicators	Baseline level	Midterm target	End of Project target	TE Assessment	Rating
<b>Outcome 4 M&amp;E and Knowledge management system established to support sustainable management of forest and agricultural landscapes and climate-resilient communities.</b>					
<p>12. Effective sharing of knowledge, lessons learned and project results enable replication and up-scaling of the project approach including:</p> <ul style="list-style-type: none"> <li>• Status of knowledge on information sources, best practices, lessons learned &amp; mapping of knowledge gaps on existing ILM/CCR practices in Bhutan</li> <li>• # of case studies presenting project-supported best practices and traditional knowledge of ILM /CCR</li> <li>• Biodiversity portal with updated comprehensive information on the PAs and BCs, including detailed GIS maps of the BCs.</li> </ul>	<ul style="list-style-type: none"> <li>• No baseline on this as project is at the development phase.</li> </ul>	<ul style="list-style-type: none"> <li>• Information sources and initial best practices, lessons learned &amp; knowledge gaps on existing ILM/CCR practices in Bhutan documented &amp; made available online.</li> <li>• Initial documentation of project supported best practices and traditional knowledge of ILM/CCR</li> <li>• Biodiversity portal with updated information on the PAs and BCs</li> </ul>	<ul style="list-style-type: none"> <li>• Information sources, best practices, lessons learned &amp; remaining knowledge gaps on ILM/CCR practices in Bhutan including all project results available online.</li> <li>• Series of case studies presenting project-supported best practices and traditional knowledge of ILM /CCR</li> <li>• Biodiversity portal with updated comprehensive information on the PAs and BCs, including GIS maps of BCs.</li> </ul>	<ul style="list-style-type: none"> <li>• The project has made a significant effort to develop and share knowledge during project implementation. The target to make knowledge, lessons learned, best practices, comprehensive information on PAs and BCs are made available online through a variety of agency web pages. Examples of project documentation available online is provided below:</li> <li>• <a href="https://www.dofps.gov.bt/fmu-management-plans/">https://www.dofps.gov.bt/fmu-management-plans/</a></li> <li>• <a href="https://www.youtube.com/channel/UCdOWqmCKx2sKO9pmrATBZmA">https://www.youtube.com/channel/UCdOWqmCKx2sKO9pmrATBZmA</a></li> <li>• <a href="https://www.nssc.gov.bt">nssc .gov.bt</a></li> <li>• <a href="https://www.dol.gov.bt">https://www.dol.gov.bt</a></li> <li>• <a href="https://www.youtube.com/watch?v=o9xVye9lytA&amp;fbclid=IwAR2DT6aKUDkqvFAnrPBI872xDXrz mSGUTHdnjVkJ0F29XF6uS4V46OXMbPIM">https://www.youtube.com/watch?v=o9xVye9lytA&amp;fbclid=IwAR2DT6aKUDkqvFAnrPBI872xDXrz mSGUTHdnjVkJ0F29XF6uS4V46OXMbPIM</a></li> <li>• JKSNR social media <a href="https://www.facebook.com/JKSNR">https://www.facebook.com/JKSNR</a>.</li> <li>• <a href="https://m.facebook.com/groups/649838128476129/permalink/4958078857652013/">https://m.facebook.com/groups/649838128476129/permalink/4958078857652013/</a></li> <li>• <a href="https://undp-bhutan.exposure.co/reviving-dying-lakesnbs?fbclid=IwAR3a_Ngq d3cXGGYb5nSskamap_hK1oN DXJYx8Qh5iaVmKVPhmT-">https://undp-bhutan.exposure.co/reviving-dying-lakesnbs?fbclid=IwAR3a_Ngq d3cXGGYb5nSskamap_hK1oN DXJYx8Qh5iaVmKVPhmT-</a></li> </ul>	

Project Objective/ Outcome Indicators	Baseline level	Midterm target	End of Project target	TE Assessment	Rating
				<p>XrOXfiiU</p> <ul style="list-style-type: none"> <li>● <a href="https://undp-climate.exposure.co/at-one-with-naturenbstowards-climateresilient-people-forests-and-wildlife-in-bhutannbsp">https://undp-climate.exposure.co/at-one-with-naturenbstowards-climateresilient-people-forests-and-wildlife-in-bhutannbsp</a></li> <li>● NDCAN/DoL Annual Progress Report communicated through website (<a href="http://www.dol.gov.bt">www.dol.gov.bt</a>)</li> <li>● Report on quantification of carbon sequestration potential from under GEF-LDCF Project (the report will be shared in the website (<a href="http://www.dol.gov.bt">www.dol.gov.bt</a>))</li> <li>● Report on “Young people drive local climate solution” shared in DoL website</li> <li>● All FMU plans and Guidelines are uploaded in the Departmental website (<a href="https://www.dofps.gov.bt/fmu-management-plans/">https://www.dofps.gov.bt/fmu-management-plans/</a>).</li> <li>● Information available online at UNDP project website is not organized to provide a comprehensive library of best practices, lessons learned &amp; knowledge gaps on ILM/CCR practices in Bhutan. The project results and success stories are available online.</li> <li>● <a href="https://kuenselonline.com/sustainable-land-management-critical-to-better-agricultural-production/">https://kuenselonline.com/sustainable-land-management-critical-to-better-agricultural-production/</a></li> <li>● <a href="https://www.undp.org/bhutan/stories/climate-proofing-rural-roads-enhance-livelihood">https://www.undp.org/bhutan/stories/climate-proofing-rural-roads-enhance-livelihood</a></li> <li>● <a href="https://www.undp.org/bhutan/stories/climate-resilient-irrigation-scheme-helps-revive-rice-">https://www.undp.org/bhutan/stories/climate-resilient-irrigation-scheme-helps-revive-rice-</a></li> </ul>	

Project Objective/ Outcome Indicators	Baseline level	Midterm target	End of Project target	TE Assessment	Rating
				<p><a href="#">cultivation-sergithang-gewog-tsirang</a></p> <ul style="list-style-type: none"> <li>• <a href="https://undp-bhutan.exposure.co/reviving-dying-lakes?fbclid=IwAR3a_Nggd3cXGGYb5nSskamap_hK1oNDXJYx8Qh5iaVmKVPhmT-XrOXfiiU">https://undp-bhutan.exposure.co/reviving-dying-lakes?fbclid=IwAR3a_Nggd3cXGGYb5nSskamap_hK1oNDXJYx8Qh5iaVmKVPhmT-XrOXfiiU</a></li> <li>• Lessons learned and best practices have been shared in community meetings and a knowledge management workshop conducted in 2021.</li> <li>• Approach to knowledge management and learning action plan_napa3.pdf</li> <li>• <a href="https://www.moaf.gov.bt/launching-of-the-online-registration-and-information-management-of-farmer-groups-and-co-operatives/">https://www.moaf.gov.bt/launching-of-the-online-registration-and-information-management-of-farmer-groups-and-co-operatives/</a></li> <li>• <a href="https://www.citizenservices.gov.bt/moaf/registration">https://www.citizenservices.gov.bt/moaf/registration</a></li> <li>• BCMI (rsebl.org.bt) – Agriculture Commodity Marketing Initiative (ACMI)</li> <li>• <a href="https://m.facebook.com/story.php?story_fbid=pfbid0231i6KdZ6eD4kZGhdkiq5Rb2Wsm9amuUUGnq1YEvAB8xYyAYM9CBasi1yrogVql&amp;id=100066646677095&amp;sfnsn=mo&amp;mibextid=RUbZ1f">https://m.facebook.com/story.php?story_fbid=pfbid0231i6KdZ6eD4kZGhdkiq5Rb2Wsm9amuUUGnq1YEvAB8xYyAYM9CBasi1yrogVql&amp;id=100066646677095&amp;sfnsn=mo&amp;mibextid=RUbZ1f</a></li> <li>• <a href="https://ncoa.gov.bt/first-ever-village-organic-fair/?fbclid=IwAR0qFSCCKGQ3vyiBwJtMmrr9VnpOB_tvxGvkSVSLMW-xSw-IWDEWaiY7Lz1s">https://ncoa.gov.bt/first-ever-village-organic-fair/?fbclid=IwAR0qFSCCKGQ3vyiBwJtMmrr9VnpOB_tvxGvkSVSLMW-xSw-IWDEWaiY7Lz1s</a></li> <li>• <a href="https://ncoa.gov.bt/pioneering-">https://ncoa.gov.bt/pioneering-</a></li> </ul>	

Project Objective/ Outcome Indicators	Baseline level	Midterm target	End of Project target	TE Assessment	Rating
				<p>ORGANIC-FARMING-IN-BHUTA/  <a href="https://fb.watch/eenq0tiA2D/">https://fb.watch/eenq0tiA2D/</a>  <ul style="list-style-type: none"> <li>• Biodiversity portal provides mapping of PAs and BCs with comprehensive information on the PAs and BCs through the online portal.</li> <li>• (<a href="http://www.biodiversity.bt">www.biodiversity.bt</a>)</li> <li>• Located on the Bhutan Biodiversity Portal website: (<a href="https://biodiversity.bt/group/list?">https://biodiversity.bt/group/list?</a>)</li> <li>• Located on NBC servers, and will be made available on Portal website (<a href="http://www.biodiversity.bt">www.biodiversity.bt</a>) after the completion of digitization of all specimens and development of new specimens feature or module on the portal.</li> <li>• Report on Butterfly BioBlitz and a Video available on the NBC and Portal Facebook pages (<a href="https://www.facebook.com/NBCBhutan/">https://www.facebook.com/NBCBhutan/</a>), NBC website (<a href="https://nbc.gov.bt/news/butterfly-bioblitz-report/">https://nbc.gov.bt/news/butterfly-bioblitz-report/</a>); YouTube (<a href="https://youtu.be/L9ma07A0Fpo">https://youtu.be/L9ma07A0Fpo</a>) and other social media handles</li> <li>• GEF-LDCF/NAPA 3 Facebook page <a href="https://www.facebook.com/NAPAIll">https://www.facebook.com/NAPAIll</a></li> </ul> </p>	

## Annex 9. Terminal Evaluation of Risk Ratings

Table 9-1 TE Analysis of Risk Ratings and Risk Treatment and Management Measures from ProDoc

Risks Identified in ProDoc	Pro-Doc	ProDoc Risk Treatment and Management Measures	Terminal Evaluation Comments
<b>Risk Category: Operational</b>			
<p><b>Risk 1:</b> The government's policy to retain small public service staffing levels may constrain adequate staffing for management of the biological corridors (BC). Coupled with the decentralization and high turnover of government staff who will be managing project components, this may impact implementation progress, and could seriously constrain management effectiveness for the BCs.</p> <p>P=4 I=3</p>	<b>Medium</b>	<p>In supporting institutional capacity development for BC management, the project will support staffing needs assessment and plans for deploying permanent BC staff. The project will work closely with the government, investigating the possibility of linking up with its poverty alleviation, rural development and job creation strategies. It will explore possibilities to engage community inputs for BC management supported by a sound financial and skill base for sustainable and effective management. The project will support development of sustainable financing mechanisms for community corridor managers, in close collaboration with Bhutan for Life, BTFEC, and rural development and public works agencies. To reduce potential negative impacts of decentralization and staff turnover, the project will appoint a project hired manager and supporting PMU staff to ensure strong project coordination, as well as continuity and smooth transition in case of government staff turnover. The project will focus on institutionalization of all the outputs and outcomes to ensure the sustainability of project products and achievements.</p>	<p>The project has successfully worked with the available government staffing from different sectors to achieve project activities working with communities</p>
<b>Risk Category: Organizational</b>			
<p><b>Risk 2</b> Coordination amongst different agencies during implementation proves difficult and corridor management plans may create frictions between agencies with different mandates. It is unlikely that ILM will be effective if agencies are unwilling or unable to</p>	<b>Medium</b>	<p>This project is multi-focal in nature, addressing biodiversity conservation, SFM and CCA. While this provides potential for demonstrating synergistic impact among the focal areas, it requires a high level of coordination between different entities working in different fields, in particular, forestry, agriculture, conservation, rural development, local governments, infrastructure etc. The project has involved all key stakeholders during the PPG phase to ensure joint project development and planning to ensure effective coordination</p>	<p>The project has successfully mitigated risk having implemented project activities with the cooperation and collaboration of multiple levels of government from different sectors working</p>

Risks Identified in ProDoc	Pro-Doc	ProDoc Risk Treatment and Management Measures	Terminal Evaluation Comments
collaborate. P=3 I=5	Medium	erstwhile GNHC-S will play a leading role in supporting the coordination. In addition, a corridor management plan should not simply create a new set of mandates that may collide with other mandates. Instead, consistent with the concepts of Gross National Happiness and the Middle Path, corridor management plans should seek to harmonize the various mandates. For example, rather than prohibiting road building, plans should provide guidelines that allow roads to be re-routed or built in a way that does not compromise corridor function.	with communities
<b>Risk Category: Financial</b>			
<b>Risk 3:</b> Sustainability of support for resilient livelihood options. This is a key sustainability risk for the project - if the capacity and financial sustainability of supporting extension services is not secured, then project gains may not be sustained over time. P=3 I=3	Medium	Sub-national administrations currently have a limited financial envelope, which will pose a serious challenge for sustainability. To mitigate this risk, the project will select target community areas which are the poorest and most vulnerable (as well as demonstrating clear linkage to climate and HWC impacts, etc), and thus it is expected that the development/adaptive gains are more visible and local buy-ins stronger. Secondly, it will work closely with LGSDP, which has a dedicated component on improving the use of ACG (unconditional grants made available for sub-national administrations), future decisions on the ways ACG will be utilized will be made more climate-sensitive.	The project has intentionally established financial sustainability mechanisms, including PES, Bhutan for Life initiative and funding from WWF
<b>Risk Category: Strategic</b>			
<b>Risk 4:</b> While the project will build capacity and demonstrate CSA options and rural livelihood diversification through its interventions, there is a risk that there will not be sufficient proactive uptake and sustained adoption of these advances through government-led agricultural and rural development programmes.	Medium	The project will focus lead agency efforts and inter-agency coordination to increase the resilience of rural communities to climate change in rural development and its related planning, budgeting and implementation processes. This will include mainstreaming CSA and rural livelihood diversification into the five year plans of erstwhile GNHC, MOAF and related agencies. The RNR extension system will be essential to build further awareness and capacity of the rural communities through continuous training and participatory approaches (including M&E) and enable inclusive participation through, for example, the combination of long-term	Project communities adopting CSA have formed farmer groups that will provide support to farmers engaged in CSA contributing to sustainability

Risks Identified in ProDoc	Pro-Doc	ProDoc Risk Treatment and Management Measures	Terminal Evaluation Comments
P=2 I=3		CSA interventions with short-term livelihood support.	
<b>Risk Category: Environmental</b>			
<p><b>Risk 5:</b> Climate change may undermine the conservation objectives of the Project. There is potential for extreme conditions resulting in local natural disasters (droughts, floods, winter storms) exacerbated by climate change to negate benefits of project supported interventions.</p> <p>P=1 I=3</p>	<b>Low</b>	<p>The project will work to address the anticipated negative impacts of climate change by increasing resilience of ecosystems and communities. It will improve PA management and emplace structures and systems for biological corridor management. By doing this, the project will contribute to the maintenance of ecosystem resilience under differing climate change conditions, so as to secure a continued sustainable flow of ecosystem services. The project will also provide direct support for enhancing community adaptation capacity through a range of field based interventions for adaptation actions that also yield conservation dividends. SLM interventions and climate proofing of GC roads will partially mitigate possible negative impacts of climate extremes.</p>	<p>Effective SLM initiatives have restored and enhanced the resilience of project landscapes to withstand extreme climate events.</p>
<p><b>Risk 6:</b> The project landscapes include critical habitats and environmentally sensitive areas, including protected areas. The implementation of certain project activities such as climate-proofing of gewog connectivity roads, irrigation infrastructure improvement and construction of small-scale agricultural facilities in such areas poses the risk of localized environmental impacts.</p> <p>P=5 I=2</p>	<b>Moderate</b>	<p>In the case of climate-proofing gewog connectivity roads, no new road construction is involved – only upgrading existing roads to improve their drainage and durability under anticipated increasingly demanding rainfall conditions. In addition, the application and improvement of environmentally-friendly road construction (EFRC) is integrated into the project design including capacity building of road engineers. A consultative approach to road planning, design and implementation are an integral part of the EFRC guidelines. Similarly, development of irrigation infrastructure will involve upgrading of existing systems rather than new systems. The Environment and Social Management Framework prepared for this project (Annex 7) includes screening templates for activities that may pose social or environmental risks, these should be applied for all project supported infrastructure development.</p>	<p>No environmental impacts have been reported as a result of road construction. The effort to make the Gewog road climate resilient should reduce future environmental impacts such as erosion and landslides. Danger to wildlife crossing the road may increase with an increase in persons using the connector road.</p>

Risks Identified in ProDoc	Pro-Doc	ProDoc Risk Treatment and Management Measures	Terminal Evaluation Comments
<p><b>Risk 7:</b> Harvesting of natural forests and reforestation in project areas may result in environmental impacts (SESP question) such as slope erosion, loss of biodiversity and introduction of alien species. Harvesting of trees from natural forests will take place in FMUs; there will be reforestation of degraded areas within FMUs, LFMPs, PAs &amp; BCs for conservation and enhancement of carbon stocks.</p> <p>P=3 I=2</p>	<b>Moderate</b>	<p>Management plans developed/updated by the project for FMUs, LFMPs, PAs &amp; BCs will be based on SFM principles and DoFPS rules. Selective harvest methods based on diameter limit cut for rural use will be allowed in line with management plans under regular monitoring and supervision by the DoFPS local offices. No commercial harvesting will occur in LFMPs and BCs. Commercial and rural harvest from the FMUs will be strictly guided by the group selection harvest guidelines and rural use guidelines indicated in the Environmental and Social Management Framework (See Annex 7). Plantation and reforestation programmes will only use native species.</p>	<p>The project has successfully developed 28 LFMPs in 34 sites based on SFM. LFMPs will reduce the environmental impact of timber harvesting on natural forests and within reforestation areas.</p>
<b>Risk Category: Strategic/ Operational</b>			
<p><b>Risk 8:</b> While specific gender concerns about the project have not been a significant issue, gender inequalities exist that stakeholders want the project to address; e.g., women's overwhelming engagement in productive and unpaid domestic activities has constrained them from being proactive and productive in socio-political spheres, especially participation in Government sponsored training and decision-making at all levels</p> <p>P=3 I=1</p>	<b>Low</b>	<p>Gender considerations have been mainstreamed into the design of project activities based on findings from the gender analysis, including gender disaggregated indicators at outcome and objective levels for monitoring. A gender action plan has been developed for the project intervention, addressing practical and strategic gender needs and priorities including specific training for women's empowerment in decision-making. See Prodoc section iv and Annex 12.</p> <p>In terms of the UNDP Gender Marker, the project has been rated GEN 2 on the basis of the gender analysis undertaken, reflecting that both general and specific gender needs and priorities are mainstreamed in the project's activities with gender disaggregated data and indicators at the outcome level for tracking project</p>	<p>Women have been actively engaged in the project increasing their participation in decision making and providing new opportunities for participation in diverse income-generating activities.</p>
<b>Risk Category: Operational/ Social</b>			

Risks Identified in ProDoc	Pro-Doc	ProDoc Risk Treatment and Management Measures	Terminal Evaluation Comments
<p><b>Risk 9:</b> The review of biological corridor delineation and associated land use planning, and operationalization of biological corridor management may affect access to natural resources by local communities P=3 I=2</p>	<b>Moderate</b>	<p>The main framework for the project intervention to operationalize management of the BCs already exists in legal terms, therefore the related project activities are only likely to impact the legal rights of access to natural resources if the boundaries of the BCs are extended or if additional legal restrictions are placed on resource use. The responsible parties for the project activities will conduct a social impact assessment including full consultation with concerned communities before imposing any restrictions on resource uses and agree on any redress required in line with national legal processes. The Environmental and Social Management Plan (Annex 7) provides guidance and a screening template for such situations. In relation to existing uses of lands within the BCs, the project will undertake a major awareness campaign to build understanding of the BC system's functions and the related regulations to reduce the potential for land use conflicts.</p>	<p>The project has not reported on reduced access to natural resources by communities. The project work on SLM has expanded the productive land base by restoring degraded lands now used for agriculture and pasture development to increase productivity of livestock.</p>

**Table 9-2. TE Analysis of SESP Risk Ratings and Management Measures**

Risks Identified in SESP	Rating	SESP Risk Management Measures	Terminal Evaluation Comments
<b><i>Risk Category: Human Rights</i></b>			
<p><b>Risk 1:</b> The review of biological corridor delineation and associated land use planning, and operationalization of biological corridor management may affect access to natural resources by local communities. P=3 I=2</p>	<b>Moderate</b>	<p>The main framework for the project intervention to operationalize management of the BCs already exists in legal terms, therefore the related project activities are only likely to impact the legal rights of access to natural resources if the boundaries of the BCs are extended or if additional legal restrictions are placed on resource use. The responsible parties for the project activities will conduct a social impact assessment including full consultation with concerned communities before imposing any restrictions on resource uses and agree on any redress required in line with national legal processes. The Environmental and Social Management Plan (see ProDoc Annex 7) provides guidance and a screening template for such</p>	<p>The project has not reported on reduced access to natural resources by communities. The project work on SLM has expanded the productive land base by restoring degraded lands now used for agriculture and pasture development to increase</p>

Risks Identified in SESP	Rating	SESP Risk Management Measures	Terminal Evaluation Comments
		situations. In relation to existing uses of lands within the BCs, the project will undertake a major awareness campaign to build understanding of the BC system's functions and the related regulations to reduce the potential for land use conflicts.	productivity of livestock.
<b>Risk Category: Gender Equality and Women's Empowerment</b>			
<p><b>Risk 2</b> While specific gender concerns about the project have not been a significant issue, gender inequalities exist that the stakeholders would like the project to address. For instance, women's overwhelming engagement in the productive and unpaid domestic activities has constrained them from being proactive and productive in the socio-political spheres, especially participation in the Government sponsored training and decision-making at all levels.</p> <p>P=3 I=1</p>	<b>Low</b>	<p>Gender considerations have been mainstreamed into the design of project activities based on findings from the gender analysis, including gender disaggregated indicators at outcome and objective levels for monitoring. A gender action plan has been developed for the project intervention, addressing practical and strategic gender needs and priorities including specific training for women's empowerment in decision-making. See Prodoc Section iv and Annex 12.</p> <p>In terms of the UNDP Gender Marker, the project has been rated GEN 2 on the basis of the gender analysis undertaken, reflecting that both general and specific gender needs and priorities are mainstreamed in the project's activities with gender disaggregated data and indicators at the outcome level for tracking project progress on gender equality and women's empowerment.</p>	Women have been actively engaged in the project increasing their participation in decision making and providing new opportunities for participation in diverse income-generating activities.
<b>Risk Category: Biodiversity Conservation and Natural Resource Management</b>			

Risks Identified in SESP	Rating	SESP Risk Management Measures	Terminal Evaluation Comments
<p><b>Risk 3:</b> The project landscapes include critical habitats and environmentally sensitive areas, including protected areas. The implementation of certain project activities such as climate-proofing of gewog connectivity roads, irrigation infrastructure improvement and construction of small-scale agricultural facilities in such areas poses the risk of localized environmental impacts.</p> <p>P=5 I=2</p>	<b>Moderate</b>	<p>In the case of climate-proofing gewog connectivity roads, no new road construction is involved – only upgrading existing roads to improve their drainage and durability under anticipated increasingly demanding rainfall conditions. In addition, the application and improvement of environmentally-friendly road construction (EFRC) is integrated into the project design including capacity building of road engineers. A consultative approach to road planning, design and implementation are an integral part of the EFRC guidelines. Similarly, development of irrigation infrastructure will involve upgrading of existing systems rather than new systems. The Environment and Social Management Framework prepared for this project (see ProDoc Annex 7) includes screening templates for activities that may pose social or environmental risks, to be applied before implementation of those activities. These should be applied for all project supported infrastructure development.</p>	<p>No environmental impacts have been reported as a result of road construction. The effort to make the Gewog road climate resilient should reduce future environmental impacts such as erosion and landslides. Danger to wildlife crossing the road may increase with an increase in persons using the connector road.</p>
<p><b>Risk 4:</b> Harvesting of natural forests and reforestation in project areas may result in environmental impacts such as slope erosion, loss of biodiversity and introduction of alien species. Harvesting of trees from natural forests will take place in FMUs; there will be reforestation of degraded areas within FMUs, LFMPs, PAs &amp; BCs for conservation and enhancement of carbon stocks.</p> <p>P=3 I=2</p>	<b>Moderate</b>	<p>Management plans developed/updated by the project for FMUs, LFMPs, PAs &amp; BCs will be based on SFM principles and DoFPS rules. Selective harvest methods based on diameter limit cut for rural use will be allowed in line with management plans under regular monitoring and supervision by the DoFPS local offices. No commercial harvesting will occur in LFMPs and BCs. Commercial and rural harvest from the FMUs will be strictly guided by the group selection harvest guidelines and rural use guidelines indicated in the Environmental and Social Management Framework (see ProDoc Annex 7). Plantation and reforestation programmes will only use native species.</p>	<p>The project has successfully developed 28 LFMPs in 34 sites based on SFM. LFMPs will reduce the environmental impact of timber harvesting on natural forests and within reforestation areas.</p>

## Annex 10. Evaluation of Progress Towards Completion of Outcome and Output Activities

The tables inserted below provide a comprehensive TE analysis of the Achievement of all project Outcome and Output activities.

<b>Outcome 1. Enhanced institutional capacity for integrated landscape management (ILM) and climate change resilience</b>			
<b>Output 1.1: Strengthened policy and planning frameworks and institutional capacity for integrated landscape management and climate change resilience within key national agencies</b>			
<b>Activity</b>	<b>Baseline</b>	<b>Output</b>	<b>TE Assessment</b>
Conduct an analytical review to identify gaps, conflicts and inconsistencies in existing sectoral and inter-sectoral policy, planning and legal frameworks for developing climate-resilient integrated landscape management and climate resilient communities including investment policy and take forward recommendations with key stakeholders, in coordination with related initiatives such as HANAS, BIOFIN, CPEIR and BTF.	Existing policy, planning and legal framework incomplete.	Gaps in sectorial, inter-sectorial policies, planning, legal frameworks identified and addressed	<ul style="list-style-type: none"> <li>• Gaps/inconsistencies/ conflicts in sectoral policy and planning frameworks identified and developed final report;</li> <li>• Completed review of RNR sector and growth analysis (policies, management regime and institution) and risk assessment</li> <li>• Based on the assessment, gaps were addressed during the implementation of the project.</li> </ul>
Assess existing capacity gaps and develop institutional capacity of MOAF and related agencies to plan and implement integrated landscape management, climate change adaptation and community development. Priority subjects for training and development/ improvement of toolkits /guidelines/resource materials	Institutional capacity of MoAF and related agencies weak to integrate climate resilient landscape management	Capacity assessment report developed, Toolkits/guidelines/resource materials developed, Capacity of MoAF agencies strengthened	<ul style="list-style-type: none"> <li>• Capacity development gaps identified and developed a report;</li> <li>• Trained 10 Dzongkhag Agriculture Officers (1 female officer) on Climate Smart Agriculture and Adaptation in Bangkok, Thailand and 15 officials (6 female) for 10 days in Maharastra, India</li> <li>• Enhanced the capacity of 4 officials (1 female) from the PPD, MoAF through short course on climate change adaptation and project financing for 14 days in April 2019.</li> </ul>
Provide TA and decision support tools for holistic and comprehensive integrated land use planning for the project landscapes through zonation (including BCs/PAs /wetlands/Settlements/ Agricultural Land /Disaster Risk Reduction /Development) for effective future conservation and planning. Review and refine BC system delineation	Land use monitoring and enforcement system weak.	Comprehensive integrated land use plan.	<ul style="list-style-type: none"> <li>• Consultation meeting was attended by 7 male and 4 female in NLCS, Thimphu. The meetings discussed way forward to come up with the plans for boundary demarcation and new maps.</li> <li>• The boundary demarcation have been completed and new map for PA/BCs have been developed</li> </ul>

<b>Outcome 1. Enhanced institutional capacity for integrated landscape management (ILM) and climate change resilience</b>			
<b>Output 1.2: Strengthened monitoring systems for forest condition, biodiversity status and carbon stocks in DoFPS</b>			
<b>Activity</b>	<b>Baseline</b>	<b>Output</b>	<b>TE Assessment</b>
Provide support for strengthening the National Forest Inventory (NFI) and the National Forest Monitoring System (NFMS) to measure status and condition of forest and carbon stocks in line with REDD+ MRV and GEF SFM monitoring requirements, including integration of HCVF approach in Bhutanese context	MoAF and relevant department are weak in monitoring of forests as per requirement of REDD+ MRV requirements.	Monitoring system of NFI and NFMS strengthened, Forest and carbon stocks information available.	<ul style="list-style-type: none"> <li>Established the internet connection to Paro, Thimphu, JKSNR, JSWNP, PNP, Wangdue, Zhemgang, Bumthang forestry divisions.</li> <li>Conducted technical workshop on Data Management at Kasetsart University, Bangkok from 29th June to 3rd July, 2019. The workshop was attended by 4 forestry officials (1 female) from FRMD and field divisions.</li> <li>National Forest Inventory is also completed including carbon stocks</li> </ul>
Support the outroll of national METT+ for BCs and PAs and ensure consistency with GEF 6 Biodiversity Tracking Tool reporting requirements for project sites	METT+ developed but not used to monitor management effectiveness of target BCs/PAs.	METT+ used to monitor management effectiveness of BCs and PAs.	<ul style="list-style-type: none"> <li>Checked the practicality of Bhutan METT+ on Biological Corridors (which was primarily developed for Parks). Its questionnaires were reviewed and tested to be used for biological corridors.</li> <li>40+ staffs including 15 female (CFOs, BC Focals, and Range Officers) trained on its use and methods;</li> <li>BCs and PAs have completed its internal assessment using the standard Bhutan METT+.</li> </ul>
Establish national protocols for monitoring habitats and biodiversity for the BC/PA system and develop capacity for targeted biological monitoring systems, including: <ul style="list-style-type: none"> <li>habitat change due to climatic factors</li> <li>status of key globally threatened species</li> </ul>	National protocols for monitoring habitats and biodiversity in BC/PA systems lacking.	National Protocols for monitoring habitats and biodiversity established and monitoring system strengthened.	<ul style="list-style-type: none"> <li>50+ officials (10 female) were introduced on KBA and its global standards through the workshop at Paro held in April 2019.</li> <li>Developed guideline for identification/Management of KBAs and trained 80 forest officials (18 female) in using the KBA guideline.</li> <li>Conducted workshop for identification of KBAs for biological monitoring</li> </ul>
<b>Outcome 1. Enhanced institutional capacity for integrated landscape management (ILM) and climate change resilience</b>			
<b>Output 1.3: Sustainable financing system for biological corridor and PA system and sector oriented valuation policy and tools to measure Ecosystem services benefits.</b>			
<b>Activity</b>	<b>Baseline</b>	<b>Output</b>	<b>TE Assessment</b>
Review policies, public expenditure and innovative financing mechanisms and develop a sustainable financing strategy to support the sustainable financing system for PAs and	Big funding gap for PAs and BCs.	Policy gap addressed and updated with	<ul style="list-style-type: none"> <li>Project in partnership with PPD, MoAF and Bhutan for Life developed strategy document for sustainable financing of the protected area and</li> </ul>

BCs.	Policy constraint to for sustainable financing for PA/BC system.	provision to facilitate financing from various sources.	biological corridor systems in Bhutan.
Evaluate and share lessons and upscale PES/ REDD+ schemes in the project landscapes in coordination with responsible agencies (note: field implementation of pilots would be supported by the project under C3)	No evaluation and documentation of lessons from PES/REDD+ schemes and other activities.	Up-scaled PES/REDD+ scheme replicated in the project landscape.	<ul style="list-style-type: none"> <li>Recruited M/s Foot printing consulting group for assessment and documentation of the PES scheme to identify potential opportunities for up scaling in other parts of Bhutan;</li> <li>Trained 7 field officials (2 female) from WMD from 7th to 16th October, 2018 through exposure trip to Bangkok to learn on "how the PES is developed and implemented in Bangkok".</li> <li>PES implemented for Gelephu Thromde</li> </ul>
Test ecosystem valuation tools in coordination with National Statistics Bureau work on Green Accounting (including tourism, HEP, RNR and other relevant sectors); and conduct awareness programme for key national stakeholders	Sector-oriented ecosystem services valuation tools lacking, Stakeholders are not much aware on ecosystem services.	Sector-oriented ecosystem services valuation tools developed.	<ul style="list-style-type: none"> <li>UNDP have recruited consultants from College of Natural Resources and completed developing ecosystem valuation tools.</li> </ul>

**Outcome 1.** Enhanced institutional capacity for integrated landscape management (ILM) and climate change resilience

**Output 1.4:** Strengthened national systemic and institutional capacity for management of the biological corridor and PA system

Activity	Baseline	Output	TE Assessment
Review and revise/update Biological Corridor Regulations (BC 2007 Rule) to optimize BC functionality and strengthen legal basis for governance.	BC regulation 2007/other related legislation cover limited functionalities of BCs.	BC 2007 rules with optimized functionality and strengthened governance.	<ul style="list-style-type: none"> <li>FNCRR 2017 have been revised</li> </ul>
Develop a strategic plan for strengthening governance and operationalizing the BC system	Strategic plan for strengthening governance of	Strategic plan developed to strengthen governance and	<ul style="list-style-type: none"> <li>Long term course in USA for one candidate completed. Strategic plan is not required as per NCD so this have been appropriated to implementation of HWC mitigation measures.</li> </ul>

	BC system not available.	operationalizing the BC system.	
Raise awareness and understanding of the BC system concept, conservation and socio-economic benefits, and the law and regulations that govern them among stakeholders at national level.	Awareness level on conservation value, economic values and regulations related to BC system limited among the National level stakeholder.	Stakeholders at national level are aware on BC system concept, conservation and socio-economic benefits and governing regulation.	<ul style="list-style-type: none"> <li>• A comprehensive information on Bhutan's Protected Area published in Happiness Journal;</li> <li>• Co-funded for production of TV spot on Wildlife feeding (monkeys) in both the languages (English and Dzongkha);</li> <li>• Developed signage on importance of not feeding the wild animals and distributed for installation at strategic locations;</li> <li>• Created awareness on forest fires and formation of FFV (Forest Fire Volunteers) groups in 6 Gewogs of Haa;</li> <li>• Awareness reading materials for school students on Protected Areas of Bhutan completed;</li> <li>• Awareness workshop on rules and regulations of PA/BC have been conducted in Punakha and Haa Dzongkhag. The workshop was attended by 30 forestry officials (10 female) and 80 local communities (23 female) of the Punakha and Haa;</li> <li>• Awareness programme on wildlife conservation and protected area systems in English language conducted through BBS panel discussion on 3rd January 2020. Aired on BBS three times in January 2020. The program targeted more than 1000 audience across the country.</li> </ul>
<b>Outcome 1.</b> Enhanced institutional capacity for integrated landscape management (ILM) and climate change resilience			
<b>Output 1.5:</b> Planning and monitoring capacity for sustainable forest management in FMUs and LFMPs.			
Activity	Baseline	Output	TE Assessment
Review and update planning, implementation and monitoring guidelines, including new inventory data management system, for FMUs and LFMPs taking into account new SFM needs including integration of climate resilience, carbon sequestration, and biodiversity conservation functions and values of FMUs and LFMPs	Planning, implementation and monitoring guidelines including new inventory data management system, of	Revised Planning, Implementation and monitoring guidelines for FMUs and LFMPs address SFM needs and integrate climate resilience, carbon	<ul style="list-style-type: none"> <li>• Trained 54 field officials (5 female) from 4 protected areas and 5 Territorial Divisions on new data inventory data management system (methods and techniques) for FMUs in Phuentsholing;</li> <li>• Completed assessment workshop on new data inventory management system and LFMP guidelines have been revised and updated</li> <li>• Conservation management plan was also completed</li> </ul>

	FMUs and LFMPs does not address SFM needs and climate resilience, carbon sequestration and biodiversity conservation functions and values.	sequestration and biodiversity conservation.	
Train staff in the employment of the updated planning, implementing implementation and monitoring guidelines system; and provide training and equipment to enhance forest management information system and planning and monitoring of FMUs and LFMPs. Acquisition of new software for forest inventory data analysis	Capacity of FRMD and TFD weak and poorly equipped.	FRMD staffs trained in planning, implementing and monitoring guidelines, Capacity of FRMD and Territorial Forestry Divisions developed.	<ul style="list-style-type: none"> <li>• Trained 22 forest officials (2 female) from the field offices on sustainable forest management in Kasartat University, Thailand for 6 days (5th Sept. to 12th Sept. 2018);</li> <li>• Conducted in country training on Forest Management information system for TFD, FRMD and NCD officials.</li> </ul>
Support field studies and lab analysis to improve the accuracy of estimation of growing stock for sustainable management planning, and training for the inventory data management system	Limited capacity of FRMD/TFDs, limited accuracy of estimating growing stocks	FRMD and Territorial Forestry Divisions equipped with field equipment.	<ul style="list-style-type: none"> <li>• Completed data collection from the field, data analysis, interpretation, modeling and updated the volume equation for 8 species of mercantile tree species</li> <li>• Conducted training on the inventory data management system of TFD officials (20 officials, 7 female) from Bumthang, Mongar, Zhemgang, Paro and Wangduephodrang divisions.</li> </ul>
Provide mobility and field equipment/ instruments to FRMD and Territorial Forestry Divisions in the project landscapes required for enhanced planning and monitoring of SFM activities in FMUs and LFMPs		Eight FMUs have trail bikes for mobility.	<ul style="list-style-type: none"> <li>• Procured 16 numbers of trail bikes for monitoring and patrolling of Forest Management Unit; Conducted patrolling to FMUs by the forestry officials. The project support includes fueling the trail bikes.</li> </ul>
Develop management plan for the newly proposed Buli-Kikhar FMU (in Landscape III) and review and update FMU management plans for Chendebji, Rongmachhu, Lingmethang, Khotokha, Karshong and Selela	Buli-Kikhar FMU does not have Forest Management	Management Plan for the Buli-Kikhar FMU developed. Management plans	<ul style="list-style-type: none"> <li>• In total 10 FMU plans were prepared (Buli-Kikhar FMU (in Landscape III), Chendebji, Rongmachhu, Lingmethang, Khotokha, Karshong and Selela) have been developed. (The tasks under this activity</li> </ul>

	Plan, Several other FMUs' FMP will expire soon.	of Chendebji, Rongmachhu, Lingmethang, Khotokha, Karshong and Selela reviewed and updated.	includes data collection, data analysis for forest inventory and plan development)
Prepare LFMPs in the project landscapes (5 of the total 38 gewogs already have LFMP as of May 2016)	32 Gewogs does not have LFMP.	LFMP developed for remaining 32 gewogs.	<ul style="list-style-type: none"> <li>32 Gewogs (Tsento, Bjee, Sombay, Gakidling, Sama, Kabjisa, Chhudzom/Doban, Jigmechoeling, Korphu, Nubi, Langthel, Chang, Sergithang, Phuentenchhu, Gantey, Phobji, Sephu, Nahi, Dangchu, Daga, Gasetsho Om, Trong, Chume, Tang, Ura, Jaray, Tsamang, Saling, Shingkar, Nangkhor, Langthel) completed - The tasks under this activity includes data collection, data analysis for forest inventory and plan development.</li> </ul>
<b>Outcome 1.</b> Enhanced institutional capacity for integrated landscape management (ILM) and climate change resilience			
<b>Output 1.6:</b> Institutional mechanisms and tools strengthened for integration of Climate Change Adaptation (CCA) and environmental sustainability needs in local development planning system at dzongkhag and gewog levels.			
Activity	Baseline	Output	TE Assessment
Strengthen the central level MRG to provide technical backstopping to Local Level MRG for integrating Climate Change Adaptation and other cross cutting issues into local government planning processes.	Central level Mainstreaming Reference Group's capacity for integration of CCA and environment sustainability in development planning is weak and group is not active.	Central-level Mainstreaming Reference Group Strengthened and active.	<ul style="list-style-type: none"> <li>Supported Cabinet Secretariat on formation of the central mainstreaming reference group.</li> </ul>
Build capacity of local government MRG on mainstreaming tools and integrate climate change adaptation and other cross-cutting issues into plans and programmes.	Mainstreaming Reference group in	Dzongkhag-level Mainstreaming Reference Groups	<ul style="list-style-type: none"> <li>Trained 4 officials (1 female) from MoAF and GNHC on climate change mainstreaming in Germany;</li> <li>Trained 13 DPOs (1 female) on climate change</li> </ul>

	dzongkhags are weak and inactive.	Strengthened and activated.	mainstreaming in Sri Lanka for 10 days; <ul style="list-style-type: none"> <li>Finalized the local MRG members and terms of reference for effective functioning of the local MRG system.</li> </ul>
Provide training and conduct SEA for key sector-led development policies, programmes and plans affecting the project landscapes.	Sectorial staffs capacity weak to conduct SEA.	Capacity of sectorial staffs enhanced to conduct SEA, 12th Five-Year plan integrated indicators for climate-resilient landscape management.	<ul style="list-style-type: none"> <li>Developed Strategic Environment Assessment for Thimphu Structure Plan to promote possible review of the structure/development plan. In doing so, trained relevant officials 29 (20M, 9 F) in conducting SEA in Malaysia/Korea for a week duration.</li> </ul>
<b>Outcome 2: Biological corridor governance and management established and demonstrated</b>			
<b>Output 2.1: Conservation management plans integrating CCA needs in place for the four BCs in the target project landscapes</b>			
<b>Activity</b>	<b>Baseline</b>	<b>Output</b>	<b>TE Assessment</b>
Review and revalidate the boundaries of the BCs and assess their ecosystem and CCA functionality, realign and demarcate them as necessary and produce new maps.	Boundaries and ecosystem functionality of BCs not updated and updated map lacking	New maps of BCs produced with updated boundaries and information on ecosystem functionality.	<ul style="list-style-type: none"> <li>A week long assessment workshop was conducted in Wang Simo, Thimphu for refinement and revalidation of protected area and biological corridor boundaries of Bhutan.</li> <li>Conducted baseline survey (recky) and camera trapping exercises to capture the baseline data for key species in the PAs and BCs;</li> <li>Reviewed the needs of musk deer conservation center;</li> <li>Training on SDM and CC modelling as capacity requirement for BCs functionality revision was conducted at Haa in May 2018. The training was attended by officials from 9 field offices</li> <li>BC boundary was completed after re-validation training of field staffs on the methodologies</li> </ul>
Develop the technical capacity of WCD and concerned TFDs on biodiversity and socio-economic survey methods that integrate appraisal of climate change vulnerabilities and risks for development of climate-adaptive conservation management plan	WCD, TFD and PA staffs lack knowledge on socio-economic and	Staffs of WCD and concerned TFDs and PAs are trained on biodiversity and gender sensitive	<ul style="list-style-type: none"> <li>15 forestry officials (4 female) were trained through study tour on climate change mitigation and adaptation completed in June.</li> <li>Supported 1 official for to the “Man and Biosphere Conference” in Thailand, 2 officials (2 female) to attend the training on “Adaptive management of</li> </ul>

	biodiversity survey methods, data analysis and application of information.	socio-economic survey method, data analysis etc.	Protected Area Conservation in the Asia Pacific” in Australia and 10 officials (2 female) for a study tour cum institutional visit to Philippines. <ul style="list-style-type: none"> <li>• Various other trainings were done for socio economic survey methods</li> </ul>
Carry out field surveys in BC8 using biodiversity and socio-economic survey methods integrating appraisal of climate vulnerabilities and risks, and prepare a climate-adaptive conservation management plan for BC8.		Biodiversity and Scio-economic survey conducted and information available.	<ul style="list-style-type: none"> <li>• Training workshop on BC survey completed and trained 50 staffs (8 female) from Wangdue, Bumthang and Mongar in May 2019; Survey equipment procured and Biodiversity survey data collection completed for Biological Corridor 8.</li> <li>• Climate-adaptive conservation management plan for BC 8 have been developed through series of consultation workshops and socio economic survey Led by Bumthang Forests Division; Completed printing.</li> </ul>
Review the conservation management plans of BCs 1, 2 and 4 during mid-term and update them integrating specific CCA needs.	Conservation management lacking.	Climate-smart conservation management plan for BCs developed.	<ul style="list-style-type: none"> <li>• BC Management Plan for BC 1, 2 and 4 is completed.</li> <li>• A two-day meeting was held at Wangdue Forest Division for to discuss the issues arising in the BC 2 and revalidating its boundary for developing the management plan. The meeting was attended by Chiefs of NCD and WFD, together with staffs of WFD and some officials from NCD;</li> </ul>
<b>Outcome 2:</b> Biological corridor governance and management established and demonstrated			
<b>Output 2.2:</b> Governance operationalized and management effectiveness enhanced for the target biological corridors including strengthened personnel capacity and sustainable financing			
<b>Activity</b>	<b>Baseline</b>	<b>Output</b>	<b>TE Assessment</b>
Establish basic infrastructure (e.g. signage, patrol/ camping sites, boundary pillars) and provide equipment essential for management of the BCs in accordance with their conservation management plans	Basic infrastructure and equipment lacking in BCs.	BCs with basic infrastructures and equipment.	<ul style="list-style-type: none"> <li>• Conducted workshop/write-shop for development/revision of PA infrastructure guidelines and the guideline was developed</li> <li>• Procured camera-traps &amp; its accessories, and patrolling raft with its accessories through UNDP procurement system; provided hands-on training on use and maintenance of the patrolling rafts and its accessories to the field staffs (15 officials/4 female) of Wangdue forest division.</li> <li>• Procured 9 night vision binoculars and 2 additional</li> </ul>

			<p>Desktops for distribution to field offices to improve the patrolling of the forest resources and biodiversity.</p> <ul style="list-style-type: none"> <li>• Equipped 9 field offices (JKSNR, PNP, JSWNP, Paro, Wangdue, Thimphu, Mongar, Bumthang and Zhemgang territorial divisions) with basic equipment (40 laptops, 12 photocopiers and 50 GPS tracking tools) that were necessary for management of BCs;</li> <li>• PFD have been equipped with office equipment (11 nos. of computers (9 numbers Dell Laptops, 1 no. Dell Latitude and 2 nos. of desk tops, 2 nos. of external hard drive, 1 no Lamination machine);</li> <li>• Installation of Signage at Chendebji, Gogona, Mongar areas for BC8; Biodiversity information signage along the eco-trail of Tergola in JKSNR completed; Installed Signage in the regions of biological corridor 1 and forest management units falling under Paro forestry division; 14 signage installed for BC 2 by Wangdue Division; Signage for BC4 and Campsites developed at Bermo botanical garden by Zhemgang Division; Numerous signage were also developed in JSWNP;</li> <li>• Developed new trekking route from Chumbu Lhakhang to Chintugoengpa under Paro Division</li> </ul>
<p>Raise awareness and understanding of the BC/PA concept, goals, regulations and conservation/ socio-economic benefits among the local stakeholders</p>	<p>Local stakeholders not aware on BC concept, goals, regulations and benefits.</p>	<p>Local stakeholders aware on BC concept, goal, regulations and importance.</p>	<ul style="list-style-type: none"> <li>• Completed awareness at Chumey in Bumthang Division, Bjee, Katsho, Eusu, Sama, Gakiling, Sombaykha under Haa, Norgaygang and Tendruk under Samtse in JKSNR; Awareness in Kabisa gewog to cover the BC 2 by Wangdue Division completed; Awareness was conducted with communities of Khomshar, Digala and Langdorbi by Zhemgang Division. Awareness on BC concepts by Mongar Division for Tshenkhar Gewog completed; Awareness by PNP, JSWNP and Paro Forest Division have also been completed in their respective jurisdiction.</li> <li>• World Wildlife Day was also observed in JKSNR;</li> <li>• Awareness programs conducted at local festivals/environment celebrations/respective</li> </ul>

			<p>communities (meeting and workshops by BCs/PAs); Awareness training on BC concepts, goal, regulations and importance for three forestry field divisions (Zhemgang, Wangdue and Bumthang);</p> <ul style="list-style-type: none"> <li>•</li> </ul>
Develop the technical capacity of TFD staff for conservation management of the target BCs with particular emphasis on landscape-based approach, climate-adaptive management, and stakeholder engagement	TDF staff lack skill of landscape-based approach, climate-adaptive management and stakeholder engagement.	TDF staffs trained on landscape-based approach, climate-adaptive management and stakeholder engagement.	<ul style="list-style-type: none"> <li>• Completed in-country trainings to equip foresters to conduct socio economic surveys as a part of development of BC management plan. The training was facilitated by UWICER attended by foresters of Zhemgang and Mongar Forestry Division.</li> </ul>
Institute a system of assessment of management effectiveness of BCs within the relevant TFDs to monitor and evaluate against METT baselines for each BC in the project landscapes	TFD lack skills of self-assessment of management effectiveness.	TFDs trained to carry out self-assessment of management effectiveness.	<ul style="list-style-type: none"> <li>• Updated biodiversity TTs (tracking tools) and sustainable forest management TTs for all biological corridors and protected area.</li> </ul>
<b>Outcome 2:</b> Biological corridor governance and management established and demonstrated			
<b>Output 2.3:</b> Law enforcement and biological monitoring capacity increased through SMART patrolling and strengthened biological monitoring system for key ecosystems for threatened species in the target BCs and adjoining PAs			
<b>Activity</b>	<b>Baseline</b>	<b>Output</b>	<b>TE Assessment</b>
Institute SMART patrolling in the management of the target BCs and adjoining PAs, and provide necessary training and equipment to the staff of these BCs/Pas	No SMART patrolling system in BCs/PAs and are poorly equipped.	SMART patrolling system in place with trained and equipped staffs in BCs and adjunct PAs.	<ul style="list-style-type: none"> <li>• 42 field officials (13 female) including staffs from Forest and Protection Enforcement Division and field divisions (Thimphu, Paro, Mongar, Zhemgang, Wangdue and Bumthang) were provided with a refresher course on SMART patrolling along with practical session at Phuentsholing from 23rd-27th October 2018. The training was facilitated by the experts from FPED, DoFPS;</li> <li>• Equipped field divisions (JKSNR, PNP, JSWNP, Paro, Wangdue, Thimphu, Mongar, Bumthang and Zhemgang territorial divisions) with the communication equipment such as wireless handsets, base stations and its necessary accessories;</li> <li>• Construction of Gagtongzam check post awarded to</li> </ul>

			M/s Druk Phuntsho Kuenjung construction in February 2021 was completed.
Institute biological monitoring system for key ecosystems and species, including high resolution mapping, in the target BCs and adjoining PAs and train their staff in the application of the monitoring system	No systematic monitoring for key ecosystems and species using high resolution mapping in PAs/BCs.	Systematic biological monitoring for key ecosystems and species using high resolution mapping instituted.	<ul style="list-style-type: none"> <li>• Core group meeting to discuss, identify and plan the work and set timeline conducted for development of biological monitoring protocol document for primary Individual taxa group (herpetofauna, fishes, birds and mammals);</li> <li>• A week long protocol refinement workshop was conducted in Punakha in February 2020, attended by experts from different fields. Social surveying protocol was added as new component to the Biodiversity Monitoring protocols and finalized; Trained more than 50 officials in using the protocol and field testing in Gelephu</li> <li>• Equipment worth 2.9 million on cost sharing basis (Nu. 0.7 million from BFL fund) has been procured for monitoring the biological diversity in the country.</li> </ul>
Train local communities and mobilize their participation in monitoring and reporting of biodiversity conditions and threats through sustainable incentives among other things	Local communities are not involved in monitoring and reporting of biodiversity status and threats.	Trained local communities monitoring and reporting on status of biodiversity and threats.	<ul style="list-style-type: none"> <li>• Prepared training materials for training tourist guides in monitoring and reporting of biodiversity conditions and threats.</li> <li>• Instituted local scientist who can monitor and report on the status of biodiversity and threats by involving the communities.</li> <li>• Trained eco-guides on the biodiversity aspects</li> </ul>
<b>Outcome 2:</b> Biological corridor governance and management established and demonstrated			
<b>Output 2.4:</b> Sustainable human wildlife conflict response strategies developed and systems strengthened through innovative mechanisms based on global best practices in the target BCs and adjoining PAs			
<b>Activity</b>	<b>Baseline</b>	<b>Output</b>	<b>TE Assessment</b>
Review and update/ strengthen Bhutan National HWC Management Strategy 2008 progressively as a living strategic document	Bhutan National HWC Management Strategy 2008 lack provision to address issues related CC	<ul style="list-style-type: none"> <li>• Bhutan National HWC management strategy 2008 updated with CC issues.</li> </ul>	<ul style="list-style-type: none"> <li>• Conducted two consultation meetings for planning and preparation on work plans for the purpose of review/update/strengthen Bhutan National HWC Management Strategy 2008 at Thimphu and Paro with participation from NCD, UWICER, DoA, DoL, PPD, MoAF and other stakeholders from Dzongkhags, Gewogs level.</li> <li>• The relevant stakeholders are identified, formed core</li> </ul>

			<p>group for review of HWC management strategy 2008 and revised the strategy.</p> <ul style="list-style-type: none"> <li>• Consultation on identification of effective mitigation measures in HWC hotspot areas conducted; field consultation / rapid assessments at JKSNR on the applicability of the existing measures.</li> <li>• Carried out rigorous consultation with the local government representatives on the National Human-wildlife conflict Management Strategy. Officials met with gewog thridzins from the 20 dzongkhags and presented the strategy document for adoption by the local government. Views from the local leaders were also sought for addressing the pressing issues and approaches such as stone wall construction, bio fencing, and barbed wire fencing were identified aside from electric fencing to protect crops from predation. Focal person for dealing with Human-wildlife conflict issues has been identified from all the protected areas and forest divisions, called for consultation meeting on identifying the HWC hotspots throughout the country.</li> </ul>
			<ul style="list-style-type: none"> <li>• HWC symposium conducted to take stock of all recommendations and findings from the studies and research on HWC in Gelephu, and the second write shop on refining the draft conducted in Phuentsholing;</li> <li>• Sought approval from TAC, Department of Forest and Park Services, finalized and printed Human wildlife strategy of Bhutan (2018-28) for implementation for the next 10 years.</li> </ul>
Identify relevant and practicable HWC management interventions from the updated HWC management strategy and implement them in the HWC hotspots identified in the BCs and adjoining PAs, evaluate and scale-up best practices	No detail studies carried out in BCs and adjunct PAs for assessment and analysis of HWC and its impact	HWC analysis and assessment conducted and updated information available. HWC hotspots in PAs/BCs mapped.	<ul style="list-style-type: none"> <li>• Workshop to develop wildlife disease surveillance guideline conducted at IMS, Serbithang and draft completed.</li> <li>• Equipment for wildlife rescue procured and distributed; More than 200 staffs (30 female) trained for the “Chemical Immobilization, Wildlife Rescue and Rehabilitation” and consulted for “Bhutan Wildlife Health Strategy” at Paro, Wangdi, Sarpang, SJ, PG, Samtse, Gedu Forest Divisions (out of landscape division covered from RGoB budget);</li> </ul>

			<ul style="list-style-type: none"> <li>• Barbed wire, wire mesh and other fencing equipment procured and installed in Bjee under Haa and Punakha (4 households is expected to be benefitted (25 farmers, 9 female farmers);</li> <li>• Live fencing poles (vegetative cut) piloted (as contribution from beneficiaries) in Kabji in Punakha;</li> <li>• The construction of HWC interpretation center completed;</li> <li>• Conducted two rounds of consultation meeting with NCD, NPPC and PPD, MoAF for HWC interventions measures. In 2021, mobile corral and fixed corral identified to address snow leopard/bear and yak conflicts and implemented</li> <li>• HWC mitigation measures implementation in Punakha, Tsirang, Haa, Bumthang.</li> </ul>
Develop the capacity of the TFDs/ PAs and relevant partners, particularly the local communities, to manage HWC and respond to HWC incidents using holistic approach	Yet unable to pilot HWC management interventions, BC/PA and relevant partner lack capacity to respond HWC incidents.	SAFE system approach for management piloted, Capacity of BCs/PAs and relevant partners strengthened to manage HWC and respond incident through safe system approach.	<ul style="list-style-type: none"> <li>• 19 officials (16 male and 3 female) including 3 from other line agencies (DoA- Wangdi, Trongsa and Zhemgang) were sent to Bangkok, Thailand to learn and see how they manage HWC in their area and also see the best practices of forestry management in collaboration with the Royal Forest Department, Thailand;</li> <li>• Created awareness training to local communities to manage and respond to human wildlife conflicts.</li> </ul>
<b>Outcome 3:</b> Livelihood options for communities are more climate-resilient through diversification, SLM and climate-smart agriculture			
<b>Output 3.1:</b> Strengthened climate resilience and productivity of agricultural and livestock management			
Activity	Baseline	Output	TE Assessment
Support for SLM interventions including traditional practices to enhance climate resilience aimed at reducing land degradation, enhancing soil fertility, productivity and vegetative cover through agronomic, vegetative and structural measures in the target landscapes.	Agriculture and livestock management is not climate friendly and unsustainable.	Land degradation reduced, soil fertility, productivity, vegetation cover enhanced through agronomic, vegetative and structural measures.	<ul style="list-style-type: none"> <li>• Total covered 2054.26 Ha (SLM) across 6 SLM Dzongkhags and 18 Gewogs</li> <li>• In 2017-19, 562 Ha of land brought under SLM practices (terracing, consolidation, stone bundling); Supplied either green seed manure, beans or peas to enhance the productivity for 1262 HHs (7964 beneficiaries, 4030 Female); Trained 3333 farmers (1811 female) on SLM, IPNM, CSA, hedgerow establishment; Supplied Avocado and mango seeding</li> </ul>

			<p>to 50 HHs (300, 130 female); Equipped NSSC lab and Gewogs with SLM equipment; 6 officials (2 female) attended two weeks study visit in Thailand; Completed maintenance of erosion plots at ARDCs in Samtenling, Wengkhar, Tsirang and Tintibi; Importance on SLM was aired on BBS coinciding with world day to combat desertification.</p> <ul style="list-style-type: none"> <li>• 2019-20: Total (372.3 Ha):Terracing: Nimshong-43 ac (45 HHs, 270 farmers, 93 female); Radi Zhemgang-30 ac (34 HHs, 210 farmers, 84 female); Tsamang/Saling-53 ac (60HHs, 360 farmers, 139 female) ; Chudzom Sarpang-43ac (40 HHs, 200 farmers, 82 female); Lhuentse-27 ac (34 HHs, 204 farmers, 91 female); Nabji-12 ac (105 farmers, 85 female) ; Tangsibje-30 ac (280 farmers, 110 female). Consolidation: Lhuentse- 2.5 ac (2 HHs, 13 farmers, 4 female); Haa-8 ac (70 farmers, 30 female); Soil survey- 11 Gewogs (Punakha); SLM training in Thiland-22 officials (8 female); Planning meeting: Mongar Somshing Chiwog (23 male and 48 female were involved in this SLM planning and review meeting); This quarter 672 ac of land brought under SLM practices (4081 farmers, 45 % female).</li> <li>• 2020-21: Brought 148 acres under terrace spread in Gangur (Lhuentse), Shingkhar (Zhemgang), Chudzom (Sarpang), Tangsebji (Trongsa) and Tsamang (Mongar).</li> <li>• Completed terracing of 83.87 acres of dry land (26.27 in Mongar, 13.6 acres in Sarpang, 8 acres in Zhemgang, 22 acres in Trongsa, 15 acres in Magar Somshing).</li> </ul>
			<ul style="list-style-type: none"> <li>• Completed SLM terracing and consolidation: NSSC - Nabji - Hedge row (8 ac); Ganjur - Orchard seedling supply (10 ac); orchard basin (36 ac), stone bund (4.6 ac); Advertised in kuensel on importance of land management during UNCCD desertification; Annual progress (NSSC) design and printed. Dzongkhags: Sarpang - hedge row (20 acre), terrace (81.86 ac): Lhuentse- hedge row in Jarey (19 ac); - terrace</li> </ul>

			<p>(156.74 ac), Hedgerow (50 ac); orchard seedlings dist. (22.5 ac): Trongsa terrace (98.66 ac); consolidated in Tangsebji and Nubi (50 ac); Zhemgang: terrace in Radi (71 ac) terrace; terrace consolidation in Thrisa (10 ac); Haa: terracing and surface stone collection (15 ac), counter stone bund (19 ac).</p> <ul style="list-style-type: none"> <li>• Completed review and documentation workshop in Mongar participated by EAs of 5 Dzongkhags except Sarpang Dzongkhag (20 participants); Conducted consultative meeting with the beneficiaries in Zhemgang, Mongar &amp; Lhuntse Dzongkhags (M 46- F 134)</li> </ul>
<p>Develop and promote climate-smart agricultural practices through support of climate resilient crop varieties and Integrated Pest Management</p>	<p>Climate resilient crop varieties are not much promoted in project landscape.</p>	<p>Developed and promoted suitable climate resilient crop variety.</p>	<ul style="list-style-type: none"> <li>• ARDCs (Bajo, Samtenling and Yesipang) equipped with basic soil testing laboratory equipment for effective soil service delivery in their respective region;</li> <li>• Insect proof hi-tech green house for seedling production of citrus constructed in Tashiyangtse;</li> <li>• Procured high spec camera for microscopic insects and pest and diseases. Mass rearing of BT for bio-control, pheromone traps &amp; lures, super grains for control of storage pest;</li> <li>• For research trail on efficacy of sulfonyleurea on stolon and rhizome of potemgeton, renovation and maintenance of green house (for NPPC in Semtokha) completed. Following this, the study on efficiency of sulfonyleurea on stolon and rhizome of potemgeton will be studied to enhance the productivity in the landscape area.</li> <li>• Seeds were procured to be supplied to the farmers for promotion of rice varieties selected by the farmer during the participatory screening process. Other field research equipment for field researchers and storage materials were procured for farmers for seed storage. 160 kg of Sasanishiki rice seed was also procured as a part of promotion of new climate resilient high altitude rice variety;</li> </ul>

			<ul style="list-style-type: none"> <li>• Two rice varieties (Chandanath-1 and Bulk-20) was selected from lower Tshento village as a cold tolerant rice varieties. In doing so 10 females and 1 men have participated in the assessment;</li> <li>• To evaluate the performance of popular rice varieties in lower Tshento, 3 research trials were carried out in the 2020 rice season;</li> <li>• To promote the products from the farmers, bought 50 kg of beaten rice (Dumja rice variety) from the farmers to diversify the local and traditional products of our farmers; Purchased Sasanishiki (new Japanese rice variety) which is still under evaluation stage;</li> <li>• Procured 800 kg bio-slurry, 1500 kg each of chicken manure and vermi compost and fertilizers for upcoming organic Quinoa research trials to compare the yield under organic and inorganic seed production on-station; NCOA in collaboration with National Post-Harvest Center (NPHC) and Dzongkhag has conducted an awareness training on consumption and utilization of Quinoa for farmers of Chang Gewog under Thimphu; Carried out inorganic seed production on-station;</li> <li>• Conducted consultation meeting with the ARDCs officials on the selection, purification and maintenance of local varieties; Procured and supplied seeds to ARDCs for distribution to the farmers;</li> </ul>
<p>Support watershed management and irrigation interventions through irrigation channel construction, rehabilitation, small-scale reservoir construction and innovative irrigation approaches</p>	<p>Limited irrigation program. Several irrigation channels damaged and nonfictional.</p>	<p>Water reservoirs and canal construction completed and drip and sprinkler irrigation established. Damaged irrigation channels repaired</p>	<ul style="list-style-type: none"> <li>• Completed construction/maintenance of 46 kilometers (Tsirang - 7.2 KM, Korphu - 2.3 KM, Punakha - 26 KM, Haa - 11.5 KM) of irrigation channel spread across four Dzongkhags of the project landscape;</li> <li>• Completed construction of 10.5 kilometres of irrigation scheme (Sharok and Zingbi) in Gangzur, Lhuentse Dzongkhag</li> <li>• Biological watershed at Raidara in Gelephu; Chudzom Gewog; Jlgmecholing Gewog and 2 lakes revived in Chudzom Gewog, watershed interventions under JSWNP, watershed at Gangzur and Saling gewog in Mongar</li> </ul>

<p>Promote and support low-emission livestock practice management through enhanced management of grazing land and fodder production, stall feeding and breed improvement.</p>	<p>Poor grazing land management</p>	<p>Grazing land improved and fodder production enhanced (1000 Ha of Pasture development).</p>	<ul style="list-style-type: none"> <li>• Brought 1,629.50 acres (659.4 Ha) of land under pasture development across 12 Dzongkhags.</li> <li>• 2020-21: Brought 130 acres of land under fodder plantation and pasture land in Mongar, Lhuentse and Zhemgang which will benefit 780 farmers.</li> <li>• Brought 25 acres of land under fodder tree plantation in Nubi Gewog and 40 acres in Jaray Gewog. The fodder tree support consists of the fodder plant and fencing materials. The labour for plantation and installation is contributed by the beneficiaries.</li> <li>• Installed electric fencing to protect the 22.55 acres of pasture land during summer season and to enable consumption during the winter season. With this initiative, 16 households (70 female, 58 male) of Nubi Gewog are benefited; 57 acres of pasture land developed in Wobthang farm in Bumthang.</li> <li>• 194 ac of pasture land developed (Bumthang and Mongar);</li> <li>• 2017-19: 386 Acres of pasture land developed (76 HHs, 482, 223 F);</li> <li>• Supplied either pullets/sheep/biogas/improved cattle to 251 HHs, (1077, 590 F);</li> <li>• Equipped RDCs with stock (poultry, jersey semen, AI equipment &amp; germplasm);</li> <li>• 20 Nos. of biogas plants constructed benefitting 156 farmers (71 female) in Mongar, Zhemang, Thimphu and Paro; Constructed 4 silo pits benefitting 20 farmers (8 females) in Chudzom and Jigmecholing;</li> <li>• 445 farmers (95 female) were trained on either on piggery, fodder development, bee keeping or unproductive cattle; 74 officials (12 female) from RDCs have been trained in Climate friendly fishing on low water &amp; sustainable harvesting of fish/sheep raring issues/bee farming, poultry training;</li> <li>• A weeks long refresher course for Artificial Insemination (AI) Technicians (AIT) / field staff (20 staffs, 5 female) of West Central Region was</li> </ul>
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			<p>conducted from 22nd April to 5th May, 2019 at RNR EC Mendelgang, Tsirang Dzongkhag;</p> <ul style="list-style-type: none"> <li>• 2019-20: Brought 1026 acres of land under fodder plantation and pasture land in Bumthang, Trongsa, Mongar, Lhuentse and Zhemgang which will benefit 6156 farmers (2952 female);</li> <li>• The fodder tree support consists of the fodder plant and fencing materials. The labour for plantation and installation is contributed by the beneficiaries.</li> </ul>
<p>Enhance institutional capacity at dzongkhag and gewog levels for extension services to promote sustainable land management, climate-resilient agricultural and low-emission livestock practices.</p>	<p>Institutional capacity at dzongkhag and gewog levels for extension services is weak.</p>	<p>Dzongkhag's and Gewog's capacity enhanced to promote extension program for SLM, climate resilient agriculture and low emission livestock practice.</p>	<ul style="list-style-type: none"> <li>• Conducted awareness workshop to the farmers of Saling, Tsamang and Jarey on bioengineering practices (SLM) and brought 30 acres of land under stone bunds and hedge row cultivation; Paid stipend for two post graduates supported by project as deposit work to RCSC;</li> <li>• 15 days SLM, CSA &amp; IPNM training in Nepal - 7 officials (3 female); 1 week SLM training in Thailand - 22 officials (8female); 8 days exchange visit to ICIMOD Nepal for exposure and to gain deeper understanding of technologies related to CS farming in mountainous ecosystem; 3 agri officers (2 from ARDCs and 1 from DoA) trained on R statistical tools in Philippines; 30 officials from ARDCs trained in research methodology and scientific paper writing at Bajo.</li> <li>• 1 long term study in US supported by the project;</li> <li>• 38 (5 female) Dzongkhag Livestock officials were trained on climate smart livestock; 3 Gewog Officials were trained on climate change and its impact on livestock farming through a study tour to Kathmandu; 6 Officials were trained on SLM and bioengineering through study visit to Thailand;</li> <li>• 3 Gewog Officials were trained on climate change and its impact on livestock farming through a study tour to Kathmandu for 7 days in February 2019; 6 Officials were trained on SLM and bioengineering through study visit to Thailand two weeks in April'19</li> </ul>
<p><b>Outcome 3:</b> Livelihood options for communities are more climate-resilient through diversification, SLM and climate-smart agriculture</p>			

<b>Output 3.2: Community livelihoods improved and sources of income diversified and enhanced in the target landscapes</b>			
<b>Activity</b>	<b>Baseline</b>	<b>Output</b>	<b>TE Assessment</b>
Promote value addition in supply chains of priority climate resilient commodities	No value addition activities in climate resilient commodities.	Different value addition program in supply chain of priority climate resilient commodities.	<ul style="list-style-type: none"> <li>Value addition equipment in Saling; Haa MPU equipment; 2 potato grading machines; Market Feasibility study for some of the agri products (potato French fry and chips, maize Kharang, immature corn tengma and valued added tengma).</li> <li>A stakeholders meeting on Cordyceps marketing for 2018 season conducted on 27th April, 2018 (68 participants took part, Buyers=32, Gups/Mangmi=18, BAFRA=3, DoFPS=5 and DAMC=10).</li> </ul>
			<ul style="list-style-type: none"> <li>Completed consultative workshop for agriculture linking and identification of potential markets. In total 25 officials (12 female) attend the workshop; Additional one workshop conducted involving staffs from Gewogs and Dzongkhags. Completed renovation of fishery ponds and plantation around the pond for protection of soil and creation shades to the ponds in Wangdue.</li> <li>Completed feasibility study for supply of Kharang Processing machines to Lhuentse and Mongar; Procured French fry production equipment; Completed cost analysis for Yogurt production in Mongar, Lhuentse, Zhemgang and Trongsa; Conducted workshop to link the hoteliers in Thimphu with the farmers/cooperatives from Trongsa and Zhemgang.</li> <li>Conducted a 3-day training on dairy product diversification to 115 dairy farmers (38 female, 77 male) and milk processors of Bjee Gewog under Haa Dzongkhag; 20 extension officials (3 female and 17 male) from Dzongkhag attended the dairy post production training in Wangdue; Procurement of the processing unit equipment for Samar Gewog; Conducted market feasibility study for potato French fry and chips, maize Kharang, immature corn tengma and valued added tengma.</li> <li>Procured value addition equipment by RAMCO</li> </ul>

			<p>Mongar to add value in processing of maize, cardamom, ginger and dairy.</p> <ul style="list-style-type: none"> <li>• 3 days training on dairy product diversification (115 farmer, 38 female, 8 milk processors of Bjee Gewog) in Haa; Post dairy production tng in Wangdi - 20 extension officials (3 female); Procurement of dairy processing equipment for MPU Samar Gewog; Market feasibility study for potato French fry and chips, maize Kharang, immature corn tengma and valued added tengma.</li> <li>• Carried out impact assessment of supplied value addition equipment through monitoring visits by the team from Regional Agricultural Marketing Cooperatives.</li> <li>• Implemented value chain recommendations of maize, buckwheat, potato and honey, conducted value chain study on minor cereals and winter vegetables.</li> </ul>
Promote organic commercialization of organically-produced farm produces through cooperatives system (certification, branding, marketing: value chain development).	No program to promote organic farming.	Cooperatives promoting organic farm products in better market.	<ul style="list-style-type: none"> <li>• 2017-19: 17 organic groups/cooperatives (727 farmers, 207 female) were supported with supply of packing equipment, linked with market in Thimphu, training in organic farming; trained 15 officers (5 F) on organic farming; Developed organic certification standard and assessed BAFRA for accreditation</li> <li>• 2019-20: Supplied low cost poly house to 9 vegetable groups (155 HHs, 755 farmers, 210 female); Conducted workshop on organic honey production (16 Male and 5 Female of Patshaling seepjam Detshen and Officials from NOP, extension agent and the gewog gup) in Jigmecholing Gewog; Conducted a consultation workshop to discuss the concept of model organic village and to prioritize the commodity for certification involving the members of 9 vegetable groups (155 HHs, 755 farmers, 210 female) in Chudzom; Conducted TOT cum farmers training on basic principles and practices of organic agriculture and certification for 40 farmers (38 Male, 2 Female); Conducted field visit to Thailand to learn the organic farming practices in Thailand; Field visit</li> </ul>

			<p>was made to INHERE, Uttarkand, Delhi to train 13 participants (private farms, extension offices and research centers) on organic agriculture; TOT conducted for 38 officials from 20 Dzongkhags, Central programs, Research centers and project (33 male and 5 Female) on principles of organic agriculture, soil fertility management, plant protection, product development, Seed production and Bhutan Organic Guarantee system (BOGS) in organic agriculture. 5 farmers from Lull village were trained on familiarization of latest agriculture technologies including hands on training on biochar preparation, post-harvest technology, seed production, preparation of bio inputs, kiwi pruning; Seedlings were distributed to 5 HHs of lull village (Asparagus: 500 nos, grafted pears:12 nos, grafted soft shell walnuts:25 nos, grafted peach:12nos, grafted persimmon:10 nos, grafted plum:12 nos, garlic seeds:500kg); Supplied 6 Nos. pruning saw, 6 Nos. budding knife, 6 Nos. Secateurs, 5 Nos. of tarpaulin for drying garlics; Completed 2 Nos. of bio-slurry unit and construction of 3 more are on-going; 85 farmers (72 female) from Buli in Zhemgang have been trained on practices of organic agriculture, certification and cultivation of local quinoa and similarly trained 25 farmers (17 female) were trained on Asparagus cultivation practices and certifications in Buli; Trained 26 farmers (17 females) from Goongring Model village, Chudzom on organic certification.</p> <ul style="list-style-type: none"> <li>• 2020-21: The National Potato Programme (NPP), NCOA has supplied 2.8 MT Yusi-Maap variety potato seed to 56 HHs of Langpa Nobgang Model organic village, Samar Gewog under Haa Dzongkhag. This initiative was aimed to promote the yusi-maap variety potato which has high content of iron, zinc and vitamin c. The variety was released by NCOA.</li> <li>• Total of 200 bottles of neem oil and 7 packets of</li> </ul>
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			<p>traps were supplied to the Goongring model village for 36 HHs (M=19nos, F17nos) of the village. The same village has been trained on preparing of local bio-pesticides along the application of commercial bio-pesticides; 500 copies of Bhutan Organic Guarantee System</p> <ul style="list-style-type: none"> <li>• (BOGS) and Bhutan Organic Certification Guidelines were printed; Farm Diary, is one of the criteria and mandatory for all the organic operators to fulfill in order to get certified and therefore, 500 copies of updated farm diary was supplied to registered organic operator; The National Potato Programme (NPP), NCOA has supplied 2.8MT Yusi-Maap variety potato seed to 56 HHs of Samar Gewog, Haa; Consultation meeting conducted to identify potential sites for model Organic village in Thimphu Dzongkhag involving the 15 agriculture (5 female) and identified Jadingkha village, Mewang, Yusipang village and Tashiding village, Kawang were identified as the potential sites for development of model organic village; Two utility sheds for research purposes were constructed in Yusipang; Total of 6 bio-digester with measurement of 2mx2mx2m has been established in the centre (NCOA) to prepare liquid manure and apply to crops and thereby improving the nutrients recycle process; The organic manure was supplied to 5HHs (M=4, F=1) of Lull village for promotion. The village has produced about 6.7 MT of garlic, 3.75 MT of Chilli, 6.25 MT of wheat and 13.75 MT tons of potato after intervention from the project; The Goongring Model Organic village, Chudzom gewog, Sarpang were supplied with 10 nos, of Low cost greenhouse, 20 nos. of mulching plastic and 2 nos. of Green shed. The village has produced about 12MT of beans and other vegetables after the intervention from project; Procured one fabricated poly house(20x5m) for flower nursery; Procured five truckloads of leaf mould to be used in nursery raising of vegetables</li> </ul>
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			<p>such as Cole crops, tomato, chilli and other vegetables and as medium for potting of flowers and seedlings; Established one set of double layer poly-house for evaluation of winter vegetable production; 36 crate, 36 knapsack sprayer and 60 plastic sprinklers was supplied to 36 HHs (M=19nos, F=17nos) of Goongring village.</p> <ul style="list-style-type: none"> <li>• Market facilitation initiated for export of green tea and herbal tea to Canada, facilitated supply of value added products to Australia and to Thailand assessment done.</li> </ul>
Pilot community-based crop and livestock insurance schemes in selected hot spot areas to provide protection and mitigation against climate and wildlife damage risks, including capacity building at Dzongkhag and community level (GECC).	No community-based insurance schemes for crop and livestock.	Community managing Crop and livestock insurance schemes.	<ul style="list-style-type: none"> <li>• Developed Gewog Tiger Conservation Tshogpa (GTCT) for Trong, Nangkhor, Langthel, Nubi, Tangsejji and Tang Gewogs since the community-based crop and livestock insurance schemes could not be materialized.</li> <li>• Additional 2 GTCT supported by project.</li> </ul>
Safeguard environmental services (PES, PWS and REDD+) and generate alternative revenue streams through watershed protection	Revenue opportunities from PES/REDD+ is not developed.	Nature/agro tourism developed and promoted, Community forests earning from environment services.	<ul style="list-style-type: none"> <li>• 2017-19: Trained the forestry officials (36, 10 F) on watershed management and PES in the context of CC facilitated by WMD; Field assessment in Paro (Tsento), Wangdi (Kazhi), Punakha (Toep) on causes of water source drying &amp; exploration of PES is completed; Developed PES in Tsirang; Equipped the division with field monitoring system (data loggers) in Wangdigang- Dechugang, instant water testers; Assessment for PES in Wangdue, Tsirang and Zhemgang is completed. PES in Tsirang - (564, 227 women, 337 men) earned additional income of Nu. 225,000.</li> <li>• 2020-21: Completed tree plantation as a measure to protection of the water shed in Trong Gewog under Zhemgang Dzongkhag; Trained 328 field forestry officers on “Hydrological inputs to Spring shed Management” for five days; Seedlings (335numbers) and bananas (35nos.) in 1ha of land was planted and constructed three log check dams with 2m length, 1m width</li> </ul>

			<p>and 1m height to control the surface runoff in Kabrey-Khola watershed area under Jigmecholing Gewog, Sarpang Dzongkhag.</p> <ul style="list-style-type: none"> <li>• Registration and Information Management of Farmers Group and Cooperatives System was launched on November 2022</li> </ul>
Support Conservation livelihood opportunity development such as community ranger system establishment and other conservation jobs.	No conservation livelihood opportunity available.	Community have job in conservation programs	<ul style="list-style-type: none"> <li>• Ecotourism activities (trail development, maintenance of the camps) in Zhemgnag, Haa and Bumthang including eco guides were trained.</li> </ul>
<b>Outcome 3:</b> Livelihood options for communities are more climate-resilient through diversification, SLM and climate-smart agriculture			
<b>Output 3.3:</b> Transformation of market access is demonstrated for selected rural communities to enhance their climate resilience			
Activity	Baseline	Output	TE Assessment
Develop climate-resilient guidelines for design and construction of climate-resilient road infrastructure, adapting to existing EFRC guidelines and standards.	Guideline for design and construction of climate resilient road infrastructure is not available.	Enforcement of EFRC guidelines/Standard for climate-resilient design and construction of road infrastructure. Road constructing following the guidelines.	<ul style="list-style-type: none"> <li>• Developed guideline for construction of climate resilient road infrastructure;</li> <li>• Trained the DoR officials (3 male, 2 female) through exposure trips to Europe and Bangkok.</li> </ul>
Improve and upgrade prioritized Gewog Connectivity road stretches for enhanced climate resilience	Gewog connectivity road need improvement.	Gewog Connectivity road improved and upgraded.	<ul style="list-style-type: none"> <li>• Constructed two crib walls each of and one concrete crib wall across the Wangdigang;</li> <li>• The climate resilient road construction (31 kms Nimsong to Shingkar) was awarded to Dungkhar Construction Private Limited;</li> </ul>
Improve marketing infrastructure through development of post-harvest storage and packaging and processing and sales facilities	Marketing infrastructure poor.	Storage, packing, processing and sales facilities established.	<ul style="list-style-type: none"> <li>• Established four farm house in four Gewogs (Wangdue and Mongar) and benefited 647 HHs (4397 farmers, 2062 female);</li> <li>• Constructed Farm shop in Sangbaykha Gewog under Haa Dzongkhag;</li> <li>• Constructed Sunday Market Shed in Lingmethang (11 direct beneficiaries) and Lhuentse town (14 direct beneficiaries);</li> <li>• Processing Units for ginger and turmeric in</li> </ul>

			<p>Dhakphel and Takabi Chiwogs under Trong Gewog; maize processing at Monger,</p> <ul style="list-style-type: none"> <li>• Constructed market shed in Jigmecholing Gewog, Sapang;</li> </ul>
			<ul style="list-style-type: none"> <li>• Completed feasibility study for supply of small grain silos, medium size cold storage for apples, orange, potato and vegetables and supplied value addition equipment to the farmers' group;</li> <li>• Developed RNR marketing strategy</li> </ul>
<p>Improve rural community access to market and weather/climate information, including commodity prices either through Gewog community information centers, farm shops, mobile applications, mass media or other innovative applications</p>	<p>Rural community access to market and weather/climate information.</p>	<p>Farmers have access to information on market, weather/ climate change.</p>	<ul style="list-style-type: none"> <li>• To generate and maintain weather data in order to assist agricultural decision making, 5 numbers of DAVIS automatic weather station (AWS) were procured and installed in Thimphu, Wangdue Phodrang, Mongar, Sarpang, Paro, Bumthang, Tsirang and Zhemgang.</li> </ul>
<p>Develop capacity of farmers to recognize market risks, linkages and explore opportunities (access to markets/buys) to maximize value addition in the supply chain.</p>	<p>Limited capacity of farmers, cooperatives in recognizing risk, opportunities for climate resilient goods.</p>	<p>Capacity to recognize market risk enhanced and market information available from Gewog community information centres.</p>	<ul style="list-style-type: none"> <li>• Trained a total of 134 FGs and Coops members (M=74 and F=58) on record and book keeping and leadership management, 22 members trained in food processing and product development;</li> <li>• Awareness program on the marketing of agriculture products created through National Television (BBS) but actual meeting and awareness program could not be conducted due to government restrictions on meetings and Covid;</li> <li>• Supplied 70 cool boxes, 150 milk cans, 4 potato frying machines, 1 potato chip machine, 12 roasting pan, 2 kirloskar engine and cornflake machine, wooden boxes for packaging of mandarin export to the farmers.</li> </ul>
<p><b>Outcome 4:</b> M&amp;E and Knowledge management system established to support sustainable management of forest and agricultural landscapes and climate-resilient communities</p>			
<p><b>Output 4.1:</b> Institutionalized knowledge for ILM and Climate Change Resilience</p>			
<b>Activity</b>	<b>Baseline</b>	<b>Output</b>	<b>TE Assessment</b>

Review and document existing information and lessons on integrated landscape management and climate change resilience.	Information useful for integrated forest and agriculture management is scattered.	Information status of different agencies related to forest and agriculture generated.	<ul style="list-style-type: none"> <li>Developed terms of reference for recruitment of the national consultant. As there was slight duplication with the activity, it was dropped.</li> </ul>
Identify and strengthen relevant institutional base(s), human and financial resources for long-term knowledge management system including postgraduate studies in environmental economics or climate change adaptation / sustainable rural development	Information on institutions strength, human and financial resources is not known.	Knowledge management strengthened with human and financial resources.	<ul style="list-style-type: none"> <li>Started long term course in USA since January 2020 and completed.</li> </ul>
Strengthen the biodiversity portal with information on PAs and BCs, including upgraded and detailed maps of the BCs	Biodiversity portal lack updated information	Biodiversity portal with updated information on BCs and PAs.	<ul style="list-style-type: none"> <li>Updating of bioportal in partnership with National biodiversity Centre completed along with upgradation of the website (funded by RGoB).</li> </ul>
<b>Outcome 4:</b> M&E and Knowledge management system established to support sustainable management of forest and agricultural landscapes and climate-resilient communities			
<b>Output 4.2:</b> Enhanced generation, documentation and sharing of knowledge and best practices in ILM and climate resilient livelihood practices			
Activity	Baseline	Output	TE Assessment
Develop a project communications strategy through a consultative process; review and report against it annually; and update it annually.	Case studies not conducted to document best practices and traditional knowledge.	Best practices documented and disseminated to wide audiences.	<ul style="list-style-type: none"> <li>Prepared and documented video story on irrigation scheme in Tsirang and climate resilient road in Zhemgang; Top three stories from the KM workshop have been selected for publication; prepared case study on biological corridors and submitted to National Environment Commission. A musical video of the roles of agricultural marketing, farmer's groups/cooperatives in promoting RNR Commodities was made.</li> </ul>
Identify, prioritize and document best practices and traditional knowledge in sustainable land and forest management and climate resilient livelihood practices, drawing on this and other projects	MoAF does not have budget for national/regional seminar/workshops and exchange	Seminar, workshop, exchange visit organised for knowledge dissemination.	<ul style="list-style-type: none"> <li>Supported exchange visit in Bangkok (4 officials, 1 female); Recruited happy journal (Private Company in Bhutan) and published the information pertaining to NAPA III Project in Happy Journal and distributed to schools. Conducted knowledge management write shop, finalized/ documented proceedings</li> </ul>

	visits.		
Support national and regional focus group discussions and exchange visits on climate change adaptation and integrated landscape management, including sustainable community livelihoods and HWC and innovative conservation approaches. Document and disseminate proceedings and results of above events through publication and various media.		Support national and regional focus group discussions and exchange visits on climate change adaptation and integrated landscape management, including sustainable community livelihoods and HWC and innovative conservation approaches. Document and disseminate proceedings and results of above events through publication and various media.	<ul style="list-style-type: none"> <li>• Officials from GNHC and MoAF (4 officials, 1 female) were sent to Bangkok for learning ILM approach in the region;</li> <li>• National Sensitization and Consultation on GI System was held on June 20, 2023 in Thimphu followed by National Workshop on GI for key technical officers and potential implementers</li> </ul>
Develop and manage project website, or web pages hosted by other organizational websites / social media:	No website with such information and updating mechanism.	Project website established, Regular updating mechanism in place to updating website	<ul style="list-style-type: none"> <li>• The project website has been developed by the GNHC in October 2017 and is currently managed by Project Management Unit, GNHC; trained two ICT (both male) Officials in Bangkok.</li> <li>• Project Accounting trained on financial management in Nepal for 10 days.</li> </ul>
<b>Outcome 4:</b> M&E and Knowledge management system established to support sustainable management of forest and agricultural landscapes and climate-resilient communities			
<b>Output 4.3:</b> Project monitoring and evaluation system in place and used to inform project management decision-making			
<b>Activity</b>	<b>Baseline</b>	<b>Output</b>	<b>TE Assessment</b>
Review, update and elaborate project indicator baselines, work plans and management arrangements during project inception period	No project M&E Plan.	Inception Workshop reviewed activities, baseline	<ul style="list-style-type: none"> <li>• Conducted Inception workshop for the project and revised some indicators and validated others, Developed M &amp; E Plan of the project and monitoring is a continuous process of the project.</li> </ul>

		information and indicators and completed missing baseline, improved indicators.	
Implement Impact Evaluation in Year 1 (baseline) and Year 5 (end line) according to methodology and draft TOR	Project has not started so no IA and QA activities.	IA & QA conducted and indicated impact of intervention.	<ul style="list-style-type: none"> <li>Completed baseline survey at household level and finalized the report by validation workshops involving the stakeholders from UNDP, Central IPs and GNHC.</li> </ul>
Facilitate, disseminate and act on learnings from the Mid Term Review and Terminal Evaluation in line with UNDP/GEF requirements and incorporate recommendations of MTR into revised project plans (management response) following PSC approval, and monitor their implementation. Updating of GEF TTs for MTR and TE.		Mid-term review conducted. Recommendation from MTR incorporated in project plans, Terminal evaluation conducted.	<ul style="list-style-type: none"> <li>Conducted Midterm review of the project from October to December, 2020 with the recommendations incorporated into project plans while terminal evaluation is under progress.</li> </ul>

## Annex 11. Terminal Evaluation Clearance Form

### TE Report Clearance Form

Terminal Evaluation Report for *(Project Title & UNDP PIMS ID)* Reviewed and Cleared By:

#### Commissioning Unit (M&E Focal Point)

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

#### Regional Technical Advisor (Nature, Climate and Energy)

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

*Attached in the last page of the Report*

## Annex 12: List of stakeholders consulted

### List of central level stakeholders (at Dzongkhags) consulted

Sl.No.	Name	Designation	Office
1	Mr. Tashi Wangchuk	Dy. Chief Forest Officer	DFO, Zhemgang
2	Mr. Kado Drukpa	Forest Officer	DFO, Zhemgang
3	Mr. Phub Dorji	Forest Officer	DFO, Zhemgang
4	Mr. Tendrel Zangpo	Forest Officer	DFO, Zhemgang
5	Mr. Sonam Phuntsho	Forest Officer	DFO, Zhemgang
6	Mrs. Rinzin Tshomo	Forest Officer	DFO, Zhemgang
7	Mrs. Sangay Wangmo	Forest Officer	DFO, Zhemgang
8	Mr. Premlal Sharma	Agriculture Officer	Zhemgang Dzongkhag
9	Mr. Chandra Subba	Engineer, Tingtibi	Dept of surface transport
10	Mr. C.B.Monger	Engineer, Tingtibi	Dept of surface transport
11	Mr. Silas Dhital	Agriculture extension	Chudzom, Sarpang
12	Mr. Dorji Wangchuk	Agriculture extension	Jigmecholing, Sarpang
13	Mr. Chimi Wangchuk	DAO	Sarpang
14	Mrs. Tshering Wangmo	ARDC, Samtenling	Sarpang
15	Mr. Jigme Tenzin	Forest Officer	Sarpang
16	Mr. Dorji Gyeltshen	DAO	Tsirang Dzongkhag
17	Mr. Domang	DAO	Wangdue Dzongkhag
18	Mr. Gaylong	DAO	Punakha Dzongkhag
19	Mr. Karma Tshering	Livestock prod. Officer	Trongsa Dzongkhag
20	Mr. Sangay Rinchen	Incharge	Nubi Gewog, Trongsa
21	Mr. Tshewang Jamtsho	Asst. DLO	Trongsa Dzongkhag
22	Mr. Tashi Tobgyel	Forest Officer	JSWNP, Trongsa
23	Mr. Pema Thinley	Forest Officer	JSWNP, Trongsa
24	Mr. Jigme Rangdrel	Forest Officer	JSWNP, Trongsa
25	Mr. Pankey Drukpa	Chief Forest Officer	DFO, Bumthang
26	Mr. Jambay Dorji	DLO	Bumthang
27	Mr. Ugyen Lhendup	Forest Officer	PNP, Ura, Bumthang
28	Mr. Nancha	Extension Officer	Jarey Gewog, Lhuntse
29	Mr. Ugyen Chodrup	Regional Manager	FCB, Gelephu
30	Mr. Chimi Tshewang	Engineer	FCB, Gelephu
31	Mr. Devi Bhakta Kharka	Engineer	FCB, Gelephu
32	Mrs. Kardung	Officer	FCB, Bumthang
33	Mr. Trulku Dorji	Officer	FCB, Dakpai, Zhemgang
34	Mr. Sonam wangdi	Incharge	Tingtibi, Cold storage
35	Mr. Ugyen Tenzin	Extension Officer	Ura, Bumthang
36	Mrs. Deki Dema	Extension Officer	Tang, Bumthang
37	Mr. Wangchuk	Program Director	National Center for Animal
38	Mr. Rinzin Namgay	Officer	Nutrition, Bumthang
39	Mr. karma Chewang	DAO	Lhuntse
40	Mrs. Pema Lhaden	Extension Officer	Gangzur, Lhuntse
41	Mr. Sonam Dorji	Tshogpa	Gangzur, Lhuntse
42	Mr. Sonam Norbu	Extension Officer	Maetsho, Lhuntse
43	Mr. Phub Dorji	ADAO	Mongar Dzongkhag
44	Mr. Sonam Wangdi	Extension Officer	Tshamang Gewog, Mongar
45	Mrs. Sonam Yangden	Extension Officer	Saleng Gewog, Mongar
46	Mr. Tshewang Dorji	Agriculture Officer	ARDC Wengkhar, Mongar
47	Mr. Sonam Drugyel	Sr. Ranger	DFO, Mongar
48	Mr. Norbu Wangdi	Principal Forest Officer	DFO, Mongar
49	Mr. Rinchen Dorji	Forest Officer	Range Office, Lhuntse
50	Mr. Deo Man Rai	Forest Officer	Range Office, Limgmethang

51	Mr. Namgay	Offg. CFO	DFO, Paro
52	Mr. Tashi Wangchuk	Offg. DAO	Haa Dzongkhag
53	Mr. Ugyen Takchu	Sr. Forest Officer	JSWNP, Haa

### List of central agency stakeholders consulted

Sl.No.	Name	Designation	Office
1	Mr. Tashi Norbu Waiba	Dy. Chief Forest Officer	Forest Resources & Planning
2	Mr. Kaka Tshering	Dy. Chief Forest Officer	Department of Water
3	Mr. Chenga Tshering	Principal Agriculture Officer	National Soil Service Centre (NSSC)
4	Mr. Choki Gyeltshen	Dy. Chief Biodiversity Officer	National Biodiversity Centre (NBC)
5	Mr. Tshering Dorji	Sr. Biodiversity Officer	
6	Mrs. Tshering Pem	Biodiversity Officer	
7	Mrs. Pem Zam	Biodiversity Officer	
8	Mr. Kezang Duba	Dy.Executive Engineer	Department of Surface Transport
9	Mrs. Sonam Choden	Dy.Executive Engineer	
10	Mrs. Pema Selden	Engineer	
11	Mr. Letro	Dy. Chief Forest Officer	Nature Conservation Division
12	Mr. Jamyang Lophel	Dy. Chief Marketing Officer	Department of Agricultural and Marketing Cooperatives
13	Mrs. Sonam Yangchen	Dy. Chief Livestock Production Officer	Department of Livestock
14	Mrs. Pema Zangmo	Sr. Agriculture Supervisor	National Centre for Organic Agriculture, Yusipang
15	Mr. Dawa Chogyal	Project Manager	UNDP
16	Mr. Tshering Penjore		UNCDF
17	Mr. Khandu Tshering	Principal Engineer	Agriculture Engineering Div,
18	Mr. Sherab Wangchuk		FAO
19	Mr. Jigme Tenzin		FAO
20	Mr. Sangay Chopel		UNDP

### List of beneficiaries consulted

Sl.No.	Name	Gewog	Dzongkhag	Project target
1	Mr. Nampa	Nyisho	Wangdue	Human wildlife conflict
2	Mr. Maichen	Nyisho	Wangdue	
3	Mr. Tshenga	Nyisho	Wangdue	
4	Mr. Namgyel	Nyisho	Wangdue	
5	Mrs. Lhaden	Nyisho	Wangdue	
6	Mr. Phub Dorji	Nyisho	Wangdue	
7	Mr. Dodo	Nyisho	Wangdue	
8	Mrs. Mane Dem	Nyisho	Wangdue	
9	Mrs. Tashi Lham	Nyisho	Wangdue	
11	Mr. Sangay Dorji	Tashithang	Tsirang	Wetland Consolidation
12	Mr. Lal Bdr Sanyasi	Tashithang	Tsirang	
13	Mr. Jangchu	Tashithang	Tsirang	
14	Mrs. Sonam Zangmo	Tashithang	Tsirang	
15	Mr. Chandralal	Chuzom	Sarpang	
16	Mr. Mahadev Oli	Chuzom	Sarpang	

17	Mr. Tikaram Phayel	Chuzom	Sarpang	Lake revival
18	Mr. Diva Bhakta Dahli	Chuzom	Sarpang	
19	Mr. Megnath Gurung	Chuzom	Sarpang	Organic Model Village
20	Mr. Tikaram Gurung	Chuzom	Sarpang	
21	Mr. Megah Gurung	Chuzom	Sarpang	
22	Mr. Bal Kumar Rai	Chuzom	Sarpang	
23	Mr. Gorey Sunu Rai	Chuzom	Sarpang	
24	Mr. Ashok Rai	Chuzom	Sarpang	Chunzom Nazhoen Detshen
25	Mr. Prakash Gurung	Chuzom	Sarpang	
26	Mr. Tek Bdr Rai	Chuzom	Sarpang	
27	Mr. Panchaman Rai	Chuzom	Sarpang	Market shed
28	Mrs. Rita Gurung	Jigmecholing	Sarpang	
29	Mr. Zangpo	Jigmecholing	Sarpang	Community forest and watershed management group
30	Mr. Karmala	Dangkar	Zhemgang	
31	Mrs. Chimi Wangmo	Dangkar	Zhemgang	
32	Mrs. Dorji Dem	Dangkar	Zhemgang	
33	Mrs. Ugyen Choden	Dangkar	Zhemgang	
34	Mr. Wangchuk Dorji	Praling	Zhemgang	Pasture development
35	Mr. Thinley Gyeltshen	Praling	Zhemgang	
36	Mr. Chey Chey	Berti	Zhemgang	Biogas
37	Mr. Karchung	Berti	Zhemgang	
38	Mrs. Leki Dema	Berti	Zhemgang	
39	Mrs. Dawa Chozom	Berti	Zhemgang	
40	Mr. Damchu	Berti	Zhemgang	
41	Mr. Tshering Lhendup	Shingkar	Zhemgang	Climate Resilient Road
42	Mr. Leki Wangdi	Shingkar	Zhemgang	
43	Mr. Pema Chojay	Khomshar	Zhemgang	
44	Mrs. Dorji Tshomo	Khomshar	Zhemgang	
45	Mrs. Sangay yangzom	Shingkar	Zhemgang	
46	Mr. Sangay Choeda	Shingkar	Zhemgang	
47	Mr. Dorji Lethro	Shingkar	Zhemgang	
48	Mr. Nima Rinzin	Shingkar	Zhemgang	
49	Mrs. Tashi Wangmo	Tingtibi	Zhemgang	Khenrig Namsum Cooperative
50	Mrs. Pema Wangmo	Tingtibi	Zhemgang	
51	Mrs. Tshering Denkar	Tingtibi	Zhemgang	
52	Mrs. Chimi Wangmo	Tingtibi	Zhemgang	
53	Mr. Dawa Zanpo	Tingtibi	Zhemgang	
54	Mrs. Kardung		Zhemgang	Turmeric Processing group
55	Mrs. Tenzin Choden		Zhemgang	
56	Mrs. Yeshi Lhamo		Zhemgang	
57	Mrs. Pema Choki		Zhemgang	
58	Mrs. Dechen Tshomo		Zhemgang	
59	Mrs. Sangay Lhaden		Zhemgang	
60	Mrs. Hari Maya Gurung		Zhemgang	BCOOP shop
61	Mrs. Tshering Lhamo		Zhemgang	
62	Mrs. Karma Zangmo		Zhemgang	
63	Mrs. Leki Wangmo		Zhemgang	
64	Mrs. Pema Lhamo		Zhemgang	Milk Processing
65	Mrs. Tshering Dema	Nubi	Trongsa	
66	Mr. Kinzang	Bjeepam	Trongsa	Livestock shed & barbed wire fencing
67	Mrs. Chorten Dema	Bjeepam	Trongsa	

68	Mr. Dorji	Korphu	Trongsa	Bio-engineering and land development
69	Mrs. Ugyen Dema	Korphu	Trongsa	
70	Mrs. Tashi Zangmo	Korphu	Trongsa	
71	Mr. Changala	Korphu	Trongsa	
72	Mr. Karma Dorji	Korphu	Trongsa	
73	Mrs. Rinzin Wangmo	Korphu	Trongsa	
74	Mrs. Kuenzang Choden	Chumey	Bumthang	Chain linked fencing at Gyatsa and Buli
75	Mr. Tshewang Samdrup	Chumey	Bumthang	
76	Mr. Ugyen Tenzin	Chumey	Bumthang	
77	Mr. Sangay Tenzin	Chumey	Bumthang	
78	Mrs. Sonam Tshomo	Chumey	Bumthang	
79	Mrs. Jambay Wangmo	Chumey	Bumthang	
80	Mr. Kelzang Dorji	Chumey	Bumthang	Tiger Conservation Tshogpa
81	Mr. Tshewang Samdrup	Chumey	Bumthang	
82	Mr. Ugyen Tenzin	Chumey	Bumthang	
83	Mr. Sangay Tenzin	Chumey	Bumthang	Ngang Nye Model Village
84	Mrs. Kezang Tshomo	Jarey	Lhuntse	
85	Mr. Kezang	Jarey	Lhuntse	
86	Mrs. Tenzin Tshomo	Jarey	Lhuntse	
87	Mrs. Tshering Yangzom	Jarey	Lhuntse	
88	Mrs. Sither Pelden	Jarey	Lhuntse	
89	Mrs. Tenzin Wangmo	Jarey	Lhuntse	
90	Mr. Karma	Jarey	Lhuntse	
92	Mrs. Tshering Dema	Ura	Bumthang	
93	Mrs. Sonam Tshoki	Ura	Bumthang	Vegetable cooperative group
94	Mrs. Sither Lhamo	Ura	Bumthang	
95	Mrs. Tshering Wangmo	Tang	Bumthang	Strawberry Cultivation
96	Mr. Palden Singye	Tang	Bumthang	
97	Mrs. Rinchen Tshomo	Tang	Bumthang	
98	Mrs. Tashi Wangmo	Tang	Bumthang	
99	Mr. Jigme	Phutenchu	Tsirang	Pasture development and electric fencing
100	Mr. Damber Singh Subba	Phutenchu	Tsirang	
101	Mrs. Yeshey Wangmo	Phutenchu	Tsirang	
102	Mr. Ugyen Dorji	Phutenchu	Tsirang	
103	Mr. Phurba	Sergithang	Tsirang	
104	Mr. Sonam	Sergithang	Tsirang	
105	Mr. Lhab Tshering	Sergithang	Tsirang	
106	Mr. Thinley	Sergithang	Tsirang	
107	Mr. Tshering Drukpa	Sergithang	Tsirang	
108	Mr. Krishan Lal	Sergithang	Tsirang	
109	Mr. Bal Bdr Rai	Sergithang	Tsirang	
110	Mr. Dawa Tshering	Sergithang	Tsirang	
111	Mr. Phuntsho Dhendup	Ura	Bumthang	Pasture development
112	Mr. Tshering Dendup	Gangzur	Lhuntse	Community Forest members
113	Mr. Tshewang Rinzin	Gangzur	Lhuntse	
114	Mrs. Ugyen Wangmo	Gangzur	Lhuntse	
115	Mr. Gyeltshen	Gangzur	Lhuntse	
116	Mrs. Ngawang Samten	Gangzur	Lhuntse	
117	Mrs. Sangay Choden	Gangzur	Lhuntse	
118	Mr. Tashi Pelzang	Gangzur	Lhuntse	
119	Mr. Palden	Tshamang	Mongar	

120	Mrs. Tshundu Wangmo	Tshamang	Mongar	SLM
121	Mrs. Damcho Zangmo	Tshamang	Mongar	
122	Mrs. Sangay Dema	Tshamang	Mongar	
123	Mrs. Kezang Deki	Tshamang	Mongar	
124	Mrs. Tashi Choki	Lingmethang	Mongar	Market Shed
125	Mrs. Kezang Choden	Lingmethang	Mongar	
126	Mr. Thinley Lhendup	Lingmethang	Mongar	
127	Mrs. Rinchen Dema	Lingmethang	Mongar	
128	Mrs. Sangay Pelmo	Lingmethang	Mongar	
129	Mrs. Kezang Wangmo	Lingmethang	Mongar	
130	Mrs. Karma Pelzom	Lingmethang	Mongar	
131	Mr. lal Bdr Rai	Lingmethang	Mongar	
132	Mrs. Chimi Wangmo	Hongstho	Thimphu	Organic village
133	Mr. Rinzin Dorji	Nobgang	Haa	Youth Group
134	Mr. Singay Namgay	Nobgana	Haa	Water User group

**ANNEX 11. Terminal Evaluation Clearance Form**

**TE Report Clearance Form**

**Terminal Evaluation Report for (Project Title “Enhancing Sustainability and Climate Resilience of Forest and Agriculture Landscape and Community Livelihoods in Bhutan” and UNDP PIMS ID 5713),  
Reviewed and Cleared By:**

**Commissioning Unit (M&E Focal Point)**

Name: Sangay Chopel \_\_\_\_\_

Signature:  \_\_\_\_\_ Date: 31-Jul-2023  
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**Regional Technical Advisor (Nature, Climate and Energy)**

Name: Manas Moghe \_\_\_\_\_

Signature:  \_\_\_\_\_ Date: 31-Jul-2023  
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