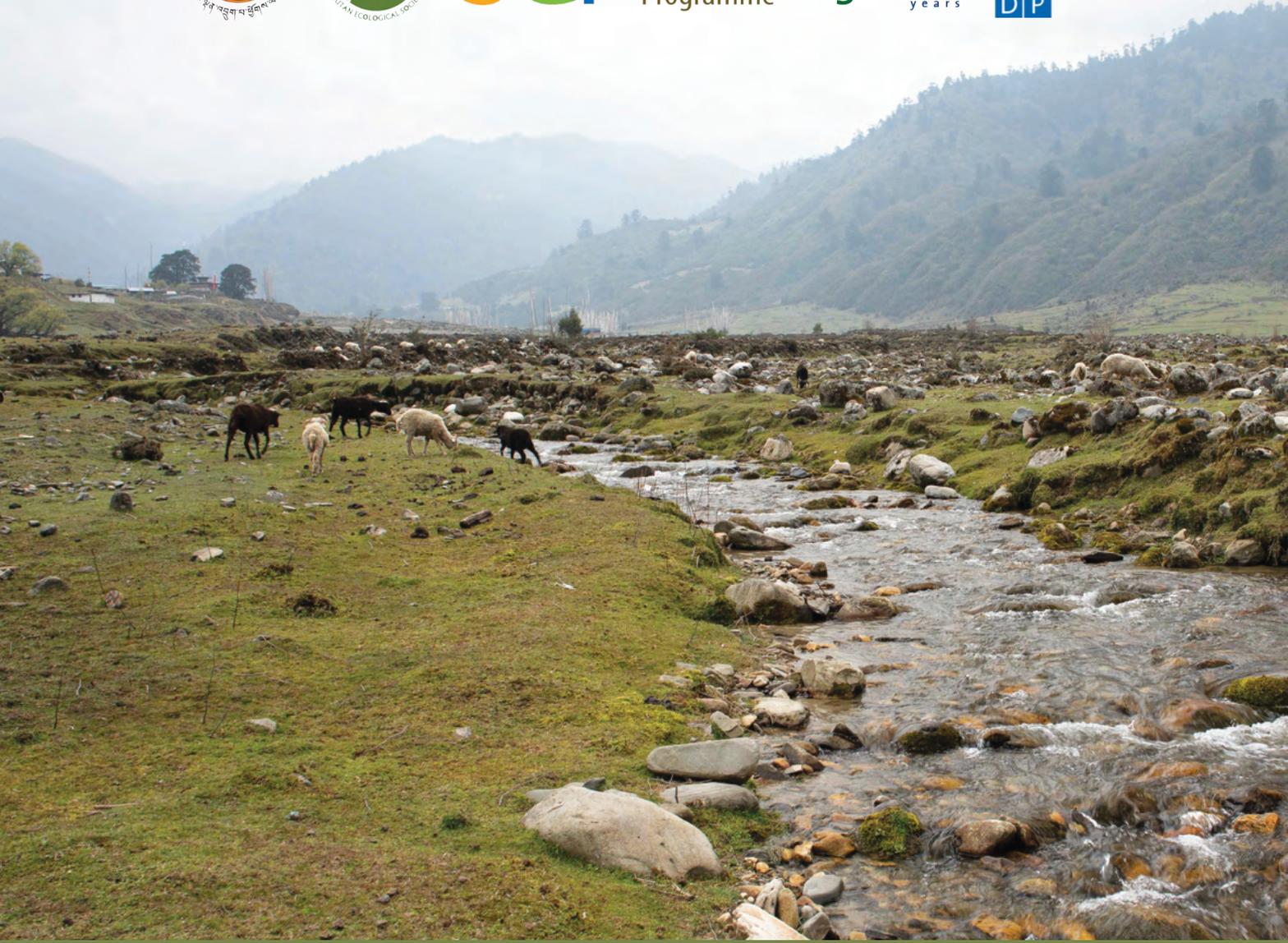




SGP The GEF
Small Grants
Programme



COMMUNITY-BASED LANDSCAPE APPROACHES FOR PROMOTING BIODIVERSITY AND SUSTAINABLE LIVELIHOODS IN BHUTAN

A national dialogue for mainstreaming the socio-ecological production
landscapes and seascapes (SEPLS) conservation approach

Community Development and Knowledge Management for the
Satoyama Initiative (COMDEKS) 2021

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landscapes and seascapes (SEPLS) conservation approach.

**Community Development and Knowledge Management for the
Satoyama Initiative (COMDEKS) 2021**

Prepared by:



With support from:





Radhi, Trashigang

Disclaimer:

The views expressed in the report are those of the author(s) and do not necessarily represent those of the GEF-Small Grants Programme, UNDP Bhutan or the partners.

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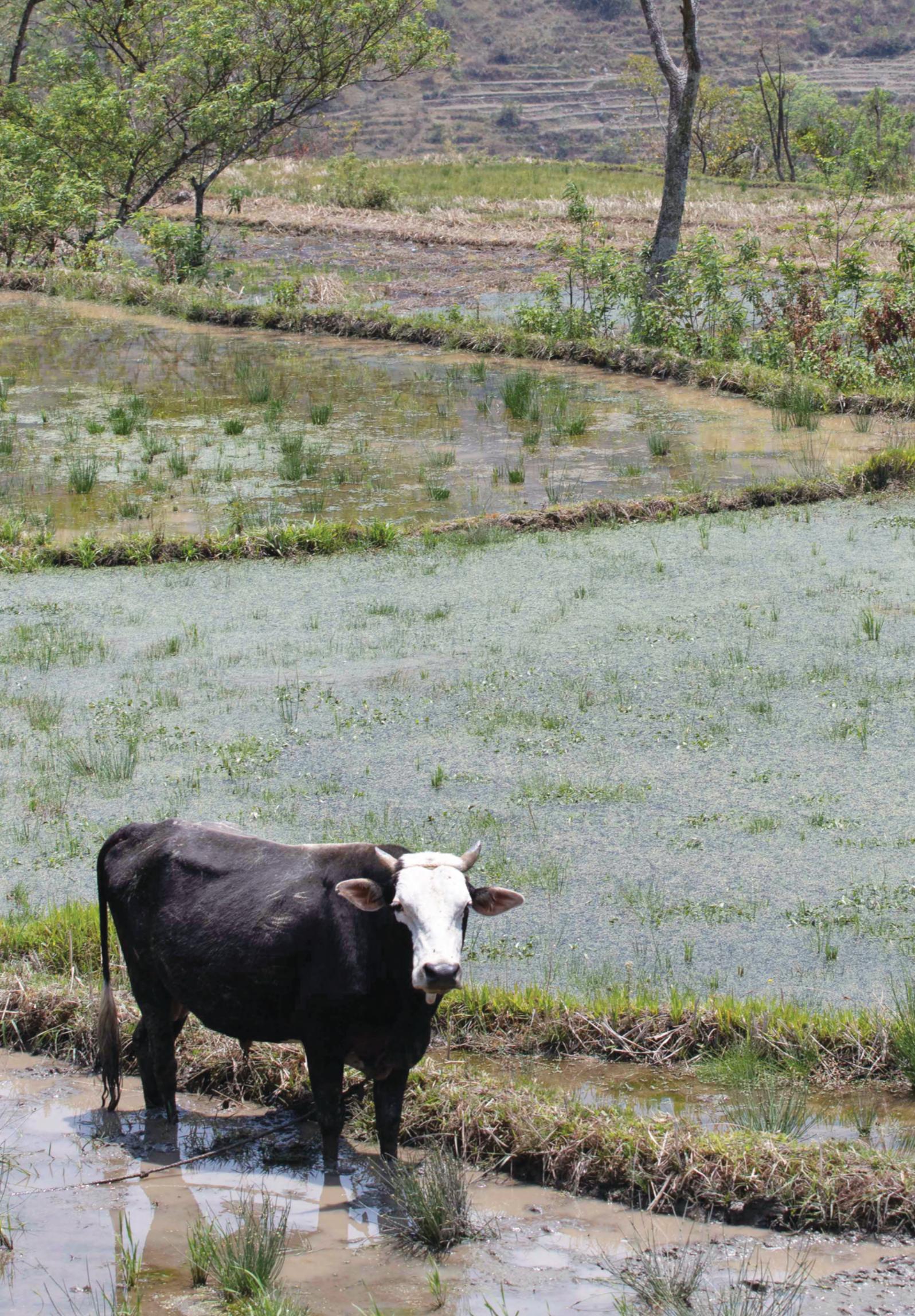


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Acronyms

BC	Biological Corridors
CARLEP	Commercial Agriculture and Resilient Livelihoods Enhancement Programme
CBD	Convention on Biological Diversity
CBNRM	Community Based Natural Resources Management
CBO	Community Based Organizations
CFMG	Community Forest Management Member
COMDEKS	Community Development and Knowledge Management for the Satoyama Initiative
COP	Conference of the Parties
CPS	Country Programme Strategy
CSO	Civil Society Organizations
DOFPS	Department of Forests & Park Services
DOL	Department of Livestock
DRDP	Decentralized Rural Development Project
FEZAP	First Eastern Zone Agriculture Programme
GEF	Global Environment Facility
GLOF	Glacial Lake Outburst Floods
GNH	Gross National Happiness
HANAs	High Altitude Northern Areas
HVC	High Value Conservation
HWC	Human-Wildlife Conflict
ICDP	Integrated Conservation and Development Programs
IGES	Institute for Global Environmental Strategies
INRM	Integrated Natural Resource Management
IPSI	International Partnership for the Satoyama Initiative
IUCN	International Union for Conservation of Nature
MOAF	Ministry of Agriculture and Forests
NAPA	National Adaptation Programme of Action
NBSAP	National Biodiversity Strategy and Action Plan
NWFPs	Non-Wood Forest Products
OP	Operational Phase
PA	Protected Areas
PES	Payment of Ecosystem Services
REDD+	Reducing Emissions from Deforestation and Degradation
RGOB	Royal Government of Bhutan
RMNP	Royal Manas National Park
RNR	Renewable Natural Resources

SEPLS	Socio-Ecological Production Landscapes and Seascapes
SEZAP	Second Eastern Zone Agriculture Programme
SGP	Small Grants Programme
SLM	Sustainable Land Management
TFDP	Third Forestry Development Project
UNDP	United Nations Development Programme
UNU-IAS	The United Nations University's Institute for the Advanced Study of Sustainability
WWMP	Wang Watershed Management Project

Glossary of Bhutanese terms

<i>Brokpas</i>	Nomadic yak herders of Merak and Sakteng region
<i>Dzongkhag</i>	District
<i>Gewog</i>	Administrative unit or block
<i>Tengma</i>	Beaten corn eaten as snacks
<i>Tsamdro</i>	Community grazing land
<i>Tshogpa</i>	Elected village representative



Thongrong, Phongmey, Trashigang

Executive summary

The Satoyama Initiative launched the flagship program, Community Development and Knowledge Management for the Satoyama Initiative (COMDEKS), in 2011 to promote sustainable use of natural resources by local communities across the globe. With financial backing from the Japan Biodiversity Fund, the COMDEKS program provides small grants administered by the Global Environment Facility (GEF) Small Grants Programme (SGP) and United Nations Development Programme (UNDP) to community organizations for environmental projects with a landscape approach. Community recipients then implement projects to maintain and rebuild Socio-Ecological Production Landscapes and Seascapes (SEPLS).

COMDEKS was introduced in Bhutan in 2013. The initial intervention took place in the Gamri watershed from 2013-2015 with support for 12 projects from the GEF-SGP and UNDP Bhutan. Furthermore, the landscape approach piloted by COMDEKS has been adopted by Bhutan's GEF-SGP country programme strategy (CPS) for 2016-2020 (Operational Phase 6) and 2021-2023 (Operational Phase 7). Under this SEPLS approach, the GEF-SGP and UNDP Bhutan, in collaboration with the Royal Government of Bhutan (RGOB), fund projects related to biodiversity conservation, climate change, sustainable forest management, chemical and waste-water treatment and land degradation with the overall aim to improve environmental resilience as well as community livelihoods.

This report presents insights from community members, civil society organizations, local leaders, government officials and policymakers on mainstreaming and upscaling landscape approaches (such as SEPLS) and ensuring their financial sustainability. The consultations and dialogues were held in the communities of intervention, with key government agencies, implementing civil society organizations (CSOs) and with other relevant groups and organizations. The conversations gathered insights, specifically, on the GEF-SGP projects based on the SEPLS approach and, generally, on other initiatives and interventions in Bhutan taking a landscape approach.

While they were not specified as landscape approaches, many projects implemented in Bhutan since the early 1990s have been aimed at building landscape resilience in tandem with improving the socioeconomic status of local communities. Although these interventions have alleviated poverty, enhanced conservation and improved national capacity, landscape approaches have yet to be effectively mainstreamed. As noted in a review by the Policy and Planning Division (PPD) of Ministry of Agriculture and Forests (MOAF) in 2018, we are yet to establish a shared vision and objectives for pursuing a landscape approach; enhance ecological, social and economic interactions among different parts of landscapes; and implement collaborative, community-engaged processes while pursuing a landscape approach.

The COMDEKS/SEPLS approach to conservation has been unique in its strong focus on community. COMDEKS recognizes local communities as the primary agents of landscape change in SEPLS and thus aims to give communities tools to improve their understanding of the social and ecological dynamics and processes that shape their landscape and its resilience. COMDEKS projects encourage communities to analyze and discuss the landscape in which they are embedded and, ultimately, take ownership for its resilience. Through small direct grants

■ ■ ■ Mainstreaming Community-Based Landscape Approaches in Bhutan

and the participatory rating exercise of resilience indicators, the SEPLS approach ensures that interventions are community-driven, thereby reinforcing the relationship between the people and their immediate natural environment.

The field visits of the GEF-SGP project locations revealed that overall, the projects resulted in positive outcomes, especially in managing the environment. The interventions to improve livelihoods had varying results - the most successful results were seen in groups that were either led by an entrepreneur and/or well-established cooperatives or community forestry groups. All communities exhibited high awareness on the importance of sustainable natural resource management and its related co-benefits. However, most communities faced challenges in managing and sustaining the community groups they are a part of and expressed the need for financial and technical support to maintain infrastructure, equipment and machineries, as well as to start and manage new entrepreneurial activities.

On the one hand, the landscape approaches adopted by many past and on-going projects has generated awareness and appreciation that support mainstreaming and upscaling these approaches and SEPLS in Bhutan. On the other hand, gaps persist and mainstreaming remains limited despite attempts from past projects to follow an integrated landscape development approach, suggesting challenges in adopting SEPLS or similar approaches at broader scales.

Recommendations for mainstreaming both SEPLS, in particular, and landscape approaches, in general, include:

- Creating a common understanding and awareness of the landscape approach – through curating locally-relevant knowledge and raising awareness of the landscape approach among all sections of society.
- Building capacity at all levels of government, non-government and private sectors for pursuing a landscape approach.
- Creating institutional mechanisms and governance structures to support a landscape approach within Bhutan's Five-Year Plans, empowering local landscape planning, establishing mechanisms for collaborative work and increasing the role of the private sector.

In addition to mainstreaming, ideas for financing a landscape approach include:

- Connecting the language of biodiversity with banking by, for instance, developing and communicating business cases for landscape interventions based on proven studies, data on financial returns and the cost of inaction.
- Inviting and fostering partnerships among a diversity of stakeholders for mutual benefit, such as establishing linkages between short-term projects and national initiatives (e.g., REDD+) or engaging entrepreneurs and the private sector to work with local community-based organizations.
- Increasing funds for the landscape approach at local and community levels through fiscal decentralization, providing incentives and loan products to communities and entrepreneurs, and through improving demand for local products and services generated by landscape conservation.

Guided by the national philosophy of GNH, the past and current landscape-based initiatives illustrate Bhutan's interest in pursuing development in harmony with nature. The COMDEKS programme in Bhutan has been successful in promoting sustainable use of natural resources by communities in their landscapes, especially by empowering communities to become stewards of their local landscapes. As Bhutan continues its journey of decentralization and enhancing the capacity of local governments, SEPLS could offer practical tools to engage local communities in assessing and actively managing their natural resources for ecosystem resilience.



Radhi, Trashigang



Langdrubi, Bardo, Zhemgang

Background on COMDEKS

Japan's Ministry of the Environment and United Nations University's Institute for the Advanced Study of Sustainability (UNU-IAS) started the Satoyama Initiative to understand the interactions between people and their environment and promote societies that live in harmony with nature. The Satoyama Initiative gained further international traction at the October 2010 Tenth Meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP10) held in Nagoya, Japan, which established the International Partnership for the Satoyama Initiative (IPSI). IPSI aims to facilitate and accelerate the implementation of activities under the Satoyama Initiative. With this added backing, the Satoyama Initiative launched the flagship program, Community Development and Knowledge Management for the Satoyama Initiative (COMDEKS), in 2011 to further promote sustainable use of natural resources by local communities across the globe.

With financial backing from the Japan Biodiversity Fund, the COMDEKS program provides small grants to community organizations for environmental projects. The United Nations Development Programme (UNDP) implements COMDEKS in partnership with the Ministry of the Environment of Japan, the CBD Secretariat and the UNU-IAS, and the Global Environment Facility (GEF) Small Grants Programme (SGP) delivers funds to community organizations. Community recipients then implement projects to maintain and rebuild Socio-Ecological Production Landscapes and Seascapes (SEPLS). Six perspectives guide the Satoyama Initiative's approach:

1. Resource use within the carrying capacity and resilience of the environment
2. Cyclic use of natural resources
3. Recognition of the value and importance of local traditions and cultures
4. Multi Stakeholder participation and collaboration in sustainable landscape management
5. Contributions to sustainable socio-economies, including poverty reduction, food security, sustainable livelihoods and local community empowerment
6. Improved community resilience to achieve greater ecological, social, cultural, spiritual and economic benefits.

COMDEKS was launched in 2011 in ten pilot countries - Brazil, Cambodia, Ethiopia, Ghana, Fiji, India, Malawi, Nepal, Slovakia and Turkey. In 2013, the Government of Japan and UNDP launched the second phase of the project in ten additional countries - Bhutan, Cameroon, Costa Rica, Ecuador, El Salvador, Kyrgyzstan, Indonesia, Mongolia, Namibia and Niger.

During the first two phases of the implementation of the programme, COMDEKS' lessons, models and tools provided useful inputs to the development of the landscape and seascape approach, which is now adopted by SGP Country Programmes in 125 countries. The third phase of COMDEKS implementation aims to promote sustainability and upscaling of the SEPLS conservation approach, including efforts to promote institutional and financial sustainability.

SEPLS and landscape resilience

What is a landscape approach?¹

A landscape approach to conservation sees the ecosystems, land uses, and communities in the landscape as a single interactive and integrated system—a socio-ecological production landscape or seascape. In this approach to environmental conservation, community-led projects are the focus of attention, with the goal of restoring landscape resilience to support sustainable local livelihoods, ecosystem health and biodiversity. This approach has been applied within more than 100 community-organized projects in the 20 COMDEKS pilot countries. These projects continue to contribute to enhanced ecosystem services, sustainable and productive agroecosystems, the development of local, green economies and stronger participatory decision-making and governance at the landscape scale.

What are Socio-Ecological Production Landscapes and Seascapes (SEPLS)?²

Humans have been interacting with ecosystems for millennia to produce food and fiber, collect building materials, extract energy and mineral resources, and support their spiritual and cultural lives. The landscapes that have resulted are altered by human management, but in many cases remain ecologically vital and productive, providing the basis for local livelihoods. In fact, many local land-use practices have evolved into highly productive and sustainable management schemes, informed by years of local adaptations and traditional knowledge. They are often characterized by a mosaic of land uses that may include crop land, home gardens, agroforestry systems, pastures, forest groves, marine and freshwater fishing grounds, and water harvesting sites, as well as community protected areas and sacred sites that are less disturbed. These so-called “socio-ecological production landscapes and seascapes (SEPLS)” are coupled systems—dependent for their production on both their social and ecological components. They occur in many places around the world under different names and are deeply intertwined with local culture and knowledge. Such production landscapes have traditionally provided the backbone of rural economies and play an important role in the cultural and spiritual well-being of the communities that live and work in them. They also serve as habitat for a globally significant repository of biodiversity. However, the resilience and productivity of many of these landscapes has declined as economic, social, and demographic changes in nearby communities have eroded traditional landscape management systems.

What is landscape resilience?³

Resilience is the ability of a system to absorb disturbances while retaining its basic structure and function. Landscapes are composite systems that include ecosystems, as well as the social/cultural and economic systems that support communities within the landscape.

1 Definition extracted from: United Nations Development Programme. 2016. A Community-based Approach to Resilient and Sustainable Landscapes: Lessons from Phase II of the COMDEKS Programme. UNDP, New York.

2 Definition extracted from: United Nations Development Programme. 2014. Communities in Action for Landscape Resilience and Sustainability – The COMDEKS Programme. UNDP, New York.

3 Definition extracted from: United Nations Development Programme. 2018. Assessing Landscape Resilience: Best Practices and Lessons Learned from the COMDEKS Programme. UNDP, New York.

To be a resilient landscape means that these integrated systems—ecological, economic, and social—continue to function in the face of physical and socioeconomic challenges. They continue to deliver ecosystem services such as water, soil fertility and biological productivity in the face of human pressure from agriculture, forestry, fishing and other resource uses. Similarly, resilient landscape systems provide the basis for sustainable livelihoods in the face of socioeconomic challenges, such as limited market access and infrastructure that frequently plague rural economies. These factors allow resilient landscapes to provide opportunities for social mobility, education, cultural expression, and the maintenance of cultural identity in the face of political marginalization, poverty, and rapid demographic changes. Building landscape resilience requires actions to address the challenges in each of these systems in an integrated fashion.

COMDEKS focuses on four interrelated landscape outcomes that contribute to landscape resilience:

- Enhancing ecosystem services and maintaining the biodiversity that underlies landscape health;
- Strengthening the sustainability of production systems;
- Developing and diversifying the livelihoods and incomes of communities;
- Strengthening institutions and governance systems to encourage community participation in sustainable landscape management.

What are resilience indicators?

Local communities are the primary and core agents of landscape conservation, but they need a framework to understand and tools to assess the resilience of their local landscape. In 2011, UNU-IAS and Bioversity International developed an initial set of 20 “Indicators of Resilience in Socio-ecological Production Landscapes and Seascapes”. The resilience indicators were adopted by the COMDEKS Programme in 2012 as a central feature of its community consultation process. An updated set of indicators and a toolkit for their practical application in the field were produced by UNU-IAS, Bioversity International, Institute for Global Environmental Strategies (IGES) and UNDP in 2014. These indicators begin to develop a picture of the dynamics and processes that shape local landscapes and their resilience.

The resilience indicators used in COMDEKS rely on community perceptions of the principal domains of landscape resilience. The resilience indicators used in COMDEKS consist of a mix of 20 quantitative and qualitative measures asking community members about the conditions, practices, and institutions occurring within the target landscape. The indicators measure elements of SEPLS resilience that are strongly interrelated, grouped in five areas:

- Landscape/seascape diversity and ecosystem protection
- Biodiversity (including agricultural biodiversity)
- Knowledge and innovation
- Governance and social equity
- Livelihoods and well-being

■ ■ ■ Mainstreaming Community-Based Landscape Approaches in Bhutan

The indicators rely on community perceptions to assess landscape resilience and reflect the knowledge, experiences, and concerns of local stakeholders. These indicators are not an absolute measure of landscape resilience but provide important information on current landscape conditions and trends in the different dimensions of resilience, link them to landscape management practices past and present, and deepen the understanding of community members of what these observations mean in relation to landscape resilience.



Sakteng, Trashigang

Biodiversity and its conservation in Bhutan⁴

Bhutan is part of the Eastern Himalayan region which has been recognized as a global biodiversity hotspot. Within a small area of 38,394 km², Bhutan presents a landscape of varied microclimates distributed across a steep elevational gradient, giving rise to rich biodiversity grouped across six major agro-ecological zones. Bhutan also has a strong tradition of environmental conservation with 70.46% of the total land area remaining under forest cover.

Bhutan hosts an extraordinary density of biodiversity, some species of which are globally threatened. About 5,603 flowering plant species occur in Bhutan. Likewise, nearly 200 mammal species have been documented, of which 27 are globally threatened. Further, Bhutan has recorded 739 species of birds till date, of which 18 are globally threatened. Recent studies have reported over a 100 freshwater fish species in Bhutan, which is thought to be an underestimate of the actual freshwater fish diversity. Ongoing surveys of other lesser-known species such as fungi, herpetofauna and invertebrates have yet to produce any robust estimates of diversity. Within the agro-environment, about 80 species of crops occur in the country, including cereals such as rice, maize, barley, millet, wheat, and buckwheat; fruits such as apple, orange, and pear; vegetables such as potato, bean and cabbage; and spices such as chili, cardamom, garlic, and ginger.

Environmental conservation has always been a top priority for Bhutan encapsulated within its development philosophy of Gross National Happiness, and the country's laws and policies reflect this commitment. As per the Constitution, a minimum of 60% of Bhutan's total land area must be maintained under forest cover for all time. Legislation such as Forest and Nature Conservation Act, National Environment Act, Environmental Assessment Act and Biodiversity Act seek to protect the environment and biodiversity. Not only does the Biodiversity Act of Bhutan (2003) encourage local communities to preserve and utilize traditional knowledge, it also empowers them to make decisions about how to manage their local natural resources. A Biodiversity Bill was tabled in May 2021 which outlines a new mechanism for accessing and using Bhutanese genetic resources in a fair and equitable manner.

Bhutan has developed and implemented three Biodiversity Action Plans, the first in 1998, the second in 2002 and the third in 2009. Bhutan revised its National Biodiversity Strategies and Action Plan (NBSAP) in 2014 to fully align with the Global Aichi Biodiversity targets. The national targets are mainstreamed in Bhutan's Five-year Plan and sectoral plans. A National Committee on Biodiversity has been established to ensure effective mainstreaming of the NBSAP targets and actions into national and sectoral plans including the monitoring of relevant activities. Once the NBSAP targets are mainstreamed into national plans, activities are monitored through the Government Performance Management System.

Recognizing the importance of people's participation in conservation, the country introduced a community forest management system in 1990. Today, 75,705 hectares (equivalent to 2.8% of the forested area) are managed as community forests, benefitting around 28,500 household

⁴ Adapted from Sixth National Report of Bhutan to Convention on Biological Diversity (Bhutan | Sixth National Report | Clearing-House Mechanism (cbd.int))

■ ■ ■ Mainstreaming Community-Based Landscape Approaches in Bhutan

members. The government approved the Access and Benefit Sharing Policy of Bhutan in 2015 with the vision of “incentivizing the conservation and sustainable use of Bhutan’s biological heritage through a financing mechanism that secures the economic, social and spiritual well-being of the Bhutanese people”.

Beyond legal measures, Bhutan has taken additional actions to conserve biodiversity. Protected areas and biological corridors make up 51.3% of the country’s total land area. The government has also undertaken programs such as on-farm conservation of crop genetic resources, sustainable land use and management. A variety of botanical and medicinal gardens, as well as a gene bank, serve as a repositories of national floral resources for ex situ conservation.

Threats to biodiversity

The main threats to biodiversity in Bhutan are: land conversion, human-wildlife conflict (HWC), over-exploitation, dependence on wood for fuel, domestic sewage pollution, climate change and forest fires. Land conversion for infrastructure development within Bhutan often fragments once contiguous forested or agricultural lands into smaller patches of habitat, further threatening biodiversity. These fragmented landscapes lead to more interactions between humans and wildlife, producing additional HWC. About 55% of the crop damage in Bhutan is attributed to wildlife and wild predators have killed more than 2000 livestock in the decade from 2002-2012.

Threats to domesticated biodiversity include unsustainable cropping practices, agricultural land conversion, cultivation of exotic agricultural crops and land degradation in the form of erosion.



Phongmey, Trashigang

COMDEKS projects in Bhutan

COMDEKS was introduced in Bhutan in 2013. The initial intervention took place in the Gamri watershed from 2013-2015 with support for 12 projects from the GEF-SGP and UNDP Bhutan. Furthermore, the landscape approach piloted by COMDEKS has been adopted by Bhutan's GEF-SGP country programme strategy (CPS) for 2016-2020 (Operational Phase 6) and 2021-2023 (Operational Phase 7). Under this SEPLS approach, the GEF-SGP and UNDP Bhutan, in collaboration with the Royal Government of Bhutan (RGOB), fund projects related to biodiversity conservation, climate change, sustainable forest management, chemical and waste-water treatment and land degradation with the overall aim to improve environmental resilience as well as community livelihoods. To achieve these goals, funds are made available through small grants (usually between USD 25,000 to USD 50,000) to community-based organizations (CBOs) and civil society organizations (CSOs).

As a part of the monitoring and evaluation taking place during the third phase of COMDEKS, we visited two landscapes – the Gamri watershed and Lower Manas Basin – that had received support and funds to adopt a SEPLS conservation approach.

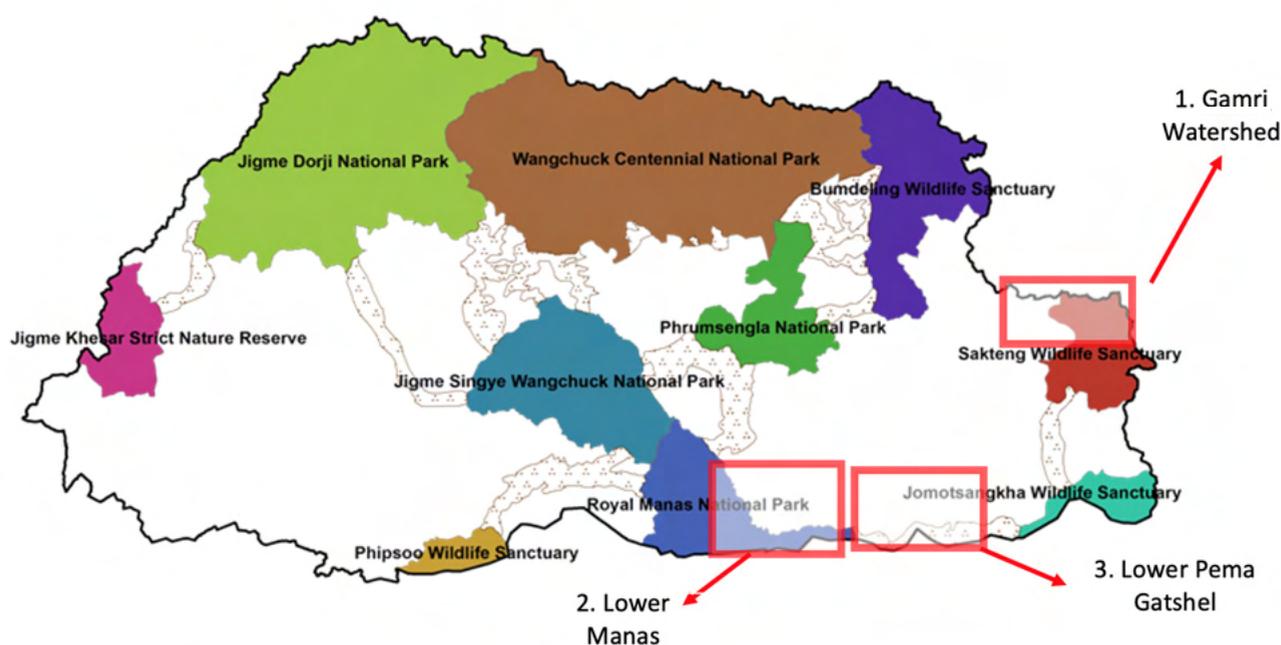


Figure 1. Landscapes of GEF-SGP projects for OP5, OP6 and OP7*

Gamri Watershed, Trashigang

The Gamri watershed, occupying an area of 745 km², spreads over eight gewogs (administrative blocks) in Trashigang Dzongkhag (district) in eastern Bhutan. The Gamri River has 19 major tributaries originating within the study area and represents a significant catchment area and drainage basin. The Gamri forms one of the main tributaries of the Drangme Chhu, which drains into the Brahmaputra River in India and finally flows into the Bay of Bengal.

* The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of BES and its partners concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

Mainstreaming Community-Based Landscape Approaches in Bhutan

The Gamri watershed contains a variety of environmental and socioeconomic features. The area has a diverse climate and contains an array of ecosystems ranging from alpine meadows to broadleaf forests. Pasture and agricultural fields make up about 30% of land within the watershed, serving the needs of the nearly 70 settlements in the drainage. Agriculture, livestock (including yak) rearing, and weaving are the economic mainstays of the people living in the watershed.

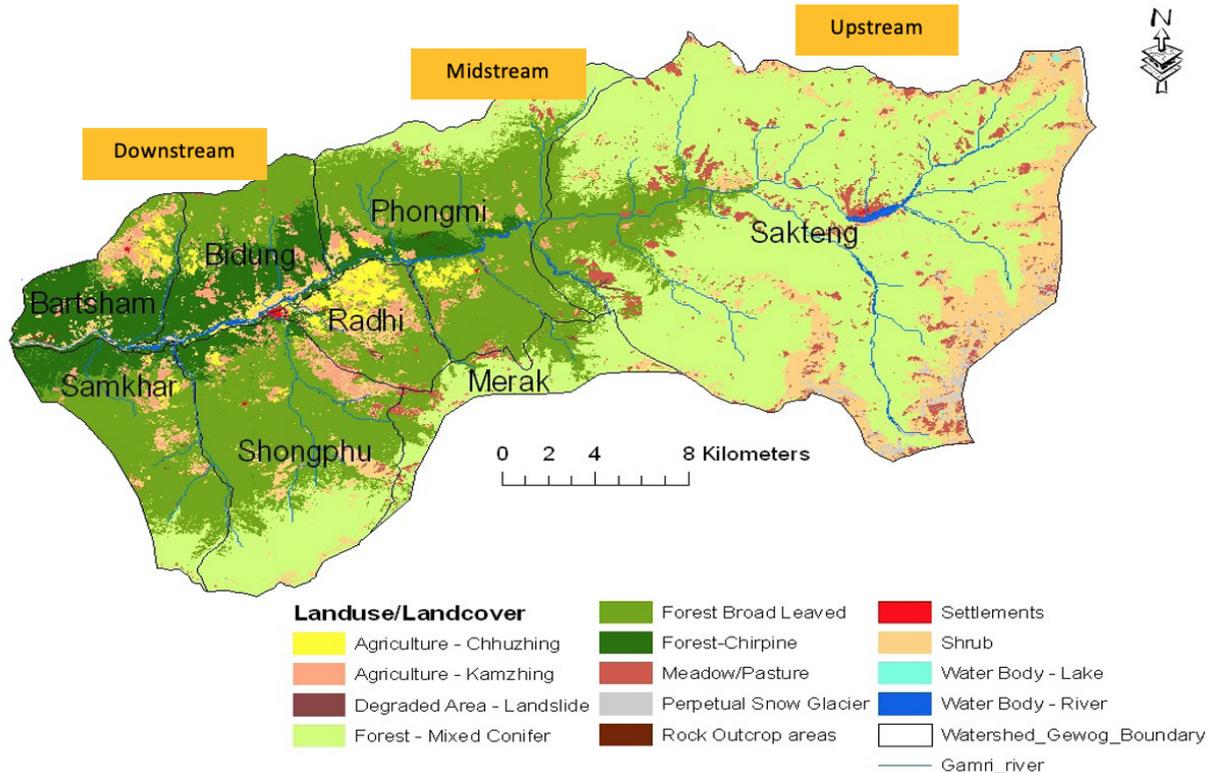


Figure 2. Gamri Watershed, Trashigang

The COMDEKS program identified the Gamri watershed as a target for intervention due to the growing pressures on the landscape from grazing, over-extraction of fodder and fuel wood, landslides, and the drying of water sources. Additionally, HWC posed (and still poses) a major problem for local communities at the lower and middle elevations of the Gamri watershed. HWC had considerably reduced traditional crop diversity and caused economic losses every year, especially from porcupines, monkeys and wild boars. In some cases, farmers had left their lands fallow due to their inability to fully mitigate this loss and damage. A total of 12 projects were implemented in the Gamri watershed area⁵ (see Table 1).

⁵ Eight of the 12 projects were implemented under the COMDEKS grant, the remaining four projects were implemented under the regular GEF-SGP grant.

Table 1. Projects supported in Gamri Watershed from 2013-2015

Sl No	Name of Project	Grantee	Location	Grant Amount (USD)
1	Yenangla Water catchment Rehabilitation and Forest Fire Management	Yenangla Water Catchment Protection Group	Yenangla, Bartsham	31,250.00
2	Sustainable management of farmland and improvement through oilseed production and sale	Saling Sazhing Zinchong Detshen	Tsigtum, Bidung	47,500.00
3	Agricultural landscape protection and management	Sazhing Yuenten Tshogpa	Radhi	38,150.00
4	Development and Pilot Testing of Improved Cooking and Heating Stoves	Tarayana Foundation	Multiple locations	41,200.00
5	Protection of Sakteng Village from Land Erosion	Sakteng Sacha Zinchong Tshogpa	Sakteng village, Sakteng	44,500.00
6	Integrated Landscape Management at Yenangbrangsa	Yenangbrangsa Watershed Management Group	Yenangbrangsa, Samkhar	32,630.00
7	Increasing productivity and rural income through sustainable agriculture landscape management	Thongrong Sazhing Tshogpa	Thongrong, Phongmey	48,300.00
8	NWFP Product Development and Sustainable Management of Wangphu Choeling Community Forest	Wangphu Choeling Community Forest Group	Yabrang, Phongmey	46,500.00
9	Sustainable rangeland management and reducing pressure on environment	Cherburling Rangeland Management Group	Chiburling, Merak	44,250.00
10	Water source protection and rehabilitation of degraded land	Joenkhar Water Source Protection Group	Joenkhar, Sakteng	31,550.00
11	Sustainable water resource management	Bidung Water Source Protection Group	Bidung	39,650.00
12	Water source protection and reduction of fuelwood consumption	Ranjung Phendoey Tshogpa	Shongphu	47,500.00

Lower Manas Basin, Zhemgang

The Lower Manas Basin covers five gewogs of Zhemgang district and covers roughly 912 km². In south-central Bhutan. The Manas is the biggest river basin in Bhutan and consists of four sub-basins – Mangdechhu, Chamkharchhu, Kurichhu and Drangmechhu. The Manas River drains into Brahmaputra River in India, which finally empties into the Bay of Bengal.

Mainstreaming Community-Based Landscape Approaches in Bhutan

The Lower Manas Basin represents some of the most biologically diverse habitat in Bhutan. The majority of the Lower Manas landscape falls under the administration of Royal Manas National Park (RMNP), Bhutan's oldest national park, which was established in 1966. RMNP's age and biological diversity make it a conservation showpiece for Bhutan and a genetic repository of

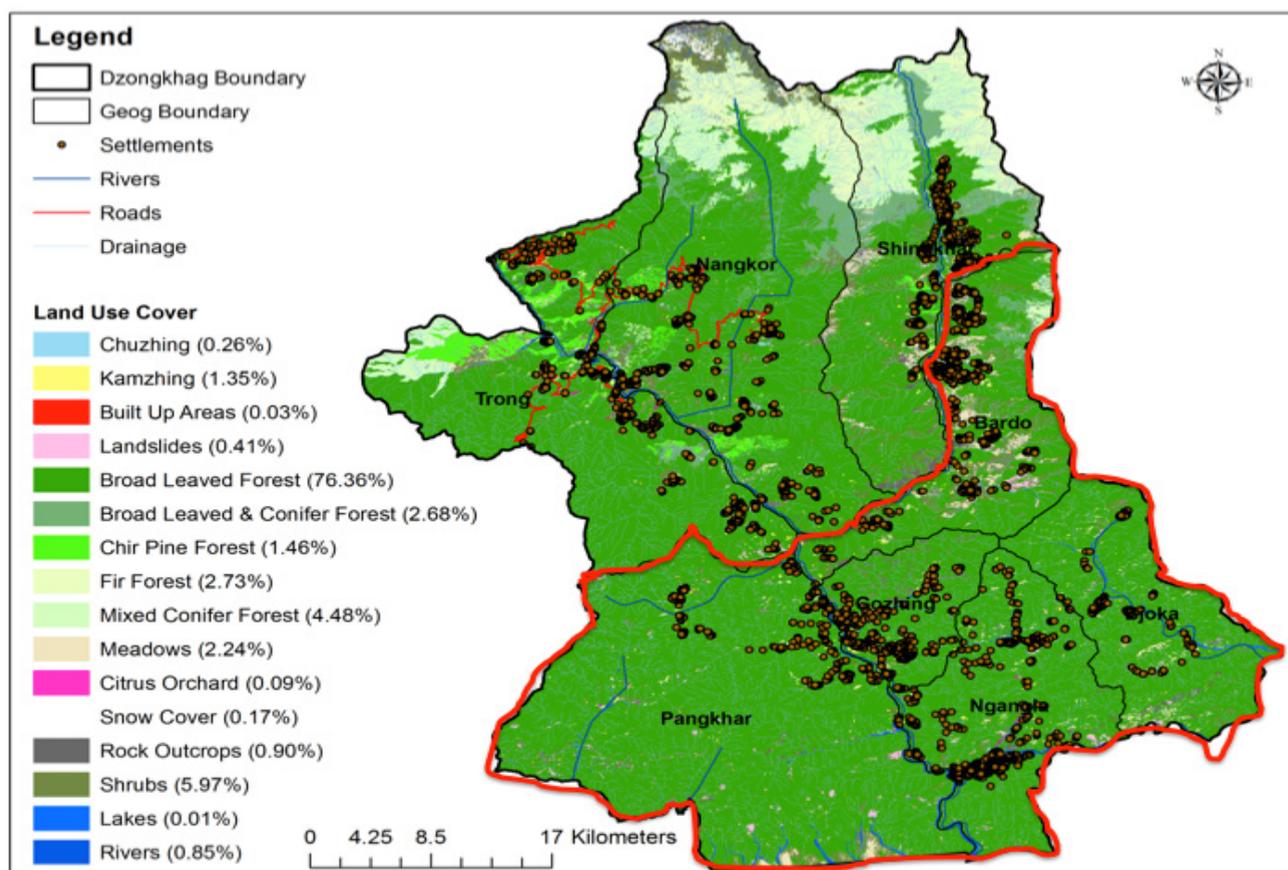


Figure 3. Lower Manas Basin, Zhemgang

valuable plants. In addition to its floral diversity, RMNP and the wider watershed host many charismatic species of mammals, including Bengal tigers, elephants, gaur (*Bos gaurus*), golden langur (*Presbytis geei*), pygmy hog (*Sus salvanius*), hispid hare (*Caprolagus hispidus*) and Ganges river dolphin (*Platanista*). RMNP represents the only habitat in Bhutan for rare species such as the one-horned rhinoceros (*Rhinoceros unicornis*) and wild water buffalo (*Bubalus arnee*). The area also boasts spectacular avian diversity with hundreds of species overall, including four species of hornbills: rufous-necked, wreathed, pied and great Indian. The watershed is home to three species of rare migratory game fish: the deep-bodied mahseer (*Tor tor*), golden mahseer (*Tor putitora*), and chocolate mahseer or Katle (*Acrossocheilus hexangonolepis*).

Socioeconomically, the Lower Manas Basin remains relatively under-developed. The landscape plays home to 11,266 people and the region has a high incidence of poverty. Most livelihoods revolve around subsistence agriculture and livestock. Within this biological and socioeconomic context of the Lower Manas Basing, GEF-SGP and UNDP supported a total of 8 projects (see Table 2).

Table 2. Projects supported in Lower Manas Basin from 2018-2021

Sl No	Name of Project	Grantee	Village, Gewog	Grant Amount (USD)
1	Sustainable land management and promotion of local agro-biodiversity for food security in Digala	Royal Society for Protection of Nature	Digala, Bardo	48,000.00
2	Sustaining agro-ecological services in Langdurbi village through sustainable natural resource management for biodiversity conservation and livelihood	Langdurbi Sa Gi Sungjab	Langdurbi, Bardo	32,900.00
3	Rehabilitating fallow land through agro-forestry for rural income enhancement	Khengrig Namsum Cooperative	Tingtibi, Trong	40,500.00
4	Enhancing livelihood through medium scale cardamom plantation in Bardo village	Khengrig Namsum Cooperative (KNC)	Bardo, Bardo	9,500.00
5	Building community resilience through youth-based small-scale beekeeping for sustainable rural livelihood and ecosystem enhancement	Budashi Beekeepers	Budashi, Goshing	30,100.00
6	Improved access to clean energy and technology to reduce GHG emissions and enhance biodiversity conservation	Panbang Chirden Phendhey Tshogpa (PCPT)	Nangla, Panbang	30,950.00
7	Sustainable management and utilization of NWFPs in multiple use area of RMNP	Pongchola Tsharzo Tshogpa	Pongchola, Phangkhar	46,600.00
8	Spring shed assessment and enhancement of Norzincholing community forest	Norzincholing Community Forest	Panbang	7,500.00

COMDEKS Phase III in Bhutan

The third phase of the COMDEKS focuses on: i) sustainability and upscaling of the socio-ecological production landscapes and seascapes (SEPLS) conservation approach and ii) institutional and financial sustainability of the mechanisms supporting these landscapes and seascapes. The third phase seeks to consolidate COMDEKS' activities, conduct policy dialogues for sustainability, and provide valuable inputs for the development of the Post-2020 Global Biodiversity Framework under the CBD. This phase would contribute to the COP decisions as follows:

- a. promote sustainable use of biodiversity and its integration into the management of land, forest, and water resources (COP decision XII/18);
- b. provide further guidance on the concept of sustainability in food and agriculture with regard to biodiversity, and to promote and strengthen support for information sharing and technology transfer among Parties (COP decision XIII/3); and
- c. where relevant, institutionalize these SEPLS as other effective area-based conservation measures (COP decision XIV/8).

This phase promotes further sharing and communication, including dissemination of best practices and lessons learned from the SEPLS projects. Information gathered through the third phase of the project will be disseminated through the global SGP network of 125 Country Programmes, IPSI, and other partners worldwide. This exchange of information and knowledge hopes to inform and enable policy formulation at the country-, regional and global levels to enhance the recognition of SEPLS.

Project Details

Project title: National policy dialogue(s) regarding the sustainability and upscaling of socio-ecological production landscapes and seascapes (SEPLS) conservation approach

Grantee: Bhutan Ecological Society (Non-government organization)

Project Number: BHU/COMDEKS/2021/01

Operational Phase: OP7- Year 1 (July 2020 – June 2021)

Dates: January 2021 – July 2021

Grant Amount: USD 33,000

Co-financing in kind: USD 6,667

We visited 12 sites from these two landscapes as a part of COMDEKS Phase III - seven projects in the Gamri watershed and five in the Lower Manas Basin. We gathered insights about the successes, challenges and lessons learned from project implementation through semi-structured interviews. The assessment involved meetings with local leaders, local officials from departments of agriculture, livestock and forest and community members. Where possible, we visited landscape intervention sites. In addition to the interviews, we conducted a rapid resilience assessment using the Indicators of Resilience of SEPLS. Following the site visit, we held consultations with key stakeholders from various government agencies and other non-government organizations involved in rural development and landscape-based projects. Finally, a national policy dialogue was held to share key insights from COMDEKS projects and discuss ideas for mainstreaming landscape approaches such as SEPLS and attaining financial sustainability for landscape-based interventions.

COMDEKS III process

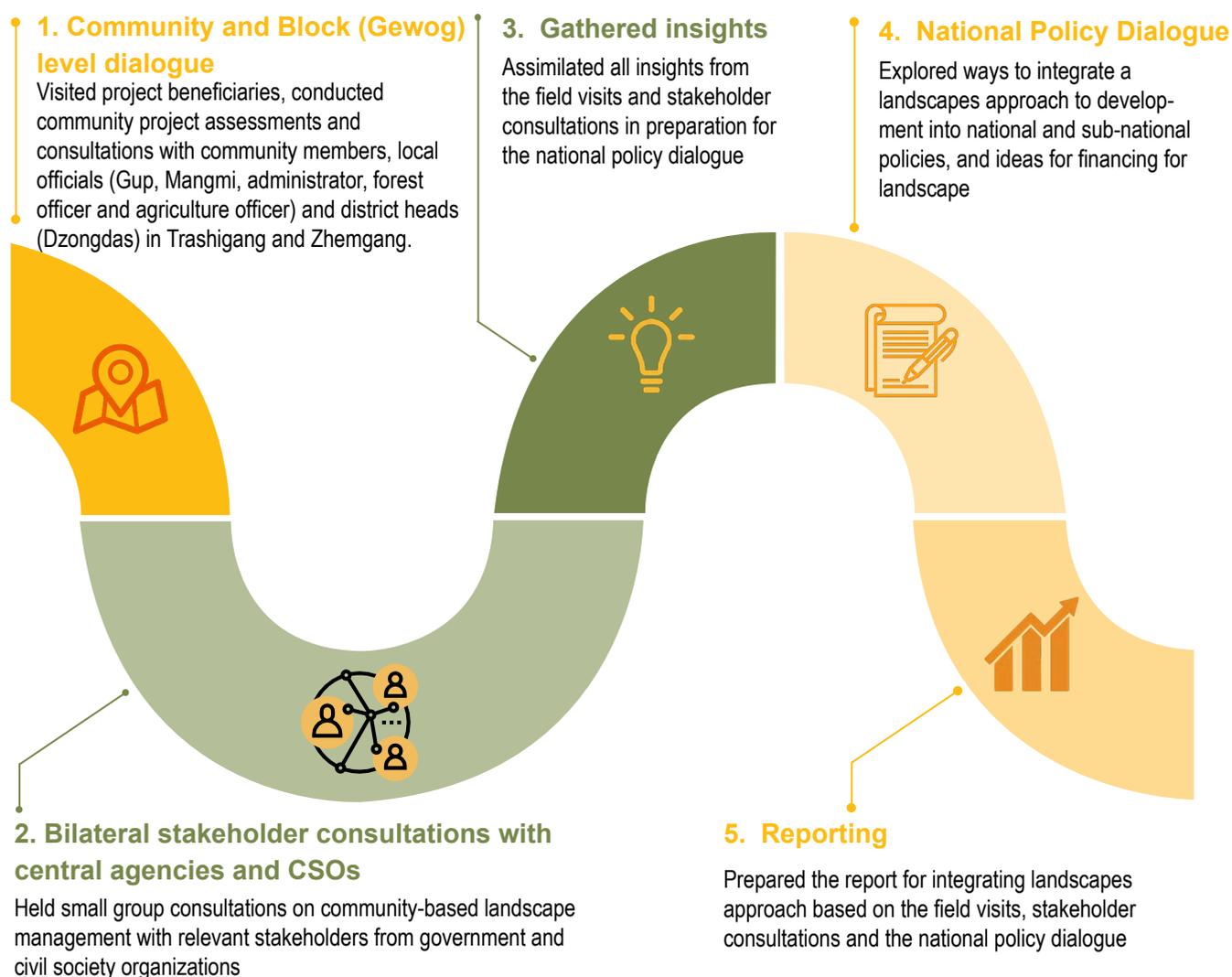


Figure 4. Process of consultation for COMDEKS Phase III

Insights from field visits

Overall, the projects resulted in positive outcomes, especially in managing the environment. Fencing and plantations led to the protection of several community water sources. The construction of causeways, drains, check dams, stone bunds mitigated landslide risks and impacts. The installation of electric fencing secured agriculture lands from wildlife damage. The introduction of Napier grasses led to better management of soil erosion. The projects contributed to fallow lands rehabilitation. Despite these successes, the community and local government made no further investments in infrastructure that needed further maintenance. Most commonly, the electric fences needed replacement, but were never maintained after the initial installation. Furthermore, in some villages, roadside drains constructed by the project were not functional as they were built at a higher level than the road in anticipation of paving that had not yet occurred.



Community consultation in Samkhar, Trashigang



Retaining walls damaged from the rainfall



Remains of the causeway in Radhi



Unsurfaced road and incomplete drain construction in Samkhar contributing to poor drainage and soil erosion



Paddy thresher in Bidung



Defunct electric fencing in Samkhar



Terracing and napier grass plantation in Thongrong



Farmers in Zhemgang



Solar electric fences in Thongrong



Chairman of Khengrig Namsum Cooperative (KNC) gives a tour of the watermelon farm in Tingtibi



Conservation conversation with the semi-nomadic community in Sakteng, Trashigang.

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The interventions to improve livelihoods had varying results - the most successful results were seen in groups led by an entrepreneur and/or well-established cooperatives or community forestry groups. Many Community Based Organizations (CBOs) that were formed during the project period had become inactive. Some members from the community who were interested in continuing alternative income opportunities introduced by the projects lacked capacity and/or capital to do so. In addition, the remoteness of some locations presented a major barrier to bringing products to market. Nonetheless, some community members generated income without major investment by developing bamboo handicrafts and baskets, using traditional techniques and low-cost technology.

All communities exhibited high awareness of the importance of sustainable natural resource management and its related co-benefits. However, most communities expressed the need for financial and technical support to maintain infrastructure, and to start and manage new entrepreneurial activities using local renewable resources (agricultural, wood and/or bamboo products). Many community members wished to develop entrepreneurial skills and expressed the need for reliable market access for their products to improve their livelihoods.

Most communities practiced Ladam and Ridam, traditional practices which restrict access to passes, mountains, groves, lakes, and forests during certain times of the year. Some communities even engaged in rituals to bring rain and protect water sources. However, these communities have not maintained traditional varieties of crops and breeds of livestock. The preservation of traditional knowledge and traditional agricultural diversity faces challenges from many factors, such as the migration of young people out of the villages, the changing mindset of younger, educated generations and a lack of capacity within older generations to document traditional customs and practices.

A summary of insights from projects visited is presented in Annexure-I.

Challenges in sustainability of projects

A common challenge in the projects visited was their limited ability to sustain and expand on the activities as most of the beneficiaries/grantees were rural community-based organizations (CBOs) with insufficient capacity and resources. In addition, the CBOs did not have established relationships with external entities who could provide them with technical and financial resources beyond the local authorities. The local authorities have limited resources and are bound by the nationally determined five-year development plans and accompanying budgets. These limits leave the communities within focal landscapes without the capacity to sustain the project interventions beyond the two-year funding period and improve landscape resilience. Some specific challenges noted in the projects implemented included:

1. Reduced activity of community-based organizations. A common issue observed was that many of the community-based organizations did not exist outside of the project funding period. After the end of the project, most groups failed to sustain the project activities and/or lost many members who migrated in search of better opportunities.
2. Limited self-help and entrepreneurial capacity. Most of the communities expect further

interventions and support from the government and donor organizations. For instance, in communities where electric fencing was provided and deemed ineffective in reducing wildlife intrusion to agricultural lands (either due to fence damage or wildlife adapting to fences and continuing to use fenced areas), they now wish to be provided fencing with barbed wires and iron poles. Furthermore, in two communities where mustard production was promoted, the oil expeller machine remained unused possibly due to improper installation, so the mustard cultivation and processing component of the project was abandoned without a means of processing the raw oilseeds.

3. Coordination and cooperation challenges in group-based activities and collective asset ownership. While the projects sought to engage the community as a group, most members preferred to operate individually. For example, some villages were provided with electric fencing around the periphery of their village which required the community to maintain the fencing collectively (such as trimming the grass regularly from touching the electric wires or mending some portions that were damaged). Since the fencing was far from any one household, members found maintaining the fencing cumbersome and ineffective. Similarly, in one community where a few power tillers were provided, sharing the machine proved to be challenging as it required coordination to plan which member would be able to use it on a given day, in addition to the difficulty of maintaining the machine collectively. Since community life is organized around families, individuals were reluctant to invest time and resources into group activities beyond their families, when collective assets required coordination and offered diluted (or in some cases, nonexistent) benefits to individual families. Community members suggested starting pilot initiatives with groups organized at the family level to improve outcomes.
4. Limited capacity and resources for in-situ preservation of traditional knowledge and local varieties of crops and livestock. Despite the effort from the National Biodiversity Center to preserve and restore local varieties of crops and livestock at the national level, most communities exhibited limited capacity and initiative to preserve traditional knowledge of farming, local crops and livestock. Except for two local varieties of rice preserved in Eastern Bhutan, we observed no local seed banks or knowledge centers in the communities visited. To build self-sufficiency and promote agricultural development, the government has long promoted improved seed varieties and soil amendments (e.g., fertilizers), and more productive cattle breeds such as Jersey. Thus, in the communities visited, we observed an apparent trade-off between self-sufficiency and the conservation of agricultural diversity, which manifested through government policy and community support.
5. Lack of access to market. Turmeric powder produced in one remote community remains to be unable to reach a market. In addition to a lack of marketing, distribution channels and entrepreneurial skills, the location and socio-economic conditions of many rural communities pose serious challenges in generating income through entrepreneurial and livelihood-enhancing activities.

SEPLS resilience indicators assessment

The Indicators of Resilience in SEPLS are a set of 20 indicators for communities to assess the socio-ecological resilience of their production landscapes. The indicators are an integral feature of COMDEKS implementation that enables communities to understand resilience and serves as a tool for adaptive management, monitoring and evaluation. Ex-ante and ex-post assessment had been carried out before and after the completion of COMDEKS projects.

As a follow-up to the ex-ante and ex-post assessments, we used the resilience indicators during the community consultations to assess the landscape changes as perceived by local landscape users and to evaluate the changes since the project interventions. Despite the previous landscape assessments, many community members were not familiar with the exercise, perhaps because they were a different set of people than those who were a part of the ex-ante and ex-post assessments.

Resilience in Trashigang

Comparing the landscape resilience scores from ex-ante, ex-post and the COMDEKS Phase III follow-up assessments in Trashigang, the scores for most categories of SEPLS indicators were similar to the ex-post surveys, but improved relative to the ex-ante surveys. This general improvement indicated that the communities' perception of resilience had sustained years after the project. However, with respect to "knowledge and innovation", follow-up survey scores were lower than in the earlier assessments. In general, community members perceived innovation in agriculture to be minimal, and that other than passing down some traditional knowledge of farming within families, local knowledge and seed banks did not exist.

Table 3. Comparison of SEPLS Resilience Indicator Scores in Trashigang

SEPLs Indicators	Ex-ante (2013)	Ex-post (2016)	Follow-up (2021)
Landscape biodiversity and ecosystem protection	3.1	4.2	4.1
Biodiversity (including agricultural biodiversity)	3.6	4.3	4.1
Knowledge and innovation	3.9	4.1	3.1
Governance and social equity	3.6	4.2	4.2
Livelihoods and wellbeing	-	-	3.6

These overall trends in resilience indicators masked some of the variation among communities in the Gamri watershed. While all communities generally perceived lower resilience in "knowledge and innovation", perception of "landscape biodiversity and ecosystem protection" and "biodiversity (including agricultural biodiversity)" varied widely among communities. Remote communities (like Saling/Bidung and Sakteng) generally felt that they had greater biodiversity than more accessible communities (like Radhi and Bartsham).

SEPLS Resilience Indicator Scoring, Trashigang

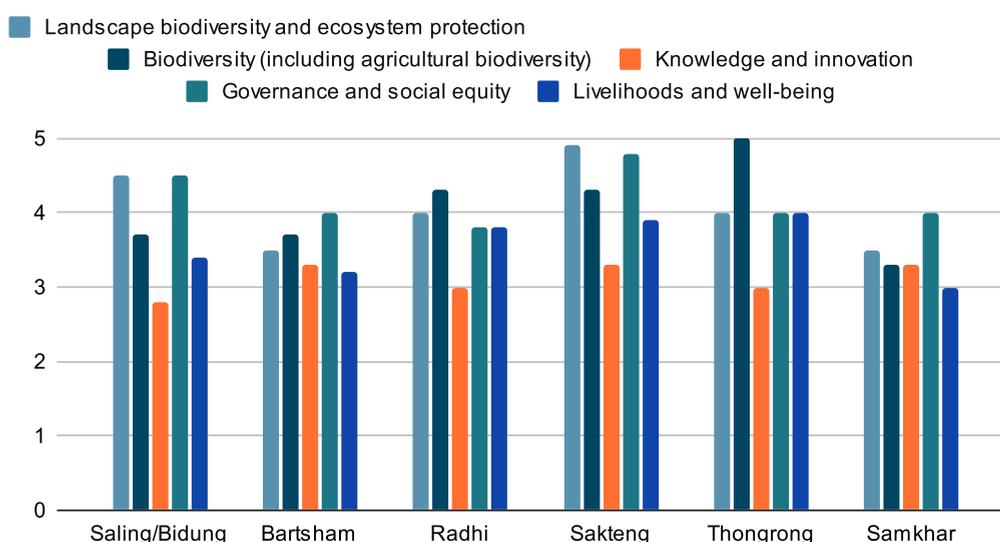


Figure 5. Resilience Indicator scoring during follow-up visit to Trashigang

Resilience in Zhemgang

In Zhemgang, ex-post assessment scores were not available, so we compared the follow-up scores to the ex-ante assessments. This comparison showed limited or no improvement in landscape resilience. As in the Gamri watershed, community members felt that the landscape’s resilience in “knowledge and innovation” was lowest, while “governance and social equity” was highest. Unexpectedly, the community perception of biodiversity and ecosystem protection in Zhemgang was low even though the Lower Manas Basin is one of the most biologically diverse landscapes in Bhutan. The results could indicate the limited community understanding about their landscape or the concept of resilience.

Table 4. Comparison of SEPLS Resilience Indicator Scores in Zhemgang

SEPLs Indicators	Ex-ante (2016)	Follow-up (2021)
Landscape biodiversity and ecosystem protection	3.5	3.7
Biodiversity (including agricultural biodiversity)	3.3	3.6
Knowledge and innovation	3.5	3.3
Governance and social equity	3.7	4
Livelihoods and wellbeing	-	3.6

The results of the resilience assessment in individual communities showed similar scoring across all communities during the follow-up survey. The only notable exception was a high “biodiversity” score in Digala village.

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SEPLS Resilience Indicator Scoring, Zhemgang

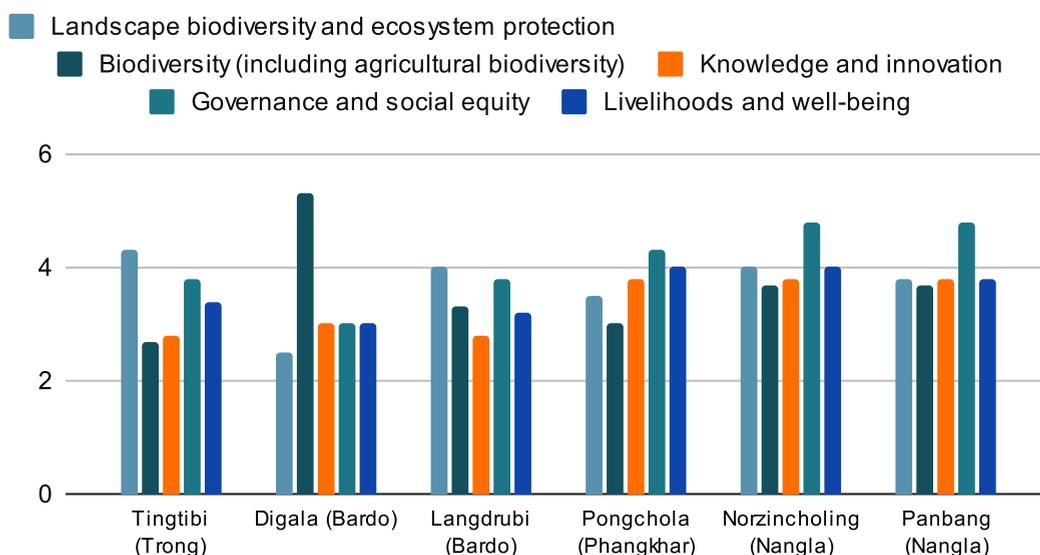


Figure 6. Resilience Indicator scoring during follow-up visit to Zhemgang

Landscape approaches and related initiatives in Bhutan

Guided by the development philosophy of Gross National Happiness (GNH), Bhutan strives for development that contributes to societal well-being and respects nature. The four pillars of GNH: i) good governance, ii) sustainable and equitable socio-economic development, iii) preservation and promotion of culture and iv) conservation of environment, illustrate Bhutan's commitment to holistic development. Bhutan has pledged to permanently remain a carbon neutral country and actively pursues opportunities to conserve its environment and biodiversity, especially in the face of climate change.

Although they were not specified as landscape approaches, many projects implemented since the early 1990s have been aimed at building landscape resilience in tandem with improving the socioeconomic status of local communities. Funded by various donor agencies, area and landscape-based development approaches have been initiated in all parts of Bhutan such as: the Wang Watershed Management Project (WWMP) in the West; First Eastern Zone Agriculture Programme (FEZAP), Second Eastern Zone Agriculture Programme (SEZAP), Commercial Agriculture and Resilient Livelihoods Enhancement Programme (CARLEP) and Third Forestry Development Project (TFDP) in the East; High Altitude Northern Areas (HANAs) in the north; and Decentralized Rural Development Project (DRDP) implemented in several districts in western, central and southern Bhutan. Table 5 presents various landscape-based interventions implemented in Bhutan over the years.

Bhutan developed its National Adaptation Programme of Action (NAPA) in 2006 to help communities adapt to climate change and to integrate climate change risks into the national planning process. Through NAPA I and NAPA II projects, Bhutan sought to reduce threats from Glacial Lake Outburst Floods (GLOF) and develop national capacity for responding to climate risks and disasters. The current NAPA III project is aimed at enhancing sustainability and climate resilience of community livelihoods, and forest and agricultural landscapes. It seeks to address the adverse impacts of climate change on rural livelihood security and poverty, as well

as the effects of sector-led development practices on the ecological integrity of biodiversity-rich forested landscapes. The project contributes to a few targets of NBSAP, namely: establishing national capacity for valuation and integration of biodiversity and ecosystem services in the national development plan; managing areas under agriculture and forestry through adoption of sustainable practices ensuring biodiversity conservation; identifying potential impacts of climate change on vulnerable ecosystems and strengthening adaptation measures; and maintaining the current protected area (PA) system with enhanced management effectiveness and financial sustainability.

Table 5. *Landscape-based concepts implemented in Bhutan*

Concept	Description
Integrated Conservation and Development Programs (ICDP)	Focuses on biodiversity conservation projects with a rural development component. ICDP have been implemented as components in projects supporting parks in Bhutan.
Community Based Natural Resources Management (CBNRM)	Calls for community action in natural resource management. CBNRM has been implemented as components in projects supporting parks and in renewable natural resource (RNR) research actions.
Integrated Natural Resource Management (INRM)	Focuses on participatory learning, action research and the integration of research and management, and has been applied by RNR Research Centres.
The Ecosystems Approach - approach to implement the Convention on Biological Diversity (CBD)	Recognizes the interdependence between humans and ecosystems and calls for integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. The approach is considered in National Biodiversity Strategy and Action Plan (NBSAP) and Bhutan For Life.
Landscape Ecology	Promotes functional relationships between land units in a landscape and the coevolution of natural and cultural subsystems over time. Adopted by Bhutan For Life and applied in protected areas (PAs).
Protected Landscape Approach - from IUCN	Promotes stewardship of landscapes by the people living in them. The approach allows communities to live in the PAs of Bhutan.
Farming Systems Approach – from FAO	Recognizes that conservation and development outcomes depend on the daily decisions of local land users in a farming system. A cross-sectoral approach to land-use planning, this approach was applied in Land Use Planning Project in the 1990s.
Area based approach	Targets specific geographical areas in a country, characterized by a particular complex development problem, through an integrated, inclusive, participatory and flexible approach. Applied in various development projects since the 1990s.
Dzongkhag based approach	Integrated development for a particular district (dzongkhag). Zhemgang, one of the districts in Bhutan, implemented an Integrated Sustainable Development Program (ISDP) for the dzongkhag.

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Concept	Description
Sustainable Development Goal (SDG) approach	Uses SDG as the basis for national development planning. In Bhutan's 12 th Five-Year Plan (FYP), 16 National Key Result Areas (NKRAs) are closely related with 16 of the 17 SDGs and close to 100 targets and indicators of SDGs are integrated into the NKRAs and Key Performance Indicators (KPIs).
Integrated Landscape Management	Seeks to secure ecosystem services for local livelihoods, promote climate-smart and environmentally sustainable community livelihoods, and ensure natural capital for national development and climate change resilience. Implemented via the National Adaptation Plans and Actions (NAPA) III project to ensure the effective management of forested landscapes including PAs and biological corridors (BCs).
High Conservation Values (HCVs) approach	Protects a network of biodiversity hotspots and high conservation value landscapes, covering nine Territorial Forest Divisions (DFOs) and 9 Dzongkhags located in the south-western Bhutan. Addresses two key challenges: i) securing water resources and ii) mitigating human-wildlife conflicts. In cooperation with the private sector, it initiates business cases for improved market access and commercialization of agricultural and forest products. Funded by International Climate Initiative (IKI), implemented by WWF Bhutan, Tarayana Foundation, Dept. of Forests and Park Services and National Land Commission Secretariat.
Socio-ecological Production Landscapes and Seascapes (SEPLS) - from COMDEKS	Aims to: i) enhance ecosystem services and maintain biodiversity; ii) improve the sustainability of production systems; iii) develop and diversify the livelihoods and incomes of landscape communities; and iv) strengthen landscape institutions and governance systems to encourage community participation in sustainable landscape management. Funded by COMDEKS and implemented through the GEF-SGP in collaboration with RGOB, small grants are provided to Community-Based Organizations (CBOs) and Civil Society Organizations (CSOs).

(Adapted from: "Analytical Review of Gaps, Conflicts and Inconsistencies in Existing Sectoral Policy, Planning and Legal Frameworks for Developing Climate Resilient Integrated Landscape Management and Climate Resilient Communities" PPD, MOAF, RGOB, 2018.)

Another related initiative to landscape management is the Reducing Emissions from Deforestation and forest Degradation (REDD+) programme being implemented in Bhutan. The Ministry of Agriculture and Forests (MOAF) through Department of Forests & Park Services (DOFPS) worked on the REDD+ Readiness program for over a decade, developing the four components of the REDD+ Warsaw Framework: i) the National Forest Monitoring System, ii) the REDD+ Strategy, iii) the Forest Reference Emission Level and iv) the Safeguard Information System. They launched the National REDD+ Strategy & Action Plan of Bhutan in July 2020 (Figure 7). The National REDD+ Strategy outlines long-term goals, policies and measures to address the drivers of deforestation and forest degradation. The strategy seeks to manage forests sustainably, while providing co-benefits, such as enhancing livelihoods, protecting ecosystem services, conserving biodiversity and increasing the nation's adaptive capacity to climate change impacts without compromising opportunities for future economic development and prosperity.

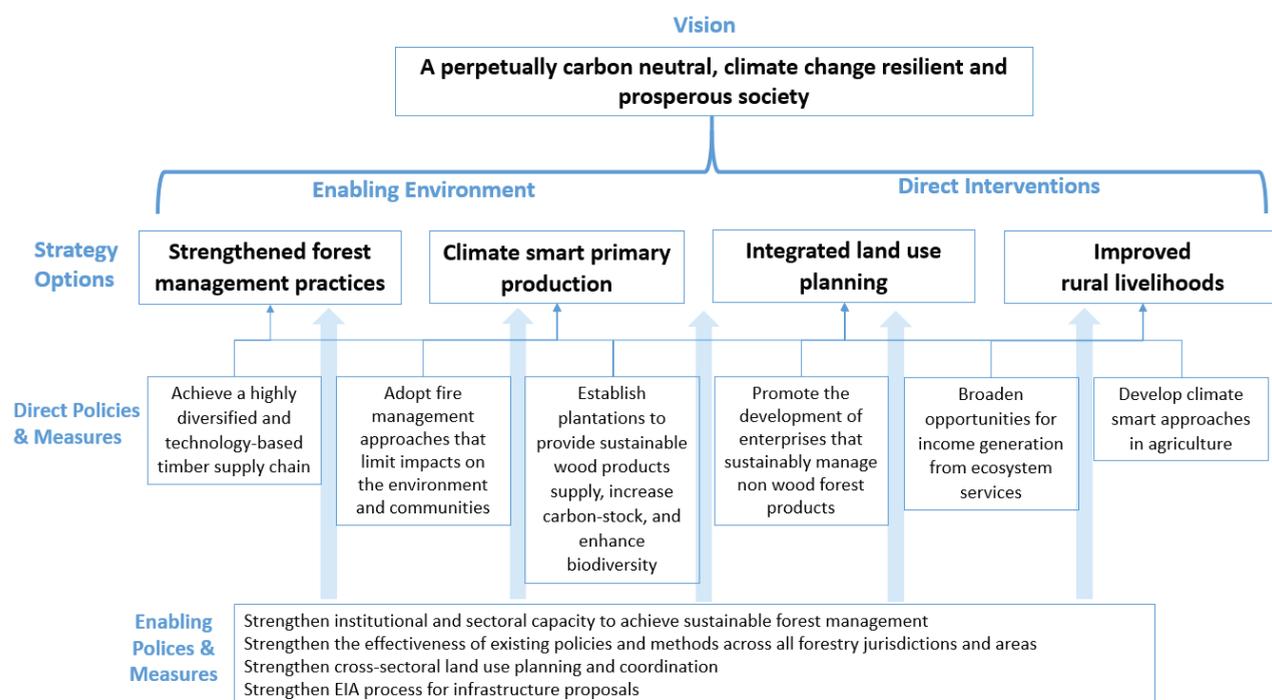


Figure 7. National REDD+ Strategy and Action Plan in a snapshot

Alternatively, the High Conservation Value (HCV) concept seeks to achieve long term conservation of biodiversity and ecosystem services; and contribute towards the country's sustainable development by prioritizing land outside the PAs and biological corridors (BCs). This approach has been adopted by a multi-partner project aiming to improve livelihoods in nine districts in south-western Bhutan. This area serves not only as a hotspot for biodiversity in Bhutan, but also of HWC and other pressures such as wildfires and illegal exploitation of natural resources. The project focuses on tackling these challenging issues that often place environmental conservation in conflict with human livelihoods. Through this project, the concept of HCVs will be integrated into the national land use planning system to protect the rich biodiversity of the region and all of Bhutan.

Furthermore, the idea of taking an integrated approach to environmental conservation and socioeconomic development has been adopted by the Bhutan For Life (BFL) initiative. BFL is an innovative finance mechanism to promote sustainable management of PAs through international donors and domestic grants. In distributing funds, BFL seeks to improve natural resource management in communities and ecosystems to better support livelihoods and climate resilience. This overarching goal focuses on harnessing climatic, hydrologic, and natural resource information to design and implement resilience and adaptation measures in Bhutan's PAs. These measures are crafted to provide livelihood opportunities to the population living both inside and in the vicinity of PAs.

Many past and current initiatives and projects in Bhutan have elements of a landscape approach aimed at building environmental resilience and sustainable livelihoods. Despite this history, the COMDEKS/SEPLS approach to conservation has been unique in its strong focus on community. COMDEKS recognizes local communities as the primary agents of landscape change in SEPLS and thus aims to give communities tools to improve their understanding of

■ ■ ■ Mainstreaming Community-Based Landscape Approaches in Bhutan

the social and ecological dynamics and processes that shape their landscape and its resilience. COMDEKS projects encourage communities to analyze and discuss the landscape in which they are embedded and, ultimately, take ownership for its resilience. Through small direct grants and the participatory rating exercise of resilience indicators, the SEPLS approach ensures that interventions are community-driven, thereby reinforcing the relationship between the people and their immediate natural environment.



Sakteng, Trashigang

Mainstreaming and upscaling the landscape approach and SEPLS

Area-based and landscape-based development have been practiced for decades in Bhutan in some form or another. Despite this long history and successes in alleviating poverty, improving national capacity and enhancing environmental conservation, the landscape approach has not been effectively mainstreamed in Bhutanese development and conservation policies or interventions. In particular, the 2018 review by Policy and Planning Division (PPD) of Ministry of Agriculture and Forests (MOAF) noted that the following results had yet to be achieved:

- Establishing shared objectives with multiple benefits from the landscape;
- Designing and inculcating practices that contribute to multiple objectives, human well-being, food and fiber production, climate change mitigation, and conservation of biodiversity and ecosystem services;
- Enhancing ecological, social and economic interactions among different parts of landscapes;
- Implementing collaborative, community-engaged processes for dialogue, planning, negotiation, and monitoring; and
- Influencing markets and public policies that could achieve a diverse set of landscape objectives.

On the one hand, the landscape approaches adopted by many past and on-going projects has generated awareness and appreciation that support mainstreaming and upscaling these approaches and SEPLS in Bhutan. On the other hand, gaps persist and mainstreaming remains limited despite attempts from past projects to follow an integrated landscape development approach, suggesting challenges in adopting SEPLS or these approaches at broader scales.

Important considerations for implementing landscape approaches such as SEPLS include: laws and regulations on natural resource rights; institutional arrangements and mechanisms; and stakeholders' power and rights. Since land-use and development plans ought to be multi-sectoral in scope, landscape approaches require a consolidated spatial and thematic planning policy to enable different ministries to coordinate their planning activities. At the same time, they also need to empower stakeholders, especially the local communities, to decide on the strategies for their landscape. Several factors such as resource rights, tenure systems and the authority, as well as capacity, of local government and local communities can significantly impact the success of landscape approach such as SEPLS.

Due to the many previous landscape and area-based approaches implemented in Bhutan, the national dialogue for Phase III of COMDEKS invited participants to share experiences, insights and recommendations from applying landscape-based approaches in Bhutan. Beyond the national dialogue, stakeholder consultations and research further explored ideas for mainstreaming either SEPLS in particular, or landscape approaches in general. This work highlighted several ideas and recommendations, broadly categorized by three themes:

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1. Create a common understanding and awareness of landscape approaches.
 - a. Create and curate locally-relevant, science-based knowledge related to biodiversity and climate change vulnerabilities of landscapes.
 - b. Assimilate local knowledge and traditional practices favorable to biodiversity conservation and landscape management into development practice.
 - c. Raise awareness among policymakers, bureaucrats, local authorities, communities, non-government organizations and entrepreneurs on landscape approaches.
 - d. Improve coordination and collaboration among all stakeholders - central government, local government, non-government, business and community - for planning and implementing landscape strategies.
2. Build capacity at all levels of government, non-government and private sectors for pursuing a landscape approach.
 - a. Train community and local government authorities to apply landscape approaches to community development and local livelihoods.
 - b. Improve appreciation for, and understanding of, landscape approaches among policymakers and senior bureaucrats.
 - c. Increase capacity of the communities on the frontline to respond to environmental challenges through combining entrepreneurship, traditional knowledge, emerging science, and data on climate and the environment.
 - d. Invite private sector and entrepreneurs to learn about, and innovate within, a landscape approach.
3. Create institutional mechanisms and governance structures to support landscape approach.
 - a. Integrate and feature landscape approaches prominently within Bhutan's Five-Year Plans with leadership from central planning agencies such as the Gross National Happiness Commission and with support from relevant national agencies.
 - b. Adopt a bottom-up approach to local landscape planning by empowering Dzongkhags and Gewogs to formulate their own local development goals to meet the environmental, social and economic goals of the local community.⁶
 - c. Reorient sector planning to be based on local, landscape-based development objectives and plans instead of the current practice of developing local plans based on sectoral guidelines. However, in the current scenario, the quickest entry point would be to include the various components of landscape-based strategies in the annual work plans of line ministries and departments such as departments of agriculture, livestock and cottage and small industries.
 - d. Establish platforms and mechanisms for implementing agencies such as line ministries, non-government organizations, local authorities and communities to work collaboratively and share lessons learned.

⁶ According to the review by PPD, MOAF, the implementation of Integrated Sustainable Development Project (ISDP) at Dzongkhag level in Zhemgang in the early 1990s resulted in significant improvement in defining Dzongkhag development objective and capacity for integrated planning.

- e. Incentivize local communities and entrepreneurs to pursue nature-based and nature-friendly initiatives through innovation in finance (elaborated in the section on financing below).

Financial sustainability acts as a key component of perpetuating landscape approaches beyond short-term projects. Providing maintenance funds as an element of the support offered to communities would facilitate beneficiaries continuing to participate in project activities beyond the term of the initial intervention. However, longer term sustainability requires innovative financing for projects. Phase III consultations and dialogues discovered several ideas for innovative financing for a landscape approach, categorized into three broad themes:

1. Connect the language of biodiversity with banking and finance to convince stakeholders outside of the conservation sector to invest in nature.
 - a. Bridge the gap in understanding, approaches, philosophy, language and perception between bankers or investors and conservationists.
 - b. Craft the project rationales to suit the audience, such that for an economic audience the financial return takes precedence and conservations acts as a co-benefit (such as the approach of Bhutan for Life).
 - c. Develop and communicate business cases for the landscape approach based on proven studies, data on financial returns and the cost of inaction.
2. Invite and foster partnerships among a diversity of stakeholders for mutual benefit.
 - a. For sustainability of short-term project interventions such as COMDEKS, work with national organizations and initiatives (such as REDD+, Biodiversity Finance Initiative (BIOFIN), Payment of Ecosystem Services (PES), etc.) to link local communities with additional financial and technical assistance beyond the project period. Consulting with relevant government departments and ministries to synergize short-term projects with their annual work plans can be another way to ensure longer-term support to the community.
 - b. Build trust with the private sector and entrepreneurs and engage them in a meaningful way to work with government and non-government organizations, and local communities to initiate and/or sustain landscape interventions.
 - c. Encourage established local community organizations such as cooperatives and community forest groups to work in partnership with entrepreneurs and local authorities to build sustainable and viable businesses.
3. Increase funds for a landscape approach at local and community levels.
 - a. Pursue fiscal decentralization through assigning greater authority to local government such as control over property taxes, business license fees and municipal service fees to fund their local landscape strategies.
 - b. Use public finance to reduce private risks through risk guarantees, seed capital and catalytic funding.

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- c. Provide incentives and loan products to communities and entrepreneurs to pursue nature-friendly businesses.
- d. Introduce certification and standards to improve demand for local products and services such as food items and eco-tourism.
- e. Coordinate sectoral investments at the landscape level



Minister for Agriculture and Forests, Resident Representative of UNDP Bhutan and panelists at the COMDEKS National Dialogue

Ms. Azusa Kubota, Resident Representative of UNDP :

“Bhutan’s Protected Areas provide a refuge for many plant and animal species that are essential for ecosystem services. However, much of the biodiversity remains outside of the Protected Areas systems, where it is exposed to human activities such as agricultural production, forestry and other land uses. The fate of our biodiversity, and of vital ecological processes, depends on the sound management of resources by the local communities. This is where the role of the Community Development and Knowledge Management for Satoyama initiative comes in. The Satoyama approach of promoting communities in harmony with nature must be promoted further through participatory decision-making processes in local communities.”

Conclusion

Bhutan's strong laws and regulations for land use and natural resource management have greatly contributed to its environmental conservation. Guided by the national philosophy of GNH, the past and current landscape-based initiatives illustrate Bhutan's interest in pursuing development in harmony with nature.

However, with growing pressures on natural resources to meet development needs, balancing environmental, social and economic concerns has become increasingly important. Despite a strong emphasis on coordination, consolidation and cooperation (known as Triple C) in Bhutan's 12th Five Year Plan, sector-based plans and policies dominate national development policy, posing a significant challenge to achieving an overall, positive and balanced outcome across landscapes.

The COMDEKS programme in Bhutan has been successful in promoting sustainable use of natural resources by communities in their landscapes, especially by empowering communities to become stewards of their local landscapes. By providing direct grants to the community for local intervention and requiring community participation in those interventions, the COMDEKS programme adds an important aspect to the implementation of integrated landscape management in Bhutan.

As Bhutan continues its journey of decentralization and enhancing the capacity of local governments, SEPLS could offer practical tools to engage local communities in assessing and actively managing their natural resources for ecosystem resilience.

His Excellency Lyonpo Yeshey Penjor, Minister, Ministry of Agriculture and Forests:

"Although Bhutan is a champion of environment conservation, we have much to learn still, especially in applying science and technology in conservation . . . we are faced with the realities such as drying up of water resources and migration of species which are posing great challenges to our farmers to adapt to the changing environment . . . The Royal Government of Bhutan shall always take leadership in environment conservation and climate change discussions, and with the support of international development agencies and local civil society organizations, I am confident that Bhutan can build resilient ecosystems through our National Adaptation Plans."

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Annexures

Annexure-I: Insights from field visits

Summary of field visit insights from Gamri Watershed, Trashigang

Project Title	Yenangla Water Catchment Rehabilitation and Forest Fire Management
Grantee and Location	Yenangla Water Catchment Protection Group, Bartsham
Description	Rehabilitated critical water sources and degraded land, while simultaneously building capacity of farmers through workshops and training on sustainable practices. Protected seven community water sources, and implemented sustainable land management practices in Ngatshang area to mitigate erosion threatening Bartsham town. Protected agricultural lands by constructing causeways and retaining walls. Planted 4,000 trees to rehabilitate degraded lands.
Field Insights	<p>Construction of retention walls, causeways, and plantation of trees have prevented road blockage and protected paddy fields, allowing ease of growing and transporting their produce to the market.</p> <p>Community still faces water scarcity due to a combination of sources drying and increased need for irrigation. In the upcoming flagship program, the gewog plans to source their water from Phongmey via Bidung which is 35 kms away.</p> <p>They hope to repair and maintain the retaining walls, as there is a risk of collapsing during the monsoon season.</p>
Project Title	Integrated Landscape Management at Yenangbrangsa
Grantee and Location	Yenangbrangsa Watershed Management Group, Samkhar
Description	Promoted sustainable watershed management as a deliberate means of protecting the environment, reducing mass erosion and securing sustainable rural livelihoods. Implemented sustainable land management practices to increase agricultural productivity and installed solar fencing to reduce human-wildlife conflict. To support alternative sources of income generation, the project supported women's groups in the production and sale of <i>tengma</i> (flattened maize snack).
Field Insights	<p>The community observed a positive change in the landscape after the plantation of Napier grass as well as the construction of check dams and stone bunds to reduce flood damage and soil erosion. The project had a positive impact in educating and broadening the community's environmental and land management knowledge.</p> <p>The solar fences no longer function as they have been damaged by flooding. The community hopes for further grant support to repair and maintain the solar fence and to replace the solar batteries. In the initial years after using the electric fences, they were able to grow maize with no wildlife conflicts and sell <i>tengma</i> to increase household income. Construction of drains and stone bunds benefited the village during monsoon season. Diverting water and stabilizing soil erosion helped maintain the road from getting blocked by landslides.</p> <p>For electric fencing, it is recommended to only select a few houses to collaborate with, having a smaller group is easier to manage and communicate with. In addition, the houses are scattered around, which makes it difficult to go to each person to follow up with everyone.</p>

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Project Title	NTPF Product Development and Sustainable Management of Wangphu Choeling Community Forest
Grantee and Location	Wangphu Choeling Community Forest Group, Phongmey
Description	Enhanced income generation by reviving local organic turmeric production and established a turmeric marketing group. A portion of the income generated from turmeric sales used to fund sustainable management of the Wangphu Choeling Community Forest.
Field Insights	The turmeric has been produced and packaged, but due to the pandemic, they have not been able to market or sell it.
Project Title	Increasing Productivity and Rural Income Through Sustainable Agriculture Landscape Management
Grantee and Location	Thongrong Sazhing Tshogpa, Phongmey
Description	Mitigated cattle fodder shortage by promoting stall-feeding and improving pasture fertilization. Introduced sustainable management of agricultural land by establishing hedgerows and stone bunds. Formed mustard oil production groups and an oil expeller pressing unit to create alternative sources of income. Reduced human-wildlife conflict and improved agricultural production through solar fencing of agricultural land.
Field Insights	<p>The oil expeller machines provided to Phongmey and Thongrong gewogs never operated because they were not installed properly and no mechanical training was given to locals for installation, repair or maintenance. The oil expellers were imported from India and installed by project agents without follow-up from skilled personnel.</p> <p>The electric fences required maintenance and non-operational. Some farmers have replaced the electric fence with barbed wires. The community viewed barbed wires and metal poles as better alternatives to electric fencing and wooden poles.</p> <p>Many members of the CBO had left the organization and migrated out of the village.</p>
Project Title	Development and Pilot Testing of Improved Cooking and Heating Stoves
Grantee and Location	Tarayana Foundation, with beneficiaries in Rangjung, Bidung and Bartsham
Description	Demonstrated the benefits of fuel-efficient biomass stoves, including user convenience, versatility, cost-effectiveness, reduced maintenance, reduced fire hazards, reduced indoor smoke and improved energy security. Designed and tested advanced biomass stoves for specialized uses such as cooking for large groups and precooking animal fodder. Documented the findings on efficiency and adoption of biomass stoves and shared these findings with stakeholders.
Field Insights	<p>Two (institutional) beneficiaries were visited out of several institutional and individual beneficiaries who received fuel-efficient stoves from Tarayana Foundation.</p> <p>Rangjung Woesel Choeling Monastery had recently moved to using LPG in their kitchen, but the improved fuel-efficient stoves had certainly benefited them - it reduced indoor air pollution and reduced their fuel wood consumption from 2 truckloads to 1 truckload per month. Rangjung Technical Training Institute (TTI) experienced similar benefits and still uses the stoves.</p> <p>The introduction of efficient and low emission cooking stoves to the local communities helped reduce environmental degradation, fuel-wood usage, fire and safety risks, and related health effects.</p> <p>However, both the TTI and the monastery are moving towards using LPG for better hygiene, efficiency and ease of use.</p>

Project Title	Agricultural Landscape Protection and Management
Grantee and Location	Sazhing Yuenten Tshogpa, Radhi
Description	Improved livelihoods through crop diversification and healthy farming systems, reducing the pressure on natural resources. Protected over 150 ha of rice fields through establishment of causeways, leading to improved conservation of local rice varieties. Restored heavily eroded areas and planted bamboo, Napier grass, fruit trees, and fodder trees in degraded areas throughout the project site. Established a community dairy group to support additional income generation.
Field Insights	<p>Some areas left barren in Radhi with no settlements and prone to erosion were rehabilitated through construction of check dams and plantation of bamboo. The area has become fertile, people have resettled and started to cultivate.</p> <p>A few villages have planted Napier grass around paddy fields and are selling it as cattle feed. Bamboo and Napier grass plantation are helping the community sustain financially.</p>
Project Title	Sustainable Management of Farmland and Livelihood Improvement Through Oilseed Production and Sale
Grantee and Location	Saling Sazhing Zinchong Detshen, Bidung
Description	Improved soil fertility and controlled erosion through establishment of hedgerows along the contour lines of farmland, winter cropping and other sustainable land management practices. These activities also conserved and protected water sources and catchment areas. Promoted oilseed production, oil extraction and marketing to improve livelihoods. Supplied three power tillers and paddy thrashers to reduce workload of women.
Field Insights	<p>Community members felt that they learned the advantages of planting Napier grass and gained knowledge on how to function a power tiller, which expanded agricultural knowledge. They continue to plant Napier grass to control soil erosion. They have maintained the fences built around the water source and bamboo plantations are growing.</p> <p>After the introduction and training on use of power tillers, individual households in the community had bought their own power tillers as they found it challenging to coordinate the use of the two communal power tillers provided through the project.</p> <p>The oilseed production has been abandoned as the oil-exPELLING machine was non-functional. The paddy thrasher also remained unused as farmers reported manual thrashing to be more efficient.</p> <p>The community's main challenge is the lack of access to water. Water is available only during certain hours of the day.</p> <p>To involve them in protecting biodiversity, and in ecosystem and landscape management, community members expressed their interest in receiving capacity building training.</p>
Project Title	Protection of Sakteng Village from Land Erosion
Grantee and Location	Sakteng Sacha Zinchong Tshogpa, Sakteng
Description	Protected Sakteng village from erosion, improved the safety of local people, and reduced the environmental impact from construction of log bridges. Facilitated the construction of 330 m of gabion walls at critical erosion sites, and protected grazing land and households in the village from river erosion and diversion, which threatened flooding of the village. Bridges to connect Sakteng village with Puesa as well as within Sakteng village contributed to inhabitants' safety and productivity.

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Field Insights	<p>The project helped the community understand the relation between people and the environment. Erosion and flood mitigation measures helped protect Sakteng village from floods and improved safety.</p> <p>However, flooding is a constant risk to the village, especially during the rainy season. The community requests further funding to rebuild some collapsed gabion walls and renovate the bridges constructed by the project.</p>
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Summary of field visit insights for Lower Manas Basin, Zhemgang

Project Title	Rehabilitation of fallow land through agroforestry for rural income enhancement, Trong Gewog
Grantee and Location	Khengrig Namsum Cooperative-KNC, Trong
Description	Rehabilitated 93 hectares of leased land that was left fallow for 32 years by planting bananas, watermelons and vegetables. Reduced human wildlife conflicts using solar electric fencing. Planted 14.14 acres of cardamoms in Bardo gewog and trained 20 youths and farmers in plantation and management of cardamom gardens.
Field Insights	<p>In 2019, KNC along with farmers converted 1.21 hectares of fallow land to banana farms in Brumbi, Trong gewog. Today the farm is one of the largest banana farms in the country. KNC has 16 members who work with 230 farmers in Zhemgang, and the cooperative hopes to recruit additional members. They are also working towards improved logistics and transportation of fresh produce to reach markets with high-quality products.</p> <p>Challenges included leased land policies and market competition with Indian produce. Local geographic and economic conditions lead to higher production and labor costs that increase prices relative to Indian imports.</p>
Project Title	Sustainable land management and promotion of local agro-biodiversity for food security in Digala
Grantee and Location	Royal Society for Protection of Nature (RSPN), with beneficiaries in Bardo
Description	RSPN, an environment CSO, helped the community of Digala in Bardo gewog through: construction of stone bunds over 40 acres of farmland, plantation of hedgerows on 13 acres of farmland, construction of solar fencing to protect over 66 acres farmland, distribution of 5 sets of greenhouses and building capacity of local farmers on agro-ecological farming (such as vermicomposting, raising saplings and growing cardamom).
Field Insights	<p>Hedgerows and stone bunds helped curb land degradation. While the solar fencing has curbed human-wildlife conflict, maintaining the fencing represents a challenge to the community.</p> <p>While members generally seemed to have greater capacity and knowledge on improved farming methods, the training and knowledge transfer had not yielded any notable improvement in community livelihoods, largely because of the remoteness of the village.</p> <p>Moving forward, the community expressed interest in raising jersey cows and growing bananas to produce chips.</p>

Project Title	Sustaining agro-ecological services in Langdurbi village through sustainable natural resource management for biodiversity conservation and livelihood
Grantee and Location	Langdurbi Sa Gi Sungjab (LSGS), Bardo
Description	Constructed stone bunds over 40 acres of farmland. Regenerated fallow land and reduced soil erosion through plantation of Napier grass and bamboo rhizomes. Constructed retaining gabion walls and check dams in strategic flash flood areas. Protected four water sources and provided reliable water supply to 45 households, the school, Basic Health Unit and village temple.
Field Insights	Construction of gabion walls and stone bunds as well as plantation of Napier grass has reduced erosion in high-risk areas. Some of the current challenges in the community are reliable access to water and labor shortages as only 30% of the population remain in the village, the majority of whom are over 60 years of age. The remaining 70% of the population have migrated to other parts of the country.
Project Title	Spring shed assessment and enhancement of Norzincholing community forest
Grantee and Location	Norzincholing Community Forest Group (NCFG), Panbang
Description	Conducted a water source assessment and feasibility study on instituting Payment for Ecosystem Services (PES) in the Community Forest (CF), and water source protection activities through assessment of water sources and establishing forest nursery to help enhance living standards of the CF members. Carried out plantations in degraded and water source areas by removing the unproductive species and planting tree species with high water retention capacity.
Field Insights	Payment for Environmental Services (PES) feasibility study revealed that the communities of the area were willing to pay for the resources, especially fresh water which is abundant in the CF, but they have currently not been able to implement the service or generate income from it. This has led to shortage of funding for management and operational cost. The nursery has raised 10,000 agar and conifer saplings. The community hopes to sell tree saplings from the nursery to increase their household income. In addition, they would like to start a community sawmill and woodworking center.
Project Title	Improved access to clean energy and technology to reduce GHG emissions and enhance biodiversity conservation
Grantee and Location	Panbang Chirden Phendhey Tshogpa (PCPT), Panbang
Description	Rehabilitated water sources through plantation of wild fruit trees and other species, while conserving important flora and fauna. Provided training on forest, water sources, waste and watershed management. Reduced carbon emissions and firewood consumption in the central school and dratshang by supplying low-cost energy efficient cookers and capacity building of cooks on use of bulk electric cookers. Sustained agroecological services and reduced threats to biodiversity through construction of climate smart sales outlets in Panbang town for agrobiodiversity products and non-wood forest products (NWFPs).
Field Insights	The introduction of efficient and low emission cooking stoves to the community and dratshang helped reduce environmental degradation, fuel-wood usage, fire and safety risks, and related health effects. Tree plantation has significantly improved water source protection and the PCPT are able to supply tree saplings to other communities. The community is keen on learning about Sustainable Land Management (SLM), as they face challenges with soil erosion and landslides during the summer.

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Project Title	Sustainable management and utilization of NWFPs in multiple use area of RMNP
Grantee and Location	Pongchola Tsharzo Tshogpa (PTT), Phangkhar
Description	<p>Enhanced income generation through sustainable management and marketing of NWFP products. Provided advanced training on bamboo crafting (handicrafts and bangchung) and established bamboo production.</p> <p>Set up a cane and bamboo nursery at Pongchola and Salapong. Provided training on bamboo cultivation and propagation.</p> <p>Constructed toilets and water supply activities for the existing weaving center at Pongchola to encourage community participation.</p>
Field Insights	<p>The beneficiaries included youth who have left school and women. Forty-eight household members were trained to weave handicraft products from bamboo and cane resources. The initiative improved the community's livelihoods and brought the community to work together during raw material collection.</p> <p>Through the project, community awareness on sustainable harvesting of NWFPs has improved.</p> <p>The beneficiaries are unable to work at night as the village does not have a connection to the electrical grid.</p>

Annexure - II: List of National Dialogue Participants (Virtual, July 20th 2021)

Note: The attendees list below captures those who participated via Zoom, the viewers on Facebook have not been listed.

	Name	Position	Organization
PANELISTS / OPENING SESSION INVITEES / ORGANIZERS			
1	Yeshey Penjor	Minister	Ministry of Agriculture and Forests
2	Azusa Kubota	Resident Representative	UNDP Bhutan
3	Nawang Norbu	Executive Director	Bhutan Ecological Society
4	Pema Bazar	NAPA III Project Manager	Gross National Happiness Commission
5	Sonam Lhaden Khandu	CBD Focal & Chief Environment Officer, Biodiversity and Land Use	National Environment Commission
6	Jigme Tenzin	Deputy Chief Forestry Officer, National REDD+ Coordinator	Dept. of Forests and Park Services, MOAF
7	Tashi Jamtsho	Country Representative	World Wildlife Fund - Bhutan
8	Mani P. Nirola	Dy. Chief Biodiversity Officer	National Biodiversity Centre
9	Ngawang Gyeltshen	National BIOFIN Project Coordinator	UNDP Bhutan
10	Thinley Choden	Entrepreneur	Bhutan Tours and Travels
11	Pem Lama	Director - Operations and Strategy	Bhutan Ecological Society
12	Tshering Phuntsho	National Coordinator	GEF- Small Grants Programme
13	Tenzin Wangchuk	Programme Assistant	GEF- Small Grants Programme
14	Kitso P Wangdi	COMDEKS Coordinator	Bhutan Ecological Society
ATTENDEES			
1	Bhawana Kafley	Program Officer	WWF Bhutan
2	Bishnu Chettri	Accelerator Lab	UNDP Bhutan
3	Chador Wangmo	Intern	Bhutan Ecological Society
4	Damudar Dahal	Lecturer	College of Natural Resources, RUB
5	Dhan Ghalley	Gewog Agriculture Extension Officer	Sergithang Extension Office, Tsirang
6	Dorji Khandu	Member, Natural Resource and Environment Committee	National Council of Bhutan
7	Dorji Wangchuk	National Maize Coordinator	Dept. of Agriculture, MOAF
8	Gungsang Wangdi	Senior Planning Officer	National Land Commission
9	Kamal Rai	Student	College of Natural Resources, RUB
10	Kencho Palden	Student	University of Queensland
11	Kunzang Choden	Program Manager	Bhutan For Life Fund Secretariat
12	Kunzang Wangmo	Accelerator Lab	UNDP Bhutan
13	Lungten Jamtsho	Chief Engineer	Dept. of Roads, MOWHS
14	Namgyel Wangdi	Project Officer	Bhutan Ecological Society
15	Narayan Ghalley	Project Officer	Royal Society for Protection of Nature
16	Nawaraj Chhetri	Portfolio Manager	UNDP Bhutan

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17	Nedup Tshering	Executive Director	Clean Bhutan
18	Norbu Wangdi	Project Coordinator	Royal Society for Protection of Nature
19	Om Katel	Dean of Research and Industrial Linkages & Lecturer Department of Environment and Climate Studies	College of Natural Resources, RUB
20	Passang	Chief Engineer	Department of Renewable Energy, MOEA
21	Pema Dakpa	Member, Natural Resource and Environment Committee	National Council of Bhutan
22	Pema Tshewang	Student	College of Natural Resources
23	Rinchen Dorji	Communication officer	WWF Bhutan
24	Roshni Bastola	Student	College of Natural Resources
25	Sangay Chopel	GCF Project Technical Officer	UNDP Bhutan
26	Sangay Dendup	Deputy Chief Horticulture Officer	Dept. of Agriculture
27	Sonam Choki	Accelerator Lab	UNDP Bhutan
28	Sonam Pem	Executive Director	Tarayana Foundation
29	Sonam Phuntsho	Director - Research	Bhutan Ecological Society
30	Sonam Phuntso	Bidung Gup	Bidung Gewog Office
31	Sonam Rabgye	Program Analyst	UNDP Bhutan
32	Tandin Wangchuk	Gewog Administrative Officer	Radhi Gewog
33	Tashi Samdrup	Member, Foreign Relations Committee	National Council of Bhutan
34	Tek Bahadur Khatiwara	Programme Director	Association of Bhutanese Tour Operators
35	Thinley	Gewog Administrative Officer	Sakteng Gewog Office
36	Thinley Wangdi	Chairman	Khengrig Namsum Cooperative
37	Tirtha Man Rai	Member, Natural Resource and Environment Committee	National Council of Bhutan
38	Tshering Lhamo	Economist	UNDP Bhutan
39	Tshering Palden	News Editor	Kuensel
40	Tshering Wangmo	Accelerator Lab	UNDP Bhutan
41	Tshering Yuden	Project Manager	Tarayana Foundation
42	Ugyen Wangchuk	Forest Ranger	DOFPS, Thongrong
43	Wangchen Norbu	Programme Associate	UNDP Bhutan
44	Xuan-Lai DAO	Assistant Resident Representative, Head of Climate Change and Environment Unit	UNDP Vietnam
45	Yeshe Dorji	Environment Officer	National Environment Commission
46	Yeshe Tshering	Forest Ranger	Phibsoo Wildlife Sanctuary
47	Yeshe Zangmo	Intern	Bhutan Ecological Society

ANNEXURE III: National Dialogue Agenda

Topic: Community-based landscape management for resilient ecosystems

Date: 20th July, 2021

Time: 9:30 am – 1:00 pm (BST)

Venue: Virtual Event (Zoom)

TIME	AGENDA	
0930 hrs	Check-in (Zoom)	
0935 hrs	Welcome Note	Dr. Nawang Norbu, Executive Vice President, Bhutan Ecological Society (BES)
0940 hrs	Remarks by UNDP	Ms. Azusa Kubota, UNDP Resident Representative
0950 hrs	Keynote Address	Hon'ble Lyonpo Yeshey Penjor, Minister of Agriculture & Forests
1000 hrs	Societies in harmony with nature	Video
	Introduction to COMDEKS landscape management (Bhutan), SEPLS and its contribution to SDGs and Post-2020 Global Biodiversity Framework	Mr. Tshering Phuntsho, National Coordinator, GEF-SGP
1010 hrs	Voices from the community	Video
1020 hrs	COMDEKS projects in Bhutan	Ms. Kitso P. Wangdi, BES
1030 hrs	BREAK	
1040 hrs	Plenary Session I: Landscape approach – discuss lessons and insights on effectiveness of landscape approach in biodiversity conservation and sustainable development and ways of integration into national plans and actions	<p>Moderator: Ms. Pem Lama, Director-Operations and Strategy, BES</p> <p>Panelists:</p> <ol style="list-style-type: none"> 1. Mr. Mani Prasad Nirola, Dy. Chief Biodiversity Officer, National Biodiversity Centre 2. Ms. Sonam L Khandu, National Environment Commission & CBD Focal 3. Mr. Pema Bazar, NAPA-III Project Manager, GHNC <p>40 minutes moderated discussion 20 minutes Q&A with audience</p>

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1140 hrs	<p>Plenary Session II: Financing for socio-ecological production landscapes - assess potential financial mechanisms such as increasing national/district-level government expenditures on relevant activities, innovative financial mechanisms (i.e. payment for ecosystem services, nature swaps, biodiversity incentives, taxes and fees), public-private partnerships, and other donor and foundation financing</p>	<p>Moderator: Ms. Thinley Choden, Entrepreneur, Bhutan Tours and Travels</p> <p>Panelists:</p> <ol style="list-style-type: none"> 1. Mr. Tashi Jamtsho, WWF 2. Mr. Ngawang Gyeltshen, National BIOFIN Coordinator, UNDP 3. Dr. Jigme Tenzin, Dy. Chief Forestry Officer & National REDD+ Coordinator (TBC) <p>40 minutes moderated discussion 20 minutes Q&A with audience</p>
1240 hrs	Key takeaways from the audience	
1300 hrs	Vote of thanks	Ms. Pem Lama, Director-Operations and Strategy, BES



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