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LESSONS LEARNED FROM INTEGRATED LANDSCAPE FINANCE TO ADVANCE THE GLOBAL BIODIVERSITY FRAMEWORK

Review of experience and recommendations for National Biodiversity Strategies and Action Plans and National Biodiversity Finance Plans

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ACRONYMS

ABA
Alianza Empresarial para la Amazonia
ACPs
Private Conservation Areas
ACRs
Regional Conservation Areas
AFOLU
Agriculture, Forestry and Other Land Use
AMREDD
Alianza Mexico REDD+
BFP
Biodiversity Finance Plan
BIOFIN
Biodiversity Finance Initiative
BSAPs
Biodiversity Strategies and Action Plans
CBD
Convention on Biological Diversity
CBOs
Community Based Organisations
CDORB
Cagayan de Oro River Basin
CDORBMC
Cagayan de Oro River Basin Management Council
CFA
Conservation Finance Alliance
CONAFOR
National Forestry Commission
CONANP
National Commission of Protected Natural Areas
CONAPESCA
National Fisheries Commission
COP
Conference of the Parties
DST
Decision Support Tool
ERDRBE
Regional Strategy for Low Emission Rural Development
FAO
Food and Agriculture Organisation of the United Nations
FFII
Forest Finance and Investment Incubator
FIDT
Funds for Territorial Development
GBF
Global Biodiversity Framework
GDP
Gross Domestic Product
GEF
Global Environment Facility
GEF SGP
Global Environment Facility Small Grants Program
GIAHS
Globally Important Agricultural Heritage Systems
GORSM
Regional Government of San Martin
IDH
Sustainable Trade Initiative
IFAD
International Fund for Agricultural Development
IKSP
Indigenous Knowledge Systems and Practices
ILF
Integrated Landscape Finance
ILM
Integrated Landscape Management
IP
Indigenous Peoples
KBAs
Key Biodiversity Areas
L-CSA
Landscape Approach to Climate Smart Agriculture
LENs
Landscape Enterprise Networks
LGUs
Local Government Units
LIFT
Landscape Investment and Finance Toolkit
LPPs
Landscape Protection Plans
LPs
Landscape Partnerships
MERESE
Mechanisms for Remuneration for Ecosystem Services
MILALITTRA
Indigenous Miarayon-Lapok-Lirongan-Tinaytayan Tribal Association
MNCs
Multinational Companies
MoMo4C
Mobilising More for Climate

MSL
Murchison-Semliki Landscape
NARC-G
Northern Albertine Rift Conservation Group
NBFP
National Biodiversity Financial Plan
NBSAP
National Biodiversity Strategy and Action Plan
NEMA
National Environment Management Authority
NPA
Natural Protected Area
PAs
Protected Areas
PES
Payment for Ecosystem Services
S
Sol the Peruvian currency
SACGOT
Southern Agricultural Growth Corridor of Tanzania
SDGs
Sustainable Development Goals
SEUs
Socioeconomic Environmental Units
SMEs
Small and Medium Enterprises
TCFD
Task Force on Climate-related Financial Disclosures
TNC
The Nature Conservancy
TNFD
Nature-related Financial Disclosures
UNCCD
United Nations Convention to Combat Desertification
UNDP
United Nations Development Program
UNEP
United Nations Environment Program
UNFCCC
United Nations Framework Convention on Climate Change
UNFSS
United Nations Forum on Sustainability Standards
UNU-IAS
United Nations University Institute for the Advanced Study of Sustainability
USAID
United States Agency for International Development
USD
United States Dollar
UWA
Uganda Wildlife Authority
WCS
Wildlife Conservation Society
YP
Yucatán Peninsula

EXECUTIVE SUMMARY

The post-2020 Global Biodiversity Framework (GBF) agreed upon under the Convention on Biological Diversity (CBD) includes ambitious targets requiring significant resource mobilization to achieve the biodiversity goals set. To achieve these goals, National Biodiversity Finance Plans (NBFP) based on National Biodiversity Strategy and Action Plans (NBSAPs) with national targets are under development by countries. The new GBF is also framed to require 'whole-of-society' and 'whole-of-government' approach, not only national government integration of biodiversity efforts.

This report aims to inform the transition to these more holistic plans by considering how the concepts, lessons, and tools of integrated landscape finance (ILF) can inform and strengthen NBSAPs and NBFPs to yield more effective, efficient, and equitable results for people and nature.

We define ILF as an approach to finance multi-project, multi-sector investment portfolios that encourage synergies between investments to generate impacts at scale across multiple landscape objectives (biodiversity, climate, livelihoods, water, and relevant economic sectors). This may include accessing new flows, aligning existing flows, and mitigating harmful financial flows.

ILF is based on a strategic planning process that engages a wide range of public, private and civil society stakeholders across sectors. The approach encourages spatial planning as well as local participatory planning. To advance a coordinated project pipeline development process, organisations driving these integrated landscape approaches create landscape action plans and translate those plans into private, public, or civic projects that together will support a landscape transformation strategy. Suitable finance and risk mitigation mechanisms are identified for specific projects or for a set of investments and projects. Finally, financial resources for these investments are secured.

The landscape approach in the CBD, NBSAPS, NBFPs

There is a long history of support within the CBD for integrated, place-based approaches to biodiversity conservation, even if these can be difficult to design and implement. NBSAPs are developed in each country to create an action agenda to achieve global biodiversity goals agreed upon under the CBD. With the adoption of the GBF at CBD Conference of the Parties (COP) 15 in Montreal in 2022, countries are updating their NBSAPs to align with the new targets. NBFPs consist of a range of actions to increase biodiversity-positive investments, decrease harmful spending and improve the effectiveness of available financing. They are based on an analysis of the drivers of biodiversity loss and gain, a review of biodiversity expenditures and subsidies, and a Financial Needs Assessment, which is linked to the NBSAP if it provides sufficient detail. While there is an increasing trend towards pursuing finance solutions at sub-national level, landscape approaches have typically not guided these efforts. Yet, lessons from ILF may be relevant for biodiversity and biodiversity finance planning at various scales.

The practice of integrated landscape finance

Integrated landscape approaches are increasing around the world. There has been wide adoption of integrated landscape ideas into key policy frameworks including the United Nations Convention on Biological Diversity (CBD), United Nations Convention to Combat Desertification (UNCCD), United Nations Framework Convention on Climate Change (UNFCCC), and United Nations Food Systems Summit (UNFSS). However, there is still a lot of work to do to support and scale these efforts.

Landscape finance initiatives have a variety of entry points. For example, local landscape transformation efforts are responding to sustainable development challenges that require a coordinated strategy across land uses and value chains. Development and government institutions are promoting integrated sustainability strategies, such as low-carbon emissions development, green growth and territorial development. Additionally, actors in internationally traded commodity value chains are coordinating investments to protect their supply sheds. Further, natural resource users and managers are promoting coordinated investments to restore ecosystem services in the landscape.

The need for financial support service providers is common to the development of integrated landscape investment initiatives. These service providers may work with Landscape Partnerships (LPs), business developers, government agencies, or civil society organisations to develop investment opportunities that support the implementation of the agreed landscape plans. They may steer existing financing to activities aligned with the plan or aggregate investment opportunities.

San Martin Department in Peru demonstrates a mature use of ILF to address biodiversity within a broader development strategy. One of the highest biodiversity areas in the Peruvian Amazon, San Martin, is threatened by deforestation and degradation. The regional government developed a cross-cutting Regional Strategy for Low Emissions Rural Development to improve public services for the rural population; promote competitiveness of low-emission goods and services produced; and manage forests sustainably with measures to address climate change. Through a collaborative process, they developed a multi-sector investment plan, incubated numerous businesses and projects, developed ten financial mechanisms, and set up a platform to facilitate funding from diverse sources.

Mobilizing the needed resources for biodiversity-oriented finance to achieve NBSAPs goals requires the simultaneous application of project-specific finance and finance focused on other development and environmental outcomes that can 'mainstream' biodiversity targets. At the landscape-level, new integrated financial models are emerging that target multiple outcomes, such as biodiversity, by coordinating various streams of finance to align with landscape visions and action plans. These include landscape-specific funds, landscape funds that invest in multiple landscapes, place-based investor collaboratives and foundations, landscape development finance institutions, and landscape bonds.

Experience of integrated finance in three landscapes

Diverse ways of financing landscape regeneration are illustrated in three landscapes. The Murchison-Semliki Landscape in Uganda, part of the Albertine Rift, is a highly populated biodiversity hotspot. The Northern Albertine Rift Conservation Group provides a platform for aligned action among numerous NGOs, government agencies and others, and is supported by the national government through an inter-ministerial framework. The group has coordinated efforts to attract financing and to link the work of diverse value chains in the landscape.

The Yucatán Peninsula in Mexico is an ecologically unique, multi-state region experiencing serious threats from tropical and mangrove deforestation, as well as coastal contamination and erosion. There are numerous multi-actor collaboratives across the region that are working to address climate change; forest, biodiversity, and coastal ecosystem restoration; ecotourism; and community sustainable development. While coordination mechanisms among these are currently weak, the different initiatives are well-positioned for greater coordination, including with economic and social development initiatives for which a supportive NBSAP framework can be very useful.

Cagayan de Oro Basin in the Philippines is a large, highly-populated river basin in northern Mindanao. Intensive agriculture and development have promoted land degradation, deforestation, and increased flooding during heavy rains and tropical storms. The Cagayan River Basin Management

Council (CRBMC) was formed as a coordinating body for different stakeholders to strengthen resilience via integrated watershed management and biodiversity conservation. The CRBMC led a collaborative process of landscape assessment, strategy development, action and investment planning. Partners developed diverse landscape finance mechanisms, including various systems of payments for ecosystem services for local farmers and indigenous communities, from governments, NGOs and private companies.

Key institutions and policies to support integrated landscape finance

While innovation is growing in ILF, the current financial system is not set up to encourage landscape-oriented finance. In expanding financing opportunities for biodiversity, national and sub-national governments need to consider ways to strengthen key institutions and policies. Spatially-explicit landscape action plans provide a critical foundation to build sets of coordinated investments. Landscape finance and risk management tools and mechanisms must be available. Finance institutions must be organized internally to facilitate landscape investment. Further, government policies and strategies must provide sufficient support for landscape investment.

Experience with ILF provides numerous lessons about how government policies and programs facilitate, or constrain, the mobilization of financial resources for biodiversity conservation jointly with other objectives. From those lessons we identified five strategic national and sub-national government roles: defining a supportive policy framework, developing financial mechanisms and services, providing public funding and incentives for landscape investments, regulating landscape investment and finance, and promoting landscape-friendly market development. The key to success includes choosing government roles and policy instruments strategically and clarifying the respective roles of national and sub-national governments. Governments also need to understand the opportunities for, and constraints to, landscape-friendly investment by the private sector. By taking a learning approach, governments can build on innovations already being implemented in landscapes and gradually forge connections among key actors.

Recommendations

The analyses above generated six recommendations that can help biodiversity leaders, especially in government, to strengthen national-level and local-level biodiversity planning and finance. Embedded within these recommendations are practical suggestions for those responsible for the process of revising the NBSAPs and NBFPs under the new GBF.

1. **Facilitate alignment of financial flows for biodiversity, climate, land restoration, and economic development through cross-sectoral and multi-stakeholder policy coordination**
Departments and agencies at different government levels should align a common vision and planning framework. This framework should have multiple goals for multiple biodiversity, climate and other sustainable development goals at the national level, with clear objectives and targets, so that they do not work at cross purposes. This core element of landscape-scale planning can be applied particularly to the development of NBSAPs by aligning national and sub-national government policy and budgeting across sectors, while providing detailed information on proposed actions and results. One of the most effective ways to better link the NBSAPs and NBFP processes, which are often disconnected, is for NBSAPs to create indicative investment budgets that are linked to clear quantifiable actions and targets, as well as facilitate stakeholder engagement for those involved in the process so that NBFP developers can ask more detailed questions, when needed. Coordinating implementation of the Rio Conventions and major initiatives around food, climate, water and land offer opportunities to strengthen the development and implementation of both NBSAPs and NBFPs if they are able to incorporate

biodiversity targets into these other related policy and budgeting processes and thereby improving efficiency and coherence of planning on all of these topics.

2. **Create spatially explicit, place-based plans that include biodiversity conservation in relation to other sustainable development goals**
   While biodiversity conservation requires strongly supportive policies at the national level, it is ultimately a place-specific land and habitat management enterprise that must be tailored to the needs of particular species and biological communities across fairly large areas. Therefore, national biodiversity policies should encourage the development of plans at the territorial or landscape scale. In the context of NBSAP development, a variety of tools have recently been developed, such as the UN Biodiversity Lab, or are being created that could help governments better align their mapping processes for a wide range of related activities. NBFPs can take advantage of emerging spatial finance and investment analysis tools.

3. **Promote finance models that support multiple projects with synergies for biodiversity and sustain action over a long-time horizon**
   Long-term impact on the conservation, restoration and sustainable use of biodiversity requires coherent landscape- and ecosystem-wide actions by multiple land users. This involves tailor-made investment strategies that target different land users across the landscape and across economic sectors, and coordination of financing efforts from a wide range of public, private and civic sources. Governments have tools to encourage shifts from project-by-project to multi-project place-based finance and also to mobilize grant funding to support integrated investment planning.

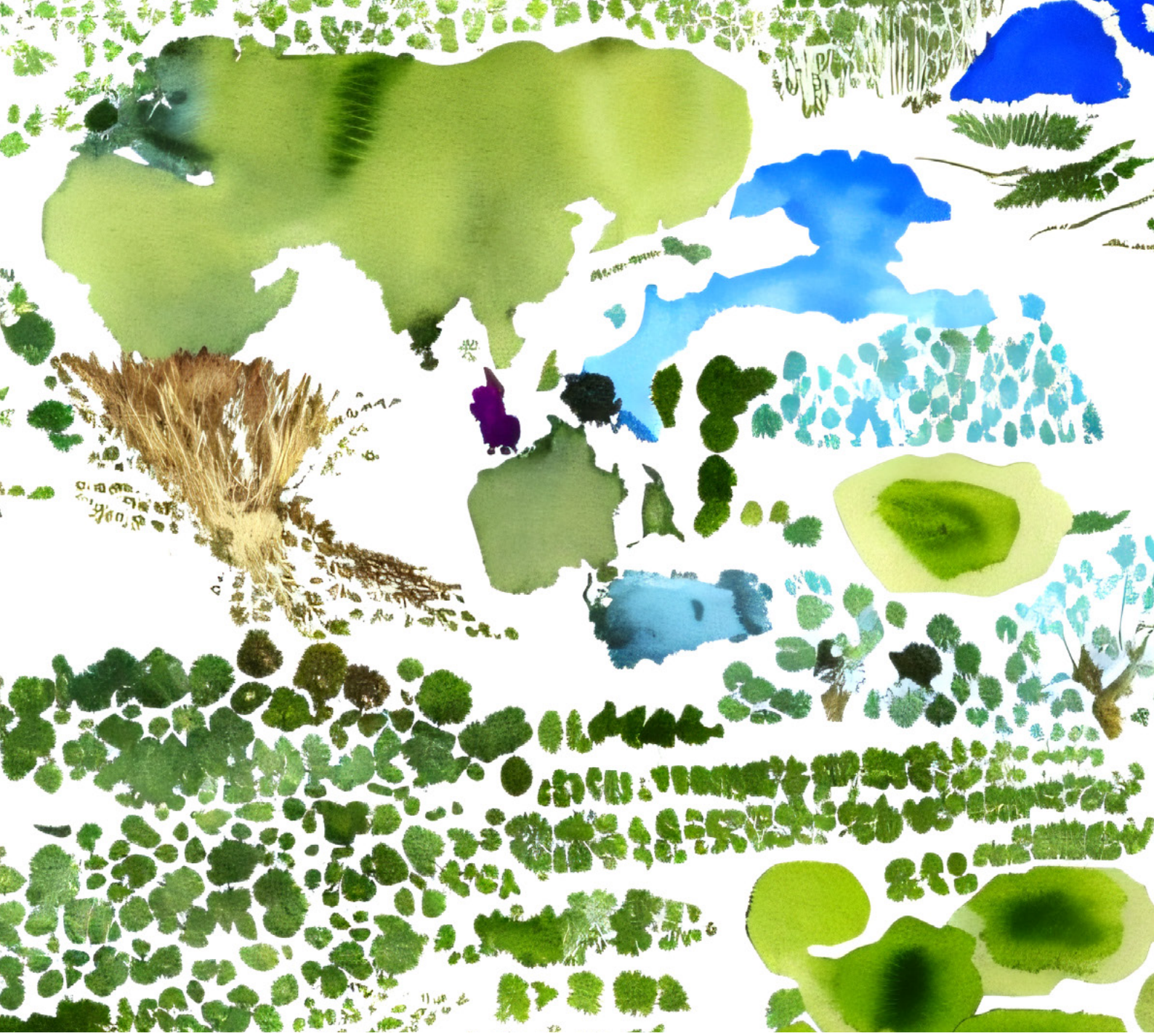
   To the extent that they encourage the development of sub-national and landscape-specific strategy and action plans, NBSAPs can call for the strengthening of finance capacities of landscape organisations and local governments; provide financial coordination and support services; and potentially assist in structuring inclusive, multi-sector and multi-project finance mechanisms. They can also call for reforming incentives, subsidies and regulations to reduce nature-degrading investments and support nature-positive land-use investments across landscapes. NBFPs can conduct analyses that build on their reviews of national-level biodiversity finance and inform the development of aligned landscape-scale finance solutions that fill the specific finance needs – across projects and time scales – that have been identified in priority landscapes and deliver the objectives defined nationally. Grant funding to support multi-stakeholder landscape planning and finance strategy development will be a critical component of these plans.

4. **Mobilize private investment within multi-sector, place-based development plans that benefit biodiversity**
   Many private sector businesses, investors and financial institutions are dependent on land and natural resources. Thus, in principle, there can be strong motivations for them to collaborate with other actors in their zones of operation or supply chains to meet sustainability challenges, including biodiversity conservation. Such challenges may include reduced risks from climate change, water shortages, natural resource disasters, and community conflicts; co-financing of critical built and natural infrastructure; increased profits from new markets; meeting company sustainability commitments; reputational benefits; more cooperative relations with workers and supply chain actors; or alliances for policy advocacy.

   Private sector actors – both large companies and Small and Medium Enterprises (SMEs) – are central to the achievement of most biodiversity goals, but they have typically been under-represented early in NBSAP processes. Efforts to engage these stakeholders should be prioritized. For NBFPs, private sector outreach is already an important element, but to the extent that these plans focus increasingly on sub-national and landscape level financial planning, the strategies of private sector engagement will need to become more localized with a greater focus on SMEs, cooperatives and other actors that are critical planning partners at a local level. NBFPs can also call for greater support from well-positioned investors interested in engaging in landscape finance opportunities.

5. **Strengthen landscape-level institutions for long-term, collaborative finance planning and implementation**
   This report reinforces the centrality of landscape-level action for achieving national biodiversity policy goals. But the success of action at this scale, and financing for it, is very dependent on the national enabling policy environment and program design. Therefore, a core public sector function is to strengthen these efforts by investing in landscape coordination institutions, such as multi-stakeholder platforms and partnerships and cross-agency government planning mechanisms. Another key function is to build the capacities of these actors and institutions to support the development and implementation of ILF strategies.

6. **Develop technical guidance and capacity development resources for countries to better align NBSAPs and NBFPs with GBF 'whole-of-society' approach**
   Implementing many of the recommendations above will require new and improved capacities, tools and processes for the NBSAPs and NBFPs, in order to align more directly with the post-2020 GBF's approach. We encourage the CBD, and its supporters, to improve and develop a set of user-friendly technical guidance resources for those responsible for updating and implementing the NBSAPs and NBFPs to support them, according to their own unique country context, in the implementation of these recommendations, such as building on the existing NBSAP forum. Some of these could be developed as pooled resources across the relevant Conventions. One focus would be information on tools available that can be adapted for various stages of NBSAP and NBFP processes. Another set of resources could focus on the implementation of ILM and ILF for landscapes that are targeted in the national strategies.



1. INTRODUCTION

1.1 *Challenges for governments financing the post-2020 Global Biodiversity Framework*

The new post-2020 Global Biodiversity Framework (GBF) that has been agreed upon under the Convention on Biological Diversity (CBD) includes a very ambitious call for resource mobilization for biodiversity to close an estimated annual biodiversity finance gap ranging from US$ 598 to 824 billion per year by 2030 (Deutz et al. 2020). Towards this end, many countries are developing National Biodiversity Finance Plans (NBFP) based on National Biodiversity Strategy and Action Plans (NBSAPs) with national targets. Ambition for the GBF will be high as it will be expected to close the gap.

Public, private, international, and national sources will be needed to finance biodiversity action, and sustainable development more broadly. Harmful financial flows and incentives must be redirected to flows that are nature-positive or at least do no harm to biodiversity. It is expected that all countries develop and implement an NBFP or similar instrument to mobilize resources for NBSAP implementation.

The Global Environment Facility (GEF), the financial mechanism of the CBD, will provide financial and technical support for developing countries to review and update existing NBSAPs to align with the new framework. This work, which will be funded by the GEF with technical support from the United Nations Development Program (UNDP) and the United Nations Environment Program (UNEP), will help developing countries identify key areas that they will need to update and refine in light of the new global framework and targets. This would include support to ensure a "whole of society" approach, align relevant policy, and develop innovative financial strategies and mechanisms to bridge the biodiversity finance gap, among others (GEF, accessed 2022). NBFPs are expected to be important implementation instruments under the GBF with initial funding support from the GEF to support countries in the development of these NBFPs, including baseline diagnostics, capacity, and institutional arrangements, with the Umbrella Program to Support Development of Biodiversity Finance Plans to be executed by UNDP.

Many countries, however, lack sufficient experience and track records in mobilizing and influencing these diverse sources of finance. The Biodiversity Finance Initiative (BIOFIN), a UNDP-managed global program, through its support for Biodiversity Finance Plans (BFPs), has experience working with countries' national and subnational governments to develop comprehensive plans on biodiversity finance. Yet few of the BFPs have been able to cover the full spectrum of financial needs for the targets in NBSAPs, largely due to the disconnect in the NBSAP and NBFP processes. BIOFIN and other agencies are planning to continue supporting country governments in developing NBFPs and applying lessons learned from their practical experience designing and implementing finance solutions for biodiversity.

The Convention provides key elements to be included in NBSAPs in terms of process, substance, components, support system, and monitoring and review systems. They are based on COP-10 and COP-11 decisions (CBD, accessed 2022). However, the new GBF is asking for a more inclusive and integrated course, at the time of writing this report, through a "whole-of-society" approach, not only national government integration. Such an approach includes subnational governments, cities and other local authorities, businesses, children and youth, civil society, Indigenous and local communities, and cooperation with other conventions, international organisations, and initiatives. Guidance on the NBSAP revision process encourages stakeholder involvement, but there is a lack of tools to implement this across key stakeholder groups. Moreover, very few cases of successful implementation of this cross-sectoral approach exist.

1.2 *Goal of the study: Assessing lessons learned on broadening finance strategies through integrated landscape finance*

The Dutch Ministry of Agriculture, Nature and Food Quality (LNV) commissioned this research in order to help Parties to the CBD better understand how concepts, lessons, and tools of integrated landscape

finance can inform and enhance the development of updated NBSAPs and new NBFPs. A second purpose was to consider what capacities must be fostered and actions organized for NBSAPs and NBFPs to be better aligned with the whole-of-society approach and better designed to address realities on the ground, thereby yielding more effective, efficient, equitable results for people and nature.

National government policies and program designs profoundly influence local and regional place-based opportunities. Integrated landscape finance approaches are especially relevant for local biodiversity strategies, but they also provide lessons for national-level strategies and finance.

1.3 *The Global Biodiversity Framework: Towards a 'whole of society' strategy*

The GBF builds on the Strategic Plan for Biodiversity 2011-2020 of the CBD and sets out an ambitious plan to implement broad action to transform society's relationship with biodiversity, ensuring that by 2050 the shared vision of "living in harmony with nature" is fulfilled. The framework is built upon the recognition that its implementation will be done in partnership with many organisations at the global, national, and local levels to leverage ways to build momentum for success. In addition, the framework's theory of change

TABLE 1.1 2030 targets in the Global Biodiversity Framework that integrated landscape finance can support

TARGET 1. Ensure that all areas are under participatory integrated biodiversity inclusive spatial planning and/or effective management processes addressing land and sea use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.

TARGET 3. Ensure and enable that by 2030 at least 30 percent of terrestrial, inland water, and coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities including over their traditional territories.

TARGET 14. Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, fiscal and financial flows with the goals and targets of this framework.

TARGET 18. Identify by 2025, and eliminate, phase out or reform incentives, including subsidies harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least 500 billion United States dollars per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.

TARGET 19. Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, by 2030 mobilizing at least 200 billion United States dollars per year, including by: (a) Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least US$ 20 billion per year by 2025, and to at least US$ 30 billion per year by 2030; (b) Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances.

(c) Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments;
(d) Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, benefit-sharing mechanisms, with environmental and social safeguards
(e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises,
(f) Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity
(g) Enhancing the effectiveness, efficiency and transparency of resource provision and use;

Source: CBD, Nations Adopt Four Goals, 23 Targets for 2030 in Landmark UN Biodiversity Agreement, 2022, accessed 2022.

acknowledges that its implementation will require the engagement of actors beyond governments, including: business and finance; Indigenous peoples and local communities; non-governmental organisations; and women and youth.

The agreed upon GBF comprises 23 action targets by 2030 with four overarching global goals, en route to "living in harmony with nature" by 2050. The CBD documents remain vague as to how this should be done, and what international, national, and subnational action is needed. There is also an emphasis on the need for a "whole of government and whole of society approach" to implementing the GBF.

1.4 *Convergence of biodiversity, climate, land restoration, water, and food systems agendas brings new opportunities for joint finance*

The profound interdependence between the agendas of biodiversity, climate change, land restoration, and food systems is increasingly recognized, even though the planning and funding in these communities is still often siloed. Among the 23 targets in the GBF is a call for cooperation across these inter-related systems and international processes including the UNFCCC, UNCCD and the UNFSS. Under target 19 there is a clear call for "optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises". Cooperation will be critical to achieving biodiversity targets as investment in major public, private, and civil society initiatives around food, climate, land, water, and food are growing. For example, far more funding is tagged for climate change, specifically mitigation, than for biodiversity.

The relatively recent emergence and high-level endorsement of natural climate solutions, and closely related Nature-based Solutions for climate (NbS), signal that there is a strong interest to support land-based projects that explicitly focus on multiple objectives (CI 2022; IUCN 2022). The UNCCD approach to targeting Land Degradation Neutrality and Drought objectives is not to ask parties to elaborate national 'land degradation' plans, but rather to integrate the outcome targets from various conventions into related national planning processes, incorporating the targets of multiple conventions.

The increased focus on food system transformation, including the UNFSS, has surfaced the need to work on multi-sectoral and multi-scale interventions and investments, across sectors and geographies. For example, the GEF, responding to its mandate as the financial mechanism for multiple conventions, has been developing and implementing these coordinated approaches for years. But there is far more work to do at the international, national, and landscape scales to normalize and scale-up these approaches.

1.5 *Integrated landscape finance*

In this report, integrated landscape finance (ILF) is described and analyzed to draw lessons and recommendations for more integrated approaches to developing NBSAPs and NBFPs that enable scaling up and diversifying biodiversity finance, as well as making it more effective. We define ILF as an approach to finance multi-project, multi-sector investment portfolios that encourage synergies between investments to generate impacts at scale across multiple landscape objectives (biodiversity, climate, livelihoods, water, and relevant economic sectors). This includes accessing new flows, aligning existing flows, and mitigating harmful flows. It also considers the policy environment at multiple levels that supports this approach to investment. ILF uses the lens of landscapes which we define as mosaics of natural features and agricultural and other land uses in a particular geographic region. These areas can be defined ecologically, jurisdictionally, or socio-culturally. The framework also applies to seascapes.

The ILF approach of identifying and mobilizing financial resources required to advance negotiated and agreed upon multi-stakeholder priorities, can be implemented in a wide range of multi-sectoral and spatial approaches for sustainable transformation.

Similar concepts have been applied to related communities of practice, including territorial development and ecosystem-based adaptation, among others (Forster et al. 2020; TP4D 2019).

New landscape scale institutional models for coordination are emerging. In many places, people are responding to their local challenges of sustainable development and ecosystem restoration by forming unconventional, multi-stakeholder partnerships among farmers, environmentalists, governments, communities, and businesses to manage shared resources within a landscape. These locally grounded platforms, known as LPs, are creating holistic solutions to sustain and regenerate resources, so they can meet the long-term needs of the diverse stakeholders in that landscape. Hundreds of initiatives using integrated landscape management (ILM), under a wide variety of labels (Scherr, 2022), are now operating to mitigate and adapt to climate change, restore degraded lands and forests, transform food systems, move to a green economy, and advance sustainable territorial development (Estrada-Carmona et al. 2014; García-Martín et al. 2016; Milder et al. 2014; Zanzanaini et al. 2017).

The basic investment thesis of ILF is that ecological and economic interactions among different projects and enterprises in a landscape can have powerful negative or positive interactions on profitability, risk, and impacts. Coordinated planning of these investments can both enhance business and project performance and accelerate regenerative transformation at the landscape scale (Scherr et al. 2017). To be successful, these LPs must organize collaborative and coordinated action, fund investable projects that can regenerate their ecosystems and economies, and gain recognition and support for their action plans from national governments and the private sector.

Audiences 1.6

The primary audience of this study is decision makers in government departments who are responsible for the implementation of the GBF and for the design of NBSAPS and NBFPs. We also seek to inform people working in relevant public and private financial institutions, as well as interested civil society, business and research organisations. Another important audience is BIOFIN, which develops guidance and supports the development of NBFPs. BIOFIN is also a source of lessons and insights based on their work with NBFP. Finally, for the uptake of the outcomes of this project and to encourage alignment among the Rio Conventions, we hope the report will inform, and facilitate collaboration with stakeholders from other United Nations conventions (e.g. UNCCD and UNFCCC) who are interested in integrating their finance efforts with those of the biodiversity community. The report may also be of interest to others seeking an overview of ILF.

Organization of the report 1.7

This report is organized into nine sections. Section 2 provides a background on landscape framing within the CBD and overviews of National Biodiversity Strategies and Action Plans and National Biodiversity Finance Plans. Section 3 provides a more detailed analysis of ILF, which is then illustrated in Section 4 with experience in a large landscape in the San Martin Department, Peru. Section 5 explores existing best practices in ILF and lessons learned by governments, companies, investors, NGOs, and community organisations in landscapes across the world. Section 6 describes some of the key challenges for implementing landscape finance that also apply more broadly, and Section 7 draws lessons for government roles from experience in public policy supporting integrated landscape investment. Building on the previous sections, Section 8 takes a deeper dive into experiences with landscape finance in three landscapes, summarizing longer case studies that are included in Annex 2. Based on findings from the global review and the case studies, Section 9 draws lessons from ILF for national level policy makers who are tasked with developing NBSAPs and NBFPs.

2. LANDSCAPE FRAMING IN THE CBD, NATIONAL BIODIVERSITY STRATEGIES AND ACTION PLANS, AND NATIONAL BIODIVERSITY FINANCE PLANS

2.1 *History and state of landscape framing in the CBD*

The CBD bases its actions on the ecosystem approach that constitutes an overall framework for supporting decisions in policy-making and planning relating to the goals of the Convention, to be implemented and organized in an integrated and inclusive way at the level of ecosystems (CBD 2004). Over the years, various additions have been made to support the implementation of ecosystem approaches, including the Addis Ababa guidelines and principles (CBD 2007).

2.1.1 *Landscape framing in the CBD*

Following the adoption of the 2011–2020 strategic framework and the Aichi Biodiversity Targets set in 2010, a complement to these principles and guidelines was proposed at the CBD COP 11 in 2012 to specifically provide guidance on how to improve the sustainable use of biodiversity using a landscape perspective (CBD 2011; CBD 2012). The COP decision XI/25 stated that the proposed guidance could be considered a useful complement to the existing approach. This proposal was the outcome of a process organized by various international organisations. It provided a rationale for addressing the landscape perspective in land use planning and informed the COP about linkages to various international and multilateral efforts to improve sustainable use of biodiversity at the landscape level (Meijer et al. 2021).

While rooted in various scientific disciplines, ecosystem and landscape approaches share various principles and guidelines for sustainable use and conservation of nature in an equitable way. A landscape approach broadens the ecosystem approach by including the socio-ecological context that could cover multiple ecosystems and focuses on the human influence on direct and indirect drivers of biodiversity loss within the spatial concept of a landscape (Meijer et al. 2021). Over the years, the need for spatially-oriented, integrated, and landscape approaches have been endorsed to support the transformative changes proposed by the CBD, such as in the most recent 5th Global Biodiversity Outlook advocating for an integrated approach which addresses socio-ecological context (CBD 2020).

2.1.2 *Alignment of the landscape framing with the new Global Biodiversity Framework*

The GBF (CBD 2022) is built around a theory of change that promotes a whole-of-government (Edinburgh Declaration 2020) and whole-of-society approach, covering all levels of national and subnational governments and including all actors in society. The GBF targets also detail transformative changes that require actions that can benefit from experiences of landscape approaches and initiatives, as well as their socio-ecological perspective. These include supporting area-based protection, comprehensive and landscape-scale spatial planning, sustainable use, and managing nature's contributions to people, as well as inclusive decision-making (Meijer et al. 2021). While the CBD has endorsed the spatially-oriented, landscape, and multi-stakeholder approach encompassed in integrated landscape management, project implementation strategies and support-mechanisms are largely lacking. Yet, these will be needed to support the transformative change proposed by the GBF, including the 30x30 targets (Dudley and Stolton 2022)

Two of the main tools being used by governments that could strengthen an integrated landscape approach are the National Biodiversity Strategies and Action Plans (NBSAPs) and the National Biodiversity Finance Plans (NBFPs). The approaches to these Plans are described in the sub-sections below, including how they currently relate to the landscape framing.

2.2 *National Biodiversity Strategies and Action Plans (NBSAPs)*

The CBD requires the preparation of "a national biodiversity strategy (or equivalent instrument) and to ensure that this strategy is mainstreamed into the planning and activities of all those sectors whose activities can have an impact (positive and negative) on biodiversity," (CBD Article 6, accessed 2022). To date, 193 of 196 parties have developed at least one NBSAP. To help countries align with the new GBF, the GEF provides resources for analysing and updating their NBSAPs, through the technical support of UNEP and UNDP.

NBSAPs are created at the national level to reflect how a country intends to fulfil the objectives of the CBD in light of specific national circumstances. The related action plans constitute the goals, targets, and high-level actions required to meet these goals. They provide important opportunities for countries and their constituents to recognize and plan for the systemic and multi-dimensional approach their strategies require, defining priorities of the where, when, and how of biodiversity management. The NBSAP is then meant to be used as an implementation instrument to achieve the country's defined priorities and objectives for biodiversity and ecosystem services, sustainable use, conservation, and benefit-sharing across stakeholders. In a few cases, biodiversity strategies and action plans (BSAPs) have been developed at the regional, subnational, and local level (CBD, accessed 2022; IUCN, accessed 2022; UNEP, accessed 2022).

However, the CBD guidance for governments developing NBSAPs is broad, and there is no standard approach to spatial analysis, action/implementation plans, biodiversity budgeting, or financing plans to achieve them. The process developed across countries can vary significantly in terms of the multi-stakeholder engagement achieved at the national level, as well as the completeness of information in the strategies and action plans that can be considered for financial resources through public funding.

NBSAPs are developed primarily by the Ministry of the Environment, and other stakeholders who provide support and funding to support "biodiversity mainstreaming" at the national level. Some national governments might lack country-specific information, creating major obstacles for biodiversity conservation planning. In these cases, technical partners have proven essential in contributing data, tools, and specific geographical knowledge. Strengthening country-specific capacity and expertise on biodiversity assessments at a national level can also be supported in the process (CBD, accessed 2022)

2.3 *National Biodiversity Finance Plans (NBFPs)*

2.3.1 *Introduction to National Biodiversity Finance Plans*

Developing finance plans is necessary to achieve the targets defined in National Biodiversity Strategy and Action Plans (NBSAPs). The current draft GBF text includes statements that tend towards the development of NBFPs for every country with flexible use of the methodology. As of 2022, 35 countries have developed NBFPs with the support of the UNDP Biodiversity Finance Initiative (BIOFIN).

BIOFIN is a UNDP global program that developed, piloted, and continuously improves a methodology to understand the national biodiversity finance ecosystem to develop context- driven Biodiversity Finance Plans (BFPs) (BIOFIN Workbook 2018). BIOFIN's Finance Plans include baseline measurements and understanding of the existing national landscape of financing mechanisms as well as the drivers of biodiversity loss and gain.

The design of BFPs includes a sequence of steps. A policy and institutional review looks at relevant national and sub-national legislation, policies and institutional frameworks that either support or harm biodiversity, including biodiversity harmful subsidies, takes stock of existing finance mechanisms. A biodiversity expenditure review measures current biodiversity expenditure; and a finance needs assessment determines financial needs based on the country's NBSAP and other relevant strategies. Finally, a context-driven biodiversity finance plan is developed, which prioritizes feasible and impactful finance solutions to reach the national biodiversity targets. The finance plans aim at improving existing finance mechanisms as well as implementing innovative ones. Finance solution implementation aims to generate new revenues, realign expenditures, improve efficiency of existing finance flows, or reduce harmful expenditure.

BIOFIN has undertaken a global mapping of over 150 potential financing solutions a country could pursue, resulting in the BIOFIN Catalog of biodiversity-

focused finance solutions, which can be used as a menu of options for all countries to explore to design their finance plans.

2.3.2 *A cross sectoral national step by step approach*

The BIOFIN methodology (BIOFIN Workbook 2018; see Figure 1) encourages a collaborative process for national biodiversity finance planning. The plans are developed by national teams with expertise across finance and biodiversity, overseen by national steering committees, and are closely linked to frameworks governed by national ministries of environment, finance, and others to create actionable plans that are feasible. Stakeholder engagement from government, civil society and private sector actors is pursued through the process and consultation workshops are organized at each step to foster a sense of ownership from the stakeholders.

2.4 *Challenges for NBSAPs related to integrated landscape finance*

A number of factors limit the ability of NBSAPs to encourage landscape finance. These include: a lack of cross-sectoral integration, a disconnect between NBSAPs and finance mobilization efforts, a disconnect between NBSAPs and private finance stakeholders, and limited engagement with landscape-specific planning and integrated landscape approaches.

2.4.1 *Lack of cross-sectoral integration*

In most countries, NBSAPs have been developed and adopted by the national authority responsible for the Convention on Biological Diversity, typically the Ministry of Environment. These plans are often not well-contextualized and aligned with other government agencies and strategies that have different and often competing objectives. As a result, most of these plans are not budgeted based on a national- level review of existing biodiversity expenditures across other relevant sectors at a national level. Many are not supported by a well-functioning coordination mechanism with cross-sectoral representation, a key mechanism for implementation. These underlying limitations of NBSAPs affect NBFPs as the NBFP designers need to look into other national plans to ensure the scope coordinates with other related sustainable development objectives such as climate, food systems, green infrastructure, or urban development. This practically means that in most cases, the underlying information linking biodiversity priorities within the broader national context to funding sources and mechanisms is unavailable in a NBSAP.

Many countries lack a strong policy and legislative framework to accompany the development of NBSAPs. Often, the focus of reforms is on legal or policy measures aimed directly at protecting habitats, ecosystems, and species rather than on causes related to broader sectors of the economy that indirectly affect biological diversity. The latter may require root cause analysis and systems thinking, sub-nationally and at landscape scales, to solve.

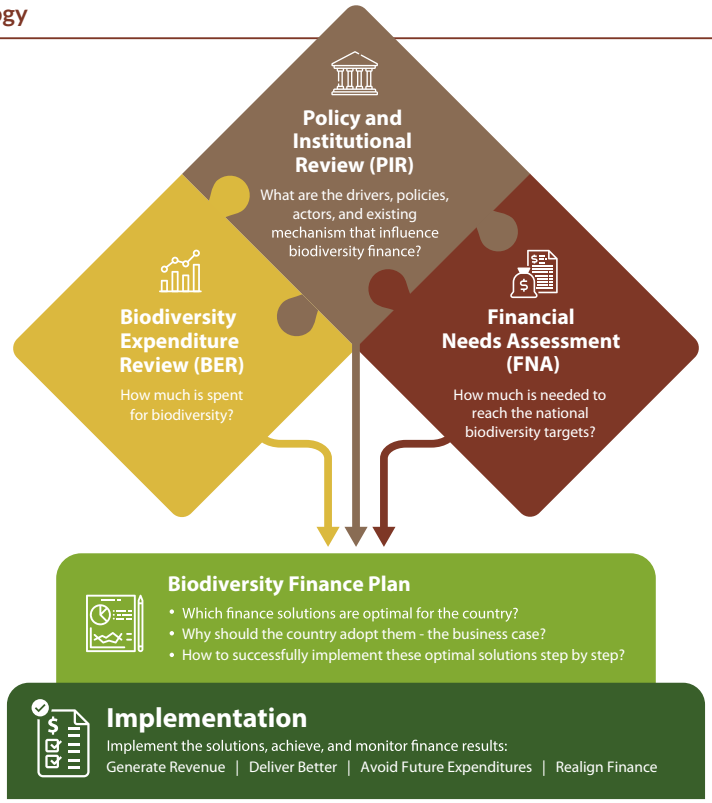
2.4.2 *Disconnect between NBSAPs and finance mobilization efforts*

With the updating of NBSAPs, there is an opportunity to more closely link them to finance mobilization efforts and use them as the basis for an NBFP. However, for national government officials to facilitate cross-sectoral and cross-ministerial processes for updating NBSAPs with a whole-of- society approach will likely require the capacity to understand the incentive structures of key stakeholders, develop root cause analysis and promote dialogue and integration in different sectors. New tools and approaches are required to engage key stakeholders to facilitate a 'whole of government and whole of society' approach that can be implemented at a landscape-scale and supported nationally. This requires a change in paradigm beyond technical assistance for updating the planning documents for NBSAPs or NBFPs, and thinking through systems approaches that can seek synergies for climate, land-use and food investments.

Most countries' ministries of environment, which often lead the NBSAP development and implementation process, require strengthened capacities for making the economic case for nature-positive investments and policy reform to ministries of finance and/ or economy. Without these technical capacities on economics and finance, it is hard to advocate effectively for public finance allocations to biodiversity

FIGURE 1 The BIOFIN Methodology

Source: UNDP BIOFIN 2018



BIODIVERSITY FINANCE POLICY AND INSTITUTIONAL REVIEW (PIR). The PIR enables countries to analyse current policies, institutions, make an inventory of harmful subsidies and map existing finance mechanisms associated with biodiversity and ecosystem services. The purpose is to evaluate their impact and effectiveness and to understand key entry points and opportunities for creating change. The first step includes identifying the existing national vision and key trends for biodiversity and sustainable development financing as well as mapping sectoral interactions with biodiversity and ecosystem services. The PIR explores how finance and economics can be used to address the main drivers of biodiversity loss. The PIR process is used to further clarify relevant stakeholders and their specific mandates, institutional arrangements and capacity related to the NBSAP and biodiversity finance. Policy recommendations, entry points to improve existing finance mechanisms and possible reforms of harmful subsidies are incorporated in the PIR.

BIODIVERSITY EXPENDITURE REVIEW (BER). The Biodiversity Expenditure Review helps countries to establish a firm baseline of historic and current biodiversity expenditure levels and future projections in comparison to the underlying institutional and policy vision and framework. The expenditure review is conducted with the public, private, and civil society institutions identified during the PIR. For each relevant biodiversity finance actor, budget, allocation and expenditure data are collected for the past 5-7 years. For each budget or expenditure, the percentage that can be attributed to biodiversity and the target area of the expenditure is determined. The analysis explores the relation of biodiversity expenditures to overall government budgets, stated policy objectives, Gross Domestic Product (GDP) and jobs, NBSAP strategies and biodiversity related categories, etc. Historic trends are analyzed and projections can be made about future financing under a business-as-usual scenario. The final report provides specific recommendations on (i) key sources of financing, (ii) possible re-alignment of expenditures; (iii) allocation or absorption issues; (iv) and other insights generated from the review.

FINANCIAL NEEDS ASSESSMENT (FNA). The FNA is meant to produce a detailed cost estimate of key biodiversity policies and plans. These are based on NBSAP when they contain sufficient clarity and detail to make these estimates. This involves an estimation of the financial needs and a prioritisation of actions for biodiversity management across all sectors of government, NGOs and can include private sector investments. Existing financing for specific actions are compared to estimated needs to develop a projected financing gap. The methodology includes reviewing and refining actions defined in the NBSAP and other major policies that require costing. For each of these costable actions, specific budget elements are calculated based on existing government budget categories and units.

BIODIVERSITY FINANCE PLAN (BFP). The BFP is a national strategy and plan for financing biodiversity addressing all possible dimensions of finance, including resource mobilization, improving impact delivery, avoiding future expenditures and re-aligning expenditures towards biodiversity goals. Using the recommendations from the PIR, the BER, and the FNA, the national experts review a wide range of possible finance solutions, and screen them using specific predetermined criteria. For a selected number of the most promising financing mechanisms, a more detailed feasibility study is to be carried out. The Finance Plan is the culmination of the process and is intended to be institutionalized within the government to ensure its implementation.

from national budgets in relation to other policy goals and ministries. In particular, the application of results-based frameworks to justify public expenditures are critical to making the case for increased funding from environment ministries. As a result, these cross-ministerial processes would provide the opportunity to include the ministry of finance and/or economy earlier in the NBSAP process, along with the sector ministries that have the most impacts, and are the most impacted by, natural capital risks and opportunities for biodiversity mainstreaming.

Given the mandate of ministries of finance and increasing recognition of nature as a systemic financial risk, strategies and action plans could be strengthened through longer-term public finance allocations, economic valuation, embedding risks, and information analysis related to nature. Without coherent processes and cross-ministerial planning, the investment synergies for biodiversity, climate, and development in a given landscape or territory will be unrealized. In addition, the roles of the Ministry of Finance in supporting the mainstreaming of biodiversity in support of the objectives within NBSAPs, can be essential to value nature-positive investments and disincentivize nature-degrading sectors and activities through fiscal and policy instruments (Power et al., 2022).

2.4.3 *Disconnect between NBSAPs and private sector finance stakeholders*

Most countries' biodiversity funding still comes primarily from public domestic expenditure and international public, accounting for an estimated 68% of global biodiversity finance (OECD, 2020). Some countries are mapping domestic biodiversity-related expenditure and costing requirements for their objectives, such as through the BIOFIN approach (Seidl et al., 2020). These are essential first steps to mobilizing resources based on reliable and consistent information on funding needs and expenditures. However, governments still spend approximately 500 billion per year in support of biodiversity harmful expenditures, equal to approximately five to six times total global biodiversity finance (OECD, 2020).

Other key stakeholders that need to be included in the process of financial resource mobilization for NBSAPs are the private sector and financial institutions. Including these financial stakeholders in the NBSAP is essential to close the biodiversity finance gap. Currently, these stakeholder groups are not included in the NBSAP process for most countries.

The private sector's interest in biodiversity investments lies in the materiality of biodiversity to their operations and business and their impacts across landscapes. Nature and climate-related risks have also come to the forefront of risk management and require investments and shifting business practices to ensure sustainability (WEF, 2022). For financial institutions, there is a strong regulatory (TNFD accessed 2022) and commercial interest in how investments can be aligned with nature-positive impacts. A plethora of initiatives and financial mechanisms are also positioning nature-based solutions (NbS), natural climate solutions (NCS) and ecosystem-based interventions as essential investment and market opportunities (UNEP, 2021). The issue of scale and aggregation of funding requirements is an obstacle for larger institutional funders and the private sector to invest.

Working through national, subnational, and landscape-scale coordination, project aggregation can connect pipelines of locally defined projects to different sources of funding for nature-positive projects and investments (adapted from UNEP 2018; and M. Arlaud, O. van den Heuvel, D. Meyers, personal communication 2022).

2.4.4 *Disconnect between NBSAPs and landscape approaches*

Landscape approaches, which encompass multi-sector, integrated, and participatory approaches, are not well represented in current NBSAPs. 44% of the available NBSAPs mentioned, integrated policy approaches in landscapes and seascapes, and of those, only a few explicitly included "landscape approach" or "integrated landscape management" (UNU-IAS 2018). Analysis of the current NBSAPs shows that integrated landscape and spatial planning approaches have not been widely incorporated into NBSAPs (Meijer et al., 2021). Leaders of local landscape initiatives–even those prioritising biodiversity conservation–are not always well linked with national biodiversity leaders.

2.5 *Challenges for NBFPs related to integrated landscape finance*

Based on consultation with the UNDP-BIOFIN team and technical staff who have been supporting countries in developing BFPs, document reviews and reviews of NBFPs, challenges and have been identified in creating NBFPs that are most relevant to ILF.

2.5.1 *Limited focus on the landscape and local level*

Most of the NBFPs focus on the national level to develop and implement policy related finance solutions. However, these strategies and plans could benefit from an explicit spatial approach and from supporting implementation through local participatory management. While some finance mechanisms are first piloted at the local level and then scaled-up to the national level, these pilots could be strengthened by being linked directly to integrated landscape-based or area-based investment plans. In the cases where these investment plans do not exist, they should be developed to consider the systemic and spatial interactions that exist across sectoral strategies and plans to ensure their sustainability, while responding to the local and contextual socio-ecological needs of the landscape or territory. However, the success of these investment cases will rely on supportive legal and investment conditions for biodiversity finance at all scales. For example, according to BIOFIN (n.d.), Kazakhstan supports the reform of legal frameworks for introducing biodiversity offsets as a formal instrument and establishing an internal Emission Trading System to integrate carbon offsets, while creating an enabling environment for attracting carbon finance internationally (); according to BIOFIN (n.d.), Mexico a program in Mexico City supports reform of finance solutions; and a new payment for ecosystem services (PES) scheme is being piloted in two different regions of Mexico to bolster under-investment in forest conservation.

Only a limited number of sub-national BFPs have so far been developed, but the demand is increasing. The first pilot of a local BFP by BIOFIN is in Mindoro, Philippines and others are under development or completed in India and China. These subnational BFPs could benefit from a stronger focus on ILM and ILF approaches by focusing on identifying synergies between investments in multiple sectors, beyond traditional conservation activities. And NBFPs could benefit from spatial analysis and mapping of landscape-scale biodiversity targets that can be included in the plan.

2.5.2 *Weak relationship between NBFPs and NBSAPs*

TTo achieve the targets defined in an NBSAP, a financing plan must be developed. The development of any NBFPs, in theory, should be partially guided by NBSAPs if they are sufficiently developed. However, in practice, the guidance for developing the content of NBSAPs is open to interpretation and very flexible, which results in significant variation between them and creates additional work to develop a financing plan. This is because NBSAPs are solely based on the process developed within the country and the extent to which enabling environments, and their link to practical implementation, are considered in these strategies and action plans.

NBSAPs are particularly important for two steps in the NBFPs, during the Policy and Institutional Review (PIR) for the initial understanding of the national targets and action plans, as well as during the Financial Needs Assessment (FNA) to estimate the finance needs to reach the national targets.

Many NBSAPs have only broad strategies and targets that are expressed as aims or objectives. This lack of detailed actions and results means that developers of NBFPs must often rely on additional official documents, such as broader national plans (e.g. sustainable development strategies) or more specific plans such as protected area expansion strategies, in order to obtain 'costable' detail. More detailed result-oriented targets and action plans in the NBSAPs would permit better costing of the actions needed to reach the national biodiversity targets, sources of existing public funding and therefore a better understanding of the national finance gap identified in the NBFP.

2.5.3 *Need for long-term vision and commitment among stakeholders*

The process of developing NBFPs requires long-term commitment by stakeholders and often renewed engagement with newly elected governments, private

sector actors and other civil society stakeholders. These stakeholders also need to commit to a long-term facilitated process, particularly as the most impactful finance solutions from NBFPs can have finance results emerging after three to four years or longer, even if early results may happen after one to two years. And once the NBFPs are designed the country needs financial resources to implement the finance solutions identified.

2.5.4 *Inadequate capacity for using integrated approaches*

There is a critical need to build capacities of stakeholders to understand that biodiversity requires an integrated approach and depends on context. Many practices perceived as sustainable by the economic sector may actually be harmful or neutral for biodiversity. These include some forms of investments that are often financed with a 'green' label, such as hydropower, wind energy, solar energy, monoculture forests, and restoration with invasive species. Clarifying credible labeling for what constitutes a nature or biodiversity-positive investment or project within the territorial or landscape context would support evidence-based decision-making for biodiversity impacts.

2.5.5 *Limited diversity of funding sources identified*

Government spending and official development assistance are the core funding sources for nature (sometimes over 70%), but a more diversified portfolio of finance mechanisms is needed to be developed to meet all identified needs. When possible, the most effective approach is identifying the most simple solution or improving existing finance mechanisms rather than creating new mechanisms.

The experience globally of planning and implementing ILF can potentially suggest ways to overcome some of the challenges described above for both NBSAPs and NBFPs.

3. OVERVIEW OF INTEGRATED LANDSCAPE FINANCE

This section describes the approach of ILF, particularly those features that can help inform the development of NBFPs that can tap broader sources of finance. ILF is built on a foundation of a strategic planning process that works across economic sectors, government ministries at the national level, and different levels of government. The approach encourages spatial planning as well as local participatory planning. The first subsection below describes how the integrated landscape approach builds from and amplifies biodiversity conservation. The second subsection compares ILF with what might typically be called "conservation finance." The remainder of the section describes key elements of ILF.

3.1 *Biodiversity conservation and integrated landscape management (ILM))*

Biodiversity conservation efforts must engage other land uses within a landscape, particularly agriculture. Nearly a third of the world's landmass has crops or planted pastures as a dominant land use; another quarter of the land is under extensive livestock grazing. Eighty (80) to 90 percent of lands habitable by humans are affected by some form of production activity, and areas critical for the conservation of genetic, species and ecosystem diversity are often most affected. More than 1.1 billion people, whose livelihoods directly depend upon agriculture, live within the world's 25 biodiversity 'hotspots," the most threatened, species-rich regions on Earth. Agriculture's ecological "footprint" will only continue to grow with rapid increases in population, growing levels of meat consumption, and the emerging biofuels market. Broader food systems also link rural and urban communities and territories in a region within a country, across regions, and beyond. Cities and urban food supply systems play an important role in shaping their surrounding and more distant rural areas where land use, environmental management, food production and infrastructure, and waste generation are involved (FAO, 2017; Forster & Escudero, 2014; Kremen & Merenlender, 2018).

Management at the site level alone will not provide the opportunities for spatial and temporal planning required for sustainable management. Neither will an approach in which managers select areas of most important biodiversity near agricultural land or cities and protect them. To ensure positive outcomes for biodiversity, protected areas (PAs) must be connected and fully integrated within participatory planning frameworks. Agricultural, agroindustry, human settlements, mining, transportation infrastructure, and other developed land should be managed as part of the matrix surrounding PAs, while natural habitat areas should be managed in relation to these surrounding areas (Borah et al., 2020).

In the context of agriculture, examples of landscape strategies for biodiversity conservation include protecting and promoting local crop and livestock diversity; maintaining connectivity between native habitats within agricultural landscapes; planting hedgerows around farm fields; protecting watersheds with spatially-targeted, natural and planted perennial vegetation; maintaining continuous year-round soil cover to enhance rainfall infiltration; managing inputs and wastes to minimize agricultural pollution of natural habitats; and designing farming systems to mimic the structure and function of natural ecosystems (Jeanneret et al. 2021; Kremen & Merenlender 2018; McNeely & Scherr 2002).

There is growing consensus that a landscape perspective and approach are necessary if the goals of biodiversity and ecosystem services maintenance, agricultural production, and improved livelihoods for local people are to be achieved (Bailey & Buck 2016; Defries & Rosensweig 2010; Thaxton et al. 2015). The collaborative process for implementing integrated landscape management (ILM) is illustrated in Figure 3.1 and described in more detail in 1000 Landscapes (2022).

FIGURE 3.1 Cycle of Integrated Landscape Management

Source: 1000 Landscapes for 1 Billion People. (2022). A Practical Guide to Integrated Landscape Management. From https://landscapes.global/wp-content/uploads/2022/09/ILM_Practical_Guide.pdf

The integrated landscape approach has been recognized internationally and formally endorsed not only by the UNCBD (CBD 2011; 2012; 2016); but also by the UNFCCC (UNFCCC 2016) and UNCCD (Orr et al. 2017; UNCCD 2017); the UNFSS (UNFSS 2021a; 2021b); UN Habitat (UN Habitat 2019); the UN High-Level Political Forum of the UN's Sustainable Development Goals (SDGs) (United Nations Economic and Social Council 2018); the UN Decade on Ecosystem Restoration (Dudley et al. 2021); and the United Nations General Assembly (United Nations 2015). While there has been a wide adoption of integrated landscape ideas into key policy frameworks in theory, there is still work to be done in operationalizing ILM and determining how to finance it. A manual is currently under development for the CBD by the United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS) to support the integration of landscape approaches into NBSAPs.

Integrated landscape finance as a cross-sectoral, multi-stakeholder approach to financing biodiversity conservation 3.2

In line with the reasoning in the previous sub-section, successful biodiversity conservation requires landscape-level planning that includes the participation of relevant stakeholders across sectors. Landscape finance strategies will need to be based on these plans. ILF supports multi-project, multi-sector investment portfolios that encourage synergies between investments to generate impacts at scale across multiple landscape objectives. To understand key elements of ILF see section 3.3. It is instructive to consider the concept's relationship to "conservation finance."

There are a variety of definitions for biodiversity finance and conservation finance. The Paulson Institute report, which estimates a yearly "funding gap" for conservation finance, defines conservation finance" as "funds needed to sustainably manage biodiversity and maintain ecosystem integrity" (Deutz et al. 2020). The Conservation Finance Alliance (CFA) defines it as "mechanisms and strategies that generate, manage, and deploy financial resources and align incentives to achieve nature conservation outcomes" (Meyers 2020). So, conservation finance can be seen as both "funds" or "mechanisms and strategies." In either formulation, the implication is that a range of public policy and "non-financial" actors need to be part of a conservation finance system.

Aligning with this framing, BIOFIN identifies a very wide range of biodiversity finance instruments, such as grants, debt, equity, fiscal, market, regulatory, and risk management. It has compiled an extensive catalog of finance mechanisms and solutions that could be used for biodiversity conservation (UNDP-BIOFIN, accessed 2022). CFA also offers a comprehensive taxonomy of conservation finance mechanisms (Meyers 2020).

Based on these definitions, as well BIOFIN's approach to compiling instruments, a conservation

1) The terms "biodiversity finance" and "conservation finance" are generally used interchangeably

finance approach intends to take a cross-sectoral approach that utilizes a full range of private and public funding. The BIOFIN workbook distils this point by saying that a conservation finance solution is one that can be defined as "an *integrated* approach to solve a *specific* problem or challenge by the context-specific use of finance and economic instruments" (UNDP-BIOFIN 2018).

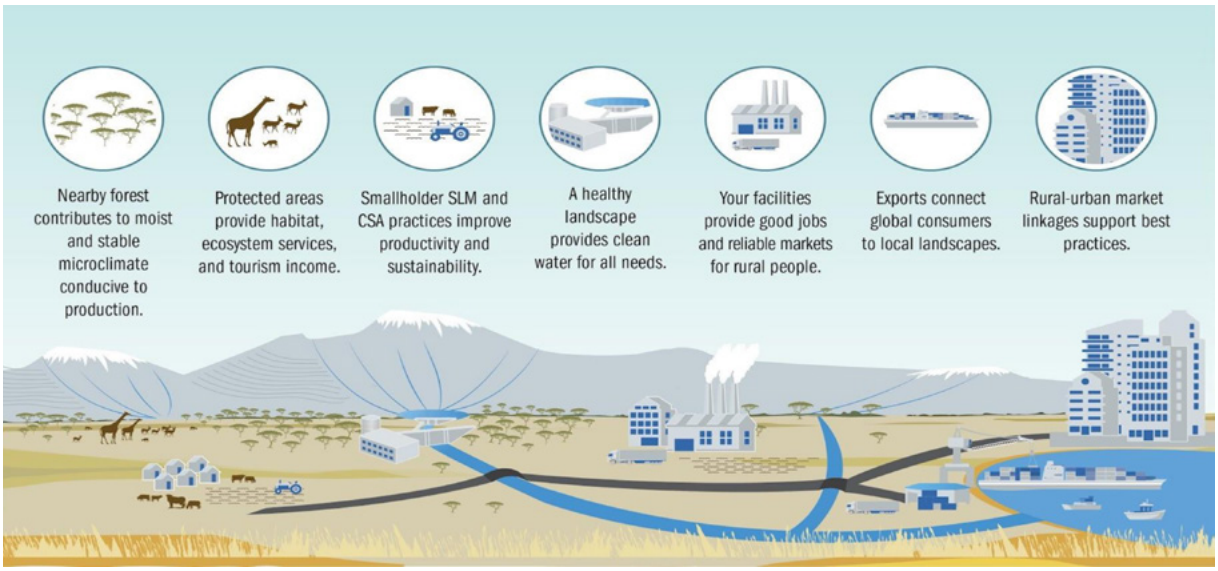
ILF can be seen as an integrated approach to use/deploy a specific set of finance and economic instruments to solve a set of integrated problems or challenges. While aligned with other definitions of conservation finance, its approach is to focus on the interrelated nature of ecosystem and livelihood challenges and the need to address these in a coherent and comprehensive way to finance an expansive set of interventions across space and time to meet these related goals. In this way, an ILF approach connects biodiversity conservation-focused investments to a broader set of land-use related issues such as climate, water, agriculture, forestry, health, and infrastructure. An integrated landscape approach also recognizes that the achievement of these other objectives is often closely tied to achieving biodiversity objectives.

Functionally, biodiversity finance planning does consider these things, but opening up the aperture for an investment lens to consider the needs of a sustainable landscape more broadly has the potential to bring new stakeholders and investors into the process.

A framework for integrated landscape finance 3.3

The Finance Solutions Design Team of the 1000 Landscapes for 1 Billion initiative (1000L) developed a 'Landscape Finance Framework' draft as a guide to devising and implementing landscape transformation strategies at scale, advancing private, public and civic investments and activities towards this end.
The pathway focuses on the finance components of the ILM process. ILM is a generation-long endeavour, and the best points to start in any landscape depend on its context, the strength of the Landscape Partnership or platform, where the energy of landscape leaders lies, and the policy context.
So, advancing any of the activities in this framework can be highly catalytic, and generate concrete benefits in the landscape.

FIGURE 3.2 Interactions between ecological, social, and economic features in a landscape



Source: Gross & Wertz (2015). Landscape Approach for Sustainability in African Agribusiness Needs and Opportunities.

To achieve transformation at scale, however, the five dimensions mentioned below must be addressed at landscape scale. A more detailed description of the Pathway can be found in Annex 1. The five key dimensions are:

- Craft a landscape transformation strategy: developing or refining a broad strategy to meet the long-term vision of the landscape stakeholders
- Define the keystone investments of an action plan: defining prospective projects and investments that will advance the strategy in the near term
- Convert investment ideas to fundable projects: designing or incubating new or expanding businesses/projects, to clarify business plans and finance needs
- Develop suitable finance mechanisms: identifying or designing suitable finance and risk mitigation mechanisms adapted to local needs, for specific projects or for a set of investments and projects; and
- Identify sources and access funds: securing financial resources for investments that contribute to the landscape transformation strategy.

Source: 1000 Landscapes for 1 Billion People, 2023, forthcoming.

3.4 *Key characteristic: Spatial planning and coordination*

A key characteristic of ILF is focused on generating added value (ecological, economic, and social), and de-risking investment, through coordinated spatial planning for ecosystem conservation and regeneration. Ecosystem degradation, climate change, drought, and increasing demand for food and natural resources are making production and access to energy and raw materials more costly for nature-dependent enterprises, including small farmers, large agribusiness, fishers, and forest managers, among others. These environmental issues also have wide ranging social impacts that directly affect the success of a given investment.

At the same time, improved global transparency and interconnectivity show the risks investors are exposed to if they ignore environmental and social sustainability. There can be significant risks to company brands that are involved in degrading high conservation areas, clearing native forests, or that create conflicts with local communities or contribute to corruption and poor governance. Companies prioritizing sustainability standards are challenged to address the indirect environmental and biodiversity impact of their operations (e.g. leakage). In many cases, these risks cannot be mitigated solely through on-farm management or supply chain programs and must be dealt with at the landscape scale. This means a single private sector investor cannot mitigate those risks alone.

Similarly, to achieve landscape-scale outcomes, government agencies often need to break out of sectoral silos and coordinate planning processes to achieve goals for agricultural development, forestry, climate change mitigation and adaptation, watershed management and biodiversity. Coordination between sectors is important to avoid different sectors nullifying each other's positive impacts. Responding to the need to coordinate, measure and monitor landscape-scale performance, initiatives and frameworks, such as LandScale, have emerged to provide guidance on generating baseline data, performance indicators, and systems to measure changes within landscapes and evaluate positive and negative impacts by different stakeholders.

For investors to manage such risks at a landscape scale, they will need to build partnerships with other stakeholders interested in the landscape's long-term social and environmental health. Such partnerships are the core of ILM. Beyond reducing risks for investors, operating within an ILM context can provide cost reductions, long-term benefits of land regeneration, land value appreciation, diversified revenue streams, and new market opportunities from payments for ecosystem services or product certification systems. Companies involved in LPs can ensure their "licence to operate," reduce their regulatory costs, attract co-financing, acquire market intelligence, find business partners, legitimately influence local policy and otherwise benefit financially (Shames & Scherr 2015).

3.5 *Key characteristic: Linking action plans to finance strategies in 'landscape investment portfolios'*

ILF supports multi-project, multi-sector investment portfolios that promote synergies between investments to generate impacts at scale across multiple landscape objectives. Any specific investment needs to be evaluated and designed in the context of the broader *landscape investment portfolio*—a set of activities that, if implemented in a coordinated way, can generate value for each other and regenerate an ecologically degraded and economically impoverished landscape. The portfolio approach is based on the idea that by spatially coordinating and sequencing investments at a landscape scale, each individual project can achieve a higher rate of return, a lower risk profile, and/or increased social and ecological benefits (Shames & Scherr, 2020). In response to financial institutions' and companies' need to measure, monitor, manage and report their impacts related to biodiversity, climate and nature within and across landscapes and territories, the field of spatial finance and its related tools has emerged (World Bank, 2020). These applications of spatial finance seek to support the planning, implementation and monitoring of investments and their risks and impacts of biodiversity and climate, which requires leveraging different data sources and sets to measure investment impacts at different spatial scales (Spatial Finance, 2021).

From a biodiversity and ecosystem services perspective, individual business decisions can reduce pressures on ecosystems and biodiversity or contribute to protection and/or restoration. However, the typical scale for the implementation of these decisions is limited. The overall impact on ecosystems and biodiversity is strongly affected by land use and management patterns in the broader landscape in which the project is situated. Even the impact from exemplary projects and businesses can be swamped by unsustainable activities around them. Furthermore, while individual conservation projects can mitigate environmental degradation in a particular area, integrated landscape approaches can help to ensure that the damage is not just being moved to another part of the landscape. Aligning and spatially coordinating multiple 'green' business investments within a landscape, in a mosaic with PAs, can achieve effective biological corridors, habitat networks, and improvements in ecosystem services—including water flow and quality, carbon sequestration, and pollination across multiple land uses.

Suitable investments for a landscape investment portfolio share these characteristics:

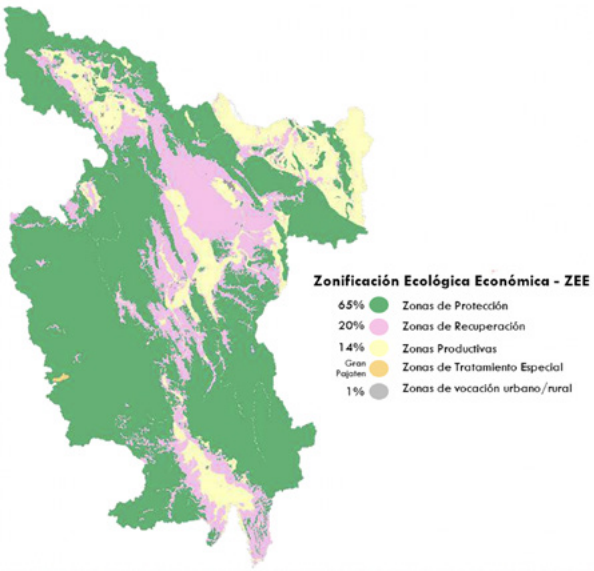
- Contribute to multiple elements of landscape sustainability—human well-being, economic production, ecosystems, biodiversity, and social bonds—as well as financial returns.
- Consider socio-ecological processes, spatial interactions, and off-site impacts in the landscape.
- Align with public land use sustainability plans and rules.
- Align with the landscape vision and action plan developed through a stakeholder process.
- Generate synergies with other investments in the landscape to meet these objectives. (Shames & Scherr, 2020).

4. ILLUSTRATING LANDSCAPE FINANCE: THE EXPERIENCE OF SAN MARTIN DEPARTMENT, PERU

This section presents the integrated landscape approach developed in the Department of San Martin, Peru. The purpose is to illustrate the elements of an ILF approach described in the previous section, emphasizing:

1) The integration of sectoral policies and investment plans addressing interrelated objectives across climate, biodiversity, land-use and livelihoods through the development of an inclusively developed strategy that specifies landscape, territorial and regional-scale interventions;
2) The process for landscape-specific investment planning and prioritisation, including spatial targeting for multiple objectives and stakeholders through multi-scale governance;
3) The estimation of finance needs and plans for the portfolio of prioritized projects and investments, with benefits to biodiversity, based on detailed budgeting to understand existing sources and gaps;
4) The systematisation of existing and potential financial mechanisms to fund priority investments;
5) The establishment of a coordination team to mobilize additional resources from public and private funders, based on their mandates.

FIGURE 4 Ecological-economic zoning of the San Martín Department



Fuente: Gobierno Regional de San Martín, 2020

Landscape challenges 4.1

The department of San Martin, Peru encompasses 51,253.3 km^2 between the Andes and lowland Amazon basin and spans multiple ecosystems from 110-4,349 metres above sea level. It is organized into 10 provinces and 77 districts, with a total population of 813,380 inhabitants (68% urban, 32% rural) with one of the highest levels of biodiversity in Peru. PAs lie within the national protected area system, including ecosystem conservation and recovery areas (ZoCRES), private conservation areas (ACPs) and regional conservation areas (ACRs) covering 1.6M ha, one of the highest percentages among Peruvian Amazon Departments (GRSM 2020c).

Lack of alignment of regional agencies, plans and multi-level objectives 4.1.1

The Regional Government of San Martin (GORSM) has national and regional public policies to promote economic development, adapt to and mitigate climate change, and conserve biodiversity. It has also generated public policies to promote agrarian development. However, it has been determined that these planning instruments are not well-articulated for implementation and that one of the main development policies, the Regional Territorial Policy, does not have a territorial vision or objectives for the Regional Development Plan. In practice, this means each regional government agency promotes policies under a sectoral approach without any joint coordination across different levels of governance.

Deforestation, climate change and poverty 4.1.2

San Martin is one of Peru's most deforested Amazon regions, with nearly 18.5% or 1.33 million hectares of the original extent of natural tropical forest loss. It is estimated that the total deforested area between 2001-2018 in San Martin was 436,512 hectares (ha), at an average of 24,251 ha/year. Deforestation associated with agricultural activity was estimated at around 72% or 297,057 ha in the provinces analyzed (GRSM 2020b). Increasing deforestation is impacting the regional climate and water cycle, reducing overall evaporation, moisture and precipitation by as much as 20% over the entire Amazon basin (Sierra et al., 2021). This disrupts ecosystems that provide essential services such as water regulation, climate stability,

and erosion and flood control. These are critical for sustaining life, affecting climate, biodiversity, and people's livelihoods in the lower Amazon basin and beyond (Marengo et al. 2018). The poorest segments of the population, especially subsistence farmers and Indigenous peoples (IPs), suffer the most due to their dependency on natural resources for food, income, and water, and inability to buy external inputs to agricultural production (Marengo et al., 2018). Climate change is also a major threat. The region has identified extreme weather events (higher frequency and intensity of rains and droughts), extreme temperatures (higher and lower temperatures), and changes in the hydrological cycle (increasing flooding and landslides), as major issues (CI 2016; INDECI 2019).

4.1.3 *Drivers of land-use changes*

Deforestation is a result of a more complex interaction of land-use changes, which is multidimensional. Among the direct causes, coffee, followed by cocoa (semi-permanent crops), are the main causes of forest loss in the provinces analyzed (GRSM 2020b). Annual crops (such as rice, banana and corn) are the next most important, along with coca, pasture, and palm oil. To understand these changes in land-use, and their systemic interactions, a rigorous participatory research process was conducted at a landscape level in different territories (GRSM 2020b). Through the analysis of quantitative and qualitative data several main causes for forest loss and degradation were established:

1) **Control and surveillance:** Scarce presence of the state at its different levels in the control of the occupation and use of the territory.
2) **Invasions:** Increased (illegal) occupation of land for conversion to agricultural use.
3) **Scarce income and capital:** To improve land in agricultural and livestock use.
4) **Public investment programs, without safeguards:** Promotion of value chains such as coffee and cocoa through PIP, and annual crops, as well as the inadequate implementation of incentive programs by the state for the improvement of production chains of different crops.
5) **Private investment programs, without safeguards:** Promotion of the expansion of crops such as palm, cocoa, coffee and rice through incentive packages for small farmers.
6) **Corruption:** Misuse of the position of local authorities in the legalisation of land purchase and sale transactions, as well as regional authorities in the granting of land-use rights (GRSM 2020b).

4.2 *Landscape transformation strategy*

In response to an absence of multi-level policies and programs, the Regional Strategy for Low Emission Rural Development (ERDRBE) was developed as an implementation and investment strategy that links biodiversity, climate change, sustainable land management and sustainable development.

4.2.1 *Landscape Vision*

The main public problem that the GORSM seeks to address is "the reduction in the quality of life of the population due to deforestation and degradation of the Amazon forests in the department of San Martin." Therefore, a regional vision was agreed upon to guide the development of the ERDRBE:
"By 2030, the San Martin Region achieves sustainable development, increasing its productivity and competitiveness indexes, through the production of goods and services with low emissions, under a focus on inclusion, gender and interculturality."

4.2.2 *Process*

The strategy was constructed along with civil society and conservation organisations, describing an explicit landscape and territorial approach with a clear articulation of the need for cross-sectoral cooperation. Developing the strategy was essential, as the ERDRBE was built based on systematic scientific and social analyses of the causes of deforestation, economic analyses of regional production bottlenecks, and social diagnoses of the main gaps, including the main actors that cause deforestation or conserve forests. In developing the strategy's theory of change, it was essential to systematize different public information and ensure coherence with existing multi-level policies and commitments, *including the regional strategy and NBSAP*. An analysis of financial flows from public and private investment programs were analyzed to understand their impacts.

4.2.3 *Strategy, including spatial dimensions*

The six causes of land use change mentioned above constitute the ERDRBE's entry points for the planned interventions and investment plans to generate desired changes in the territorial systems and reduce deforestation. The ERDRBE acknowledges that to address interrelated public problems, such as ecosystem degradation, deforestation, small-scale agriculture, refugees, climate change impacts, water stress, employment, and others, it is necessary to carry out participatory interventions at a landscape level, seeking joint solutions between the direct and indirect actors of the territory focusing on spatial coordination, reducing trade-offs, increasing synergies, and finding co-financiers. As a result, these differentiated interventions were defined in each targeted territory, with a landscape perspective, responding to the contextual needs and characteristics across the region, including deforestation patterns, economic corridors, productive intensification centers, limitations and opportunities.

The prioritized areas defined in the ERDRBE correspond to the provinces of Rioja, Tocache, Picota, and San Martin. The provinces were chosen because they have the highest deforestation rates, recent agricultural expansion, and concentration of certain key stakeholders. From a territorial perspective, that means focusing on Alto Mayo, Bajo Mayo, Central Huallaga, and Alto Huallaga.

4.2.4 *Cross-cutting interventions at Territorial and Regional Levels*

Cross-cutting interventions are proposed at territorial and regional levels aligned to the ERDRBE objectives to enable effective implementation and maximize synergies (GRSM 2020d). At the regional level, key activities are to improve municipal management, strengthen regional institutions, and develop the "San Martin Region" brand. At a landscape level, the focus is an increased provision of technical, legal, and financial services.

4.2.5 *Potential sustainability benefits*

The general objective of the ERDRBE is to support the region's sustainable development by improving the welfare of the population of San Martin through the conservation and recovery of the Amazon forests, low-emission sustainable and competitive regional productivity, and improving livelihoods. The strategy has also defined three specific objectives, each objective with its own metrics and interventions defined in the theory of change (GRSM 2020b):

1) Improve the quality of, and access to, public services for the population, with special attention to women, IPs and youth, as part of a just, inclusive, and corruption-free society.
2) Promote the competitiveness of low-emission goods and services produced.
3) Manage the Amazon forests sustainably with measures to address climate change.

Target actors for the investment plan **TABLE 4.1**

TARGET ACTORS–SOCIOECONOMIC ENVIRONMENTAL UNITS–FOR INTERVENTIONS AND INVESTMENTS.
To effectively transform landscape dynamics there are different actors related to the forests who require differentiated interventions: a) those who pressure the forests, and b) those who make the effort to conserve it. Both these actors have been clustered as the target actors as ten different Socioeconomic Environmental Units – (SEUs). Investment activities have been designed for these units across each of the four-landscapes defined previously.
SOCIOECONOMIC ENVIRONMENTAL UNITS
1. Family farms 2. Private farms dedicated to commercial production (rice) 3. Private land for dairy and beef cattle ranching 4. Palm and palm by-products trading companies 5. Territory of native communities 6. Conservation and ecotourism concessions 7. Timber forest concessions 8. National protected areas and RCAs 9. Ecosystem conservation and recovery areas - (ZoCRES) 10. Lands without an assigned territorial category

Landscape investment portfolio 4.3

Components of the investment portfolio and objectives 4.3.1

Investments and interventions have a strong focus on Agriculture, Forestry and Other Land Use (AFOLU). Based on the systemic analyses of agricultural deforestation drivers, along with the direct and indirect causes for these, the investment portfolio is based on the specific objectives of the ERDRBE segmented into three components 1) production;

2) inclusion; and 3) protection. Total investment cost, at market prices, is S/. 2,963,396,073 for five years, including 302 interventions, grouped into 10 components and three programs. Of the direct cost, 63.7% is allocated to the Production and Technology for Sustainable Development Program, 27.9% to the Public Incentives Program, and 8.4% to the Program for Sustainable Management of the Amazon Forest in the face of climate change (GRSM 2020c).

4.3.2 *Portfolio investments segmented by Socioeconomic Environmental Units*

The portfolio is targeted towards defined territorial actors categorized as SEUs. Investments for each territory have been designed contextually based on the presence of the SEU, as well as the environmental and socio-economic conditions found in each landscape (GRSM 2020b).

4.4 *Business and project incubation, refining business and finance plans and estimating finance needs*

4.4.1 *Technical and support services for investments*

There are budget designations within the ERDRBE for financial, technical and legal services at the landscape level for the SEUs. At a regional and cross-cutting level, there is a focus on support for increasing market access and competitiveness across the region for low-emission AFOLU activities provided by the GORSM. In addition, several existing national programs support business plans. One of them is PROCOMPITE, a competitive fund that co-finances productive proposals to improve production chains and AGROIDEAS, a non-reimbursable fund that, in 2019, endorsed 280 business plans for a value of US$35 million.

4.4.2 *Estimating financing needs*

A gap analysis was undertaken to understand what additional financing would be required for the landscape investment plan, disaggregated by component and the associated landscape interventions. For example, with national public financing resources, 105 projects have been identified for a total of S/. 513,722,529. The financing is earmarked for sustainable production components (coffee, cacao, banana, hard yellow corn, livestock, aquaculture, and tourism); basic services (basic sanitation); and projects for recovering degraded soils and environmental services.

The **estimated funding gap of the entire ERDRBE is -78.9%** or **-S/2,339,420,045 from a total budget of S/2,963,396,073**. This is broken down into: **-81.4%** or **-S/1,534,588,140** for the production component, **-86.7%** or **-S/717,733,392** for the inclusion component and **-34.9%** or **-S/87,098,513** for the protection component (GRSM 2020c).

Sample of investments for two of the Units responding to local needs **TABLE 4.2**

SEU	INVESTMENTS
Family farms	*Provision of technical assistance and market approaches* aligned with a low-emission approach for i) production diversification and reconversion; ii) soil conservation and degraded soil recovery; iii) promotion of family agriculture; iv) Aquaculture; v) fertigation systems. *To improve competitiveness;* i) implementation of infrastructure for agro-exports; ii) promotion of sustainable associative models; iii) private agreements for trade with producers; iv) quality management capacity building; v) organic certification and free trade; and vi) promote and facilitate PES; vii) access to conditional agricultural finance.
	INVESTMENTS
Territory of native communities	*Technical assistance, market access and financial incentives for* i) agroforestry management; ii) promotion of bio-businesses with non-timber and agroforestry products; iii) identification and product market development; iv) transfer of incentives for forest protection; v) capacity building. Support reduction of vulnerability and risk with i) solutions of boundary conflicts of native communities; ii) community infrastructure; iii) basic quality services.

4.5 *Finance mechanisms*

As previously mentioned, supporting the AFOLU sectors and marginalized communities are a priority in the ERDRBE. This requires the use of finance and support mechanisms to efficiently channel financial flows to the targeted investments.

4.5.1 *Existing mechanisms supporting financial flows to projects*

To achieve this a variety of (mainly) public mechanisms are in existence that need to be adapted and scaled up and to more effectively leverage funds for the ERDRBE objectives with an integrated approach.

1) **Public investment programs:** Promotion of value chains such as coffee and cocoa with incentive programs by the state for the improvement of production chains.
   a) Multi-year investment programs, such as the Sistema Nacional de Programación Multianual y Gestión de Inversiones (Invierte.Pe)
   b) Existence of special funding sources for activities, such as FONDEPES, FDIT.
   c) Sources of non-reimbursable resources for innovation and competitiveness such as PROCOMPITE, PNIPA and Innóvate.
   d) Favoured access to credit and support to small- and medium-sized farmers, through AGROBANCO, COFIDE, AGROIDEAS, AGRORURAL, and others.
   e) COFIDE established a trust fund with the regional government - FONDESAM for agricultural water security (US$13 million annually).
   f) SME support to access loans through guarantee fund (FOGAPI).
   g) Public investment project underway (Tilapia project) and a portfolio of projects in the process of being financed.
   h) Conservation agreements through the national forest conservation program - PNCB.
   i) Targeted jurisdictional strategies and investment plans for REDD+, linked to the joint declaration of intent between Peru, Norway and Germany and the Forest Carbon Partnership Facility (FCPF) emission reduction program in San Martin.
2) **Support mechanism** for local governments to help guide the execution of their resources more efficiently, aligning them with the products of budgetary programs. This includes the Forest Finance and Investment Incubator (FFII) designed to generate concrete Finance and Investment Plans that advance climate and land use strategies.
3) **Private investment programs:** Promotion of the expansion of crops such as oil palm, cocoa, coffee and rice, through incentive packages for small farmers such as Peru's only Directorate for the Promotion of Sustainable Private Investment and public-private-partnerships, for development of water funds and infrastructure arrangements, promoted by regions and led by the ministry of finance and economy.
4) **PES through the Mechanisms for Remuneration for Ecosystem Services** (MERESE)
   Instruments that make it possible to generate, channel and invest in actions aimed at the conservation, recovery and sustainable use of ecosystems, for ecosystem services, through voluntary agreement, managed by the Peruvian government.
5) **Territorial development support:** Funds for territorial development (FIDT) resources will be used for investments and pre-investment studies and technical sheets aimed at providing: i) Basic health services, ii) Child malnutrition and/or child anaemia, iii) Basic education services, iv) Road infrastructure, v) Sanitation services, vi) Rural electrification, vii) Agricultural infrastructure, viii) Rural telecommunications, and ix) Support for productive development.

4.5.2 *New financial mechanisms*

New mechanisms are being developed and implemented that, with joint coordination under a landscape approach, will be key to funnelling the required ERDRBE funding:

1) **Guarantee Fund (FONDESAM)** will facilitate access to credit for the AFOLU activities with organized and unorganized producers and private companies at the regional level.
2) **The Alianza Empresarial para la Amazonia (ABA)** was set up in 2020 to develop sustainable business models for greater biodiversity impact. The platform aims to generate 100 businesses and projects, working with like-minded companies whose supply chains have the greatest impact on the biodiversity within the Peruvian Amazon, 50 private sector and 50 public sector co-investment opportunities, and leverage US$50 to $100 million in private-sector investments with an initial US$10 million provided by the United States Agency for International Development (USAID) (Glave et al. 2022).

4.6 Funder mobilization

4.6.1 Coordination and other support services for ERDRBE investment plan

To act effectively throughout the jurisdiction and achieve vertical and horizontal articulations, an inter-management coordination space has been created, one which reports to the highest-level Governor's Office. Two teams will coordinate, manage and monitor the investment plans and results, building off of the already identified financing, capacity, safeguards, and monitoring needed for the successful implementation of the ERDRBE. i) A qualified team with extensive experience in strategic and operational management of investment projects will be established to achieve maximum efficiency in the execution of operational procedures and financial management of the Investment Plan. Their function will be to support coordination, management and alignment. In addition, they will work on developing a financial leverage plan to maximize the use of public resources and other sources of complementary financing for investments in productive activities and sustainable enterprises promoted, starting with those that are prioritized because their enabling promotes or facilitates other activities to achieve positive impacts and degree of compliance with the programmed goals. ii) A permanent monitoring unit will be established, led by the Regional Government (Regional Planning Management), with the participation of stakeholders as information providers and users of the results.

4.6.2 Mapping of financing sources

Mapping of financing sources to develop co-financing and funding strategies has been completed by type of institutions and mechanisms. This was developed by the GORSM, NGOs and civil society involved in developing the ERDRBE. The sources mapped were based on existing relationships, institutional mandates and new sources aligned to the investment plan.

4.6.3 Strategy for funder mobilization

From existing international financing sources, eight projects have already been selected for a total amount of S/. 110,253,499; the resources are earmarked for forest recovery and conservation projects, basic sanitation projects in rural areas, and projects for developing agricultural activities. A strategy to leverage additional co-financing from existing funding mechanisms and sources is being developed with government agencies, aligned funders and investors.

4.7 Next steps to advance landscape finance in San Martin

Active discussions are underway for further advancing finance for investments in the San Martin landscape transformation. A more biodiversity-specific strategy with clear indicators linking to the updated NBSAP and NBFP. If undertaken, the analysis of potential biodiversity finance solutions from the NBFP may be considered for implementation by the GORESAM investment coordination mechanism. New delivery mechanisms and innovative financial products may be developed (Glave et al., 2022), especially to deliver financing biodiversity in multiple sectors, with a focus on smallholder AFOLU sectors as an ERDRBE priority.

Business case development has begun for aggregated investment by bigger players in the private sector. Efforts are being made to coordinate existing and new financial mechanisms, leveraging public funding for co-financing and resource mobilization efforts at a larger scale for the SEUs defined as priority investments (Glave et al., 2022). A tiering of enabling and asset investments will be constructed to support sustainable agricultural improvement. Potential payers for ecosystem services will be evaluated, clearly demonstrated, and a system designed.

4.8 *Benefits of integrated landscape finance: expanded finance and enhanced biodiversity*

By taking a landscape finance approach, several benefits to biodiversity can be highlighted in San Martin:

- The investment coordination established to implement the ERDRBE will help align public and private investments, and policies related to land-use activities within territories to support coherence across the landscape (e.g. the ministries of agriculture, planning, infrastructure, environment, etc.).
- A spatially-targeted and integrated approach allowed for high-value and at-risk biodiversity to be identified at a territorial and landscape-level and included in the regional investment plans, which align to the national level policy instruments and commitments (GRSM 2020d).
- The public expenditures in biodiversity spending from 2008-2019 at a national and regional level for denominated “sustainable investments” were mainly (88%) from results-based budgeting systems from the government, showing the need for results-based planning and framework for increased biodiversity funding in further NBSAPs and NBFPs (Glave et al,. 2022).
- Additional sources of funding, beyond what might typically be considered biodiversity finance (finance for agriculture, climate, infrastructure, etc.) if deployed as part of an integrated landscape plan can support increased resource mobilization for biodiversity.
- A more inclusive and participatory approach, through the Territorial Development Units, allows for local projects to mitigate impacts on biodiversity and support restoration more effectively.

5. THE CURRENT PRACTICE OF INTEGRATED LANDSCAPE MANAGEMENT

Most actors engaging in landscape finance, whether they are LPs, business or project developers, investors, or support service providers, are engaged in multiple agricultural, forestry or biomass energy production or supply chain projects within a landscape. Efforts to expand finance for biodiversity conservation will rely largely on integrating biodiversity benefits into initiatives that start in these other areas. Organisations that develop landscape programs have a variety of entry points, motivations and approaches.

This section begins with a review of the most common motivations for the development of these integrated landscape initiatives. It then describes support services that are needed in order to coordinate and access financing. Finally, it examines some of the models of ILF mechanisms that have been developed for the purpose of supporting these kinds of initiatives. An understanding of how these programs develop and what is needed to support and finance them, will be critical for crafting effective national strategies and finance plans.

5.1 *Approaches to initiating integrated landscape programs*

This typology and the examples used to describe it were derived from a series of interviews conducted by the 1000 Landscapes for 1 Billion People initiative with more than 80 finance innovators and dozens of local LPs struggling to mobilize funding for regenerative investment. (1000L, forthcoming). All these approaches can potentially be supported, in one way or another, by national biodiversity strategy and finance plans, if crafted to effectively support them.

5.1.1 *Locally-driven landscape transformation*

This approach is driven by a Landscape Partnership that is working to develop and implement a holistic strategy of sustainable landscape transformation across land uses and value chains. This could be considered the most developed form of ILM in that it has a robust process of stakeholder collaboration. This kind of holistic landscape transformation requires the involvement and buy-in from a large group of stakeholders across sectors and interests, including the local authorities in the landscape.

An example is the Kafue Flats in Zambia, an area of major ecological, industrial, and socio-economic significance for Zambia. The Kafue is the largest tributary of the Zambezi River. It is instrumental in providing electricity to half of the Zambian population and drinking water to half of the capital, Lusaka. This has led to pressures in the region, creating trade-offs between expanded economic activity, resource management, climate adaptation, and conservation.

The Kafue Flats showcases synergies between bankable opportunities and grant-funded projects that can be captured by the consortium. Notably, by taking steps to improve water availability through ecosystem restoration (grant-funded), the development of a water treatment facility, and the introduction of water efficiency measures. Investment cases have also been made possible for expanded agricultural activity and aquaculture (OECD, 2020).

5.1.2 *Externally coordinated investments to deliver broad sustainability goals in the landscape*

This approach is typical of development institutions that are generally dealing with government agencies to create integrated sustainability strategies such as *low-carbon emissions development, green growth or territorial development.* These topics are closely related to biodiversity, but in reality, this is not always incorporated. Integration in these cases is often stimulated through a top-down approach and not initiated by a local Landscape Partnership. It may also be driven in part by a group of international funders. Landscapes are often very large, and the approach offers the potential of deep political and legal transformation, such as the improvement of land tenure regulations. The general purpose is often improvement of land governance with broad economic, social and environmental purposes. Working through government agencies, often at the national level, can help to build an enabling environment for other types of projects, including biodiversity.

An example is the World Bank BioCarbon Fund. World Bank landscape projects are country projects directly financed by World Bank loans or through a number of multi-donor trust funds such as the BioCarbon Fund, the Initiative for Sustainable Forest Landscapes or Progreen, or the Global Partnership for Sustainable and Resilient Landscapes. These programs generate value for the institutions in charge of land use and for many stakeholders in the countries. (Suit et al., 2021).

5.1.3 *Integrating finance for value chain transformation*

In these cases, the development of an integrated landscape agenda is triggered by the need to improve the sustainability of value chains of internationally traded commodities. This integration focuses on financing sustainable management practices by the local communities that, at the same time, contribute to the protection or conservation of natural assets. These programs are often financed by international agencies working in partnership with value chain companies. They mix a variety of tools, from grants supporting the project preparation and monitoring to carbon credits, supporting the adoption of best practices and equity investment for local value chain companies.

An example is the &Green Fund. IDH (the Initiative for Sustainable Landscapes) supports the development of multi-stakeholder sustainable land use plans, regulatory frameworks, and business models to achieve the goals of sustainable production, natural resource protection, and improvement of local livelihoods. &Green Fund was initiated by IDH to help to fund these kinds of projects. Therefore, it is dedicated to commercial projects in agricultural production value chains in order to protect and restore tropical forests and peatlands and make agriculture more sustainable and inclusive. Investments target mostly private companies or initiatives that are directly or indirectly involved in production activities and have an impact on land use. The instruments are either loans or guarantee mechanisms that aim to have a leveraging effect with other funders. Beneficiaries are mostly value chain actors, such as input providers and producers. Local financial institutions can also be supported (e.g., through guarantee mechanisms or loans). Carbon finance mechanisms can also be used to support and preserve good practices, particularly from local smallholders (IDH, accessed 2022).

In the Murchison Semliki Landscape in Uganda (see the case study in section 8.1 and Annex 2 for more details), NGOs work together with value chain companies to achieve a more sustainable value chain. This is done by helping farmers improve their livelihoods while at the same time protecting biodiversity through the creation of ecological corridors. These efforts are coordinated through the Northern Albertine Rift Conservation Group (NARC-G), which is a collaboration platform between local and international NGOs operating in Uganda, as well as other public or private stakeholders.

5.1.4 *Coordinated landscape investment for restoration of ecosystem services*

Integrated resources management projects in landscapes focusing on land, water and/or ecosystem restoration is a common entry point for even further integration of sustainability issues, including biodiversity. In these cases, the initial motivation comes from the interdependence of a number of actors that rely on a degrading common pool of natural resources. This approach demonstrates ways that local actors can generate funding for a pool of ecosystem services and nature-based solutions.

The development of a watershed management plan, including Nairobi, Kenya, and the subsequent development of the Upper-Tana Nairobi Water Fund, provides a good illustration of the approach. This initiative arose from the degradation of the watershed supplying 95% of the water to the city of Nairobi, which was the result of the conversion of forests and peatlands into agricultural land that increased erosion and sediment load in the rivers with severe consequences for agricultural productivity, costs of water treatment and the maintenance of water management infrastructure. The problem and solutions emerged from the fact that water connects all catchment stakeholders who are affected in different and complementary ways. For example, farmers are losing their soils while downstream users are affected by floods and increased sedimentation rates.

This project was initiated by The Nature Conservancy (TNC) with grants and was also supported by an environmental project supported by the GEF. Based

on first results, International Fund for Agricultural Development (IFAD) provided different loans aiming to scale the initial measures through the Upper-Tana Catchment Natural Resources Management project, to support food security (through Kenya Cereal Enhancement program), and to increase the resilience of local communities (through Climate-resilient Agricultural Livelihoods Window). Resources provided by the Kenyan government complemented the US$60 investment of these funds.

Additional support was also provided by TNC to mobilize private funding through PES from the local water utility, and by various water users in the beverage and energy sectors. The different financial contributions ended up generating a series of interconnected programs in the catchment, connecting water management and its related ecosystem services with land restoration, biodiversity improvements, tree seedling production, sustainable afforestation, supporting bamboo micro-industries, and education activities. This was the first water fund of its kind, and this model has been replicated around the world (TNC accessed 2022).

The Cagayan de Oro River Basin (CDORB) is a large watershed in the Philippines (see the case study in chapter 8.3 and Annex 2 for further details), where a collaboration between various stakeholders aims to restore and maintain ecosystem service provisioning. In the CDORB, a management council has been formed that supports the implementation of PES schemes in the area that aims to continuously provide water-related ecosystem services such as clean drinking water and flood mitigation.

Landscape finance support services 5.2

Common to the development of these integrated landscape initiatives and their financing, regardless of their path towards formation, is a set of support services that are required for success. To advance a coordinated project pipeline development process, organisations driving these integrated landscape approaches need to create landscape action plans and translate those plans into private, public, or civic projects that together become a *landscape investment portfolio*. These entities do not necessarily provide financing themselves — though they could — but they increase the efficiency, effectiveness, speed, and coordination of finance for key landscape businesses or projects. These service providers may work with business developers, government agencies, or civil society organisations to prepare both investment opportunities that support implementation of agreed landscape plans. They may steer existing financing to activities aligned with the plan, and aggregate investment opportunities. Table 5.2-1 below outlines the key features of four different types of investment service providers.

Types of integrated landscape finance support services **TABLE 5.1**

MODEL TYPE	DESCRIPTION
LPs expanding their role into investment and finance	Support landscape coordination, including the development of a common landscape vision and action plan; can also contribute to finance strategy, analysis of financial flows, and early-stage investment opportunity scoping
Landscape portfolio developers (nonprofit)	Work closely with the Landscape Partnership to identify and build investment opportunities, bringing in expertise in both multi-stakeholder landscape planning and finance
Landscape development companies (for profit)	Set up to develop as well as to earn money themselves either as paid consultants or as commercial partners in landscape investments
Business incubators and accelerators with a landscape lens	Work with project developers and entrepreneurs in the landscape to refine business plans and financing strategies

Source: Shames and Scherr (2020), pp. 15

5.3 *Finance mechanisms/models*

An expansion of biodiversity finance will require the simultaneous application of project-specific biodiversity finance, finance focused on other outcomes that can 'mainstream' biodiversity, and new integrated models that coordinate these related streams of finance, so they align with the vision and action plan in a landscape.

Broad overviews of conservation finance are found elsewhere (The Conservation Finance Network 2021; CPIC 2021; Deutz et al. 2020; OECD 2020; UNEP 2021), and this is a review of an emerging class of investment entities that are designed explicitly to fund multiple activities across sectors in a landscape to maximize synergies and accelerate progress toward landscape-level goals. The project-specific mechanisms can coordinate with these to amplify their impact. Key features of these mechanisms are that they are multi-activity; multi-sector; they take advantage of financial, environmental, and social synergies between activities; and they are temporally and spatially coordinated. They can source funds from profit-seeking or blended finance sources, as well as from investors interested only in environmental and social returns (Shames & Scherr 2020).

The survey identified five general types of landscape finance mechanisms: Landscape-specific funds; landscape-focused funds that invest in multiple landscapes; place-based investor collaboratives and foundations; landscape development finance institutions; and landscape bonds. These are summarized in the table below.

TABLE 5.2 Types of integrated landscape finance mechanisms

MODEL TYPE	DESCRIPTION	TYPICAL SOURCES OF FINANCE
Landscape-specific funds	Investment structures designed to pool capital from a variety of different sources, to be invested by a specialized manager with sustainable land use investment expertise and understanding of landscape-scale synergies, guided by the priorities of stakeholders in a specific landscape	Companies, foundations, organisations, financial institutions, individuals connected to a Landscape Partnership
Landscape focused investment funds (multiple landscapes)	Funds operating across multiple landscapes are able to invest large sums of money for their investors, thus bringing new types of investors into the landscape finance space and offering built-in fund diversification	Multilateral development banks, family offices, private investors, foundations
Place-based investor collaboratives and foundations	Investors commit to social/ecological goals in a specific landscape or place and pool financial resources with others to support development of an integrated landscape investment portfolio; not a formal fund or financial institution, but can tap or mobilize large pools of funds	Diverse types of investors
Landscape development finance institutions	Global or local development finance institutions that integrate place-based sustainability with economic growth objectives in lending and investing; could potentially evolve from existing development finance institutions to include landscape-focused investing and stakeholder governance	National and local governments, multilateral development banks, commercial banks
Landscape bond	Mechanism that can be used to borrow from a wide group of investors; this vehicle could be used in landscape contexts either by government agencies that are associated with landscape initiatives or by landscape development companies	Institutional investors, impact investment funds

Source: Shames and Scherr (2020), p. 19

6. NEEDS FOR IMPLEMENTING INTEGRATED LANDSCAPE FINANCE

While innovation is growing in ILF, landscape investing is presently a more difficult prospect than conventional investing. The current financial system is clearly not set up to encourage it. This section describes four key needs that are all highly relevant to national and sub-national governments to consider in expanding financing opportunities for biodiversity.

NEEDS FOR INTEGRATED LANDSCAPE FINANCE

1. organized, spatially-explicit landscape action plans to build sets of coordinated investments
2. Landscape finance and risk management tools and mechanisms are available
3. Finance institutions are organized internally for landscape investment
4. Government policies and strategies provide sufficient support for landscape investment

6.1 *Organized, spatially-explicit landscape action plans to build sets of coordinated investments*

Private investment funds and financial institutions interviewed in the consultations described above (Scherr et al., forthcoming) say that a major barrier to investing is a lack of investment-ready projects that have clearly defined revenue flows, risk profiles and mitigation strategies, and reliably positive landscape impacts, with strong project implementing organisation in which to invest. But to organize landscape finance requires institutions that can coordinate the different resource users and investors in the landscape, identify where investments are needed and feasible, and facilitate financial flows to those investments. However, most institutions in the landscape are siloed across agriculture, forestry, PAs, health, infrastructure, food systems, and human settlements.

Mobilizing and engaging multiple projects and funders can be a lot of work. Most landscapes lack landscape-level institutions able to coordinate project investments initially developed in silos or aggregate investments or finance sources. It is challenging for private sector actors to provide that integration; they typically do not see it as their role. So even when a financial institution sees that leveraging co-finance from multiple entities will add value, they are not willing to embrace that role. Governmental ministries and agencies also often operate individually and with a lack of cohesion and cooperation between organisations. This can lead to the mobilization of non-supportive, and even conflicting, funds and subsidies between ministries. In such cases, the funds generated for projects by one ministry might hinder the achievement of targets set by other ministries. In contrast, a coordinated approach might have achieved the objectives of both (see the case study on the Yucatán Peninsula (YP) in Mexico in chapter 8.2 for an example of a lack of synergy between governmental entities).

Furthermore, LPs or platforms that are trying to play these roles are chronically under-funded. Available grants are inadequate, short-term, priorities set external to the landscape, and poorly linked to financial mobilization. In other sectors, commercial parties (e.g., oil and gas) are prepared to invest in infrastructure: pipelines, roads, etc., and the financial sector is willing to finance those. But commercial investors tend not to invest in the infrastructure for landscape regeneration, especially where the landscape is highly degraded. Organisations who are motivated to develop a grant-based technical support facility find them challenging to fund.

6.2 *Landscape finance and risk management tools and mechanisms are available*

Most financial instruments available today are not tailored to landscape investment needs. Landscape finance instruments need to address aspects of scale, synergies and tradeoffs with other investments, longer time frames, alignment with landscape action plans, multiple revenue streams, and multiple objectives. Because landscape finance is still such a new approach, organizational mechanisms are not yet in place to reduce the complexity for financiers. Financiers find they need to develop novel systems, often jury-rigging key components and struggling

to develop the necessary partnerships. For those instruments that do already exist, details on actual step-by-step transaction processes that would inform others are absent.

Specific mechanisms are needed to manage investor risk. Overall risks for landscape-regenerating investments should, theoretically, be lower when they are part of synergistic landscape investment portfolios. But risks of landscape investing are often perceived by investors to be high (even when they are not); or they may be uncertain. Governments can do more to build an enabling environment for landscape finance to flow, for example by creating and enforcing policies that reduce risk for investors. This could be through structuring the investment, putting good governance in places, providing checks and balances, regular reporting, and possibly insurance for certain risks. They can also provide highest risk capital and/or guarantees in order to attract private funders. Aspects of good governance needed include national land use plans and clear land tenure rights. These types of policy and their enforcement are essential for creating a good landscape investment climate, as without them investments into nature conservation and restoration can have a high risk of being devalued through improper land management (See the case studies in sections 8.1 and 8.3 for examples of a lack of land use plans and tenure rights).

Financial institutions may also fear reputational risks. Some government and other funders want investee companies to 'guarantee' exclusion of risk (e.g., "no land rights issues"), which in practice cannot be guaranteed. Requirements are sometimes impossible to meet for investors. For example, a publicly listed company cannot always comply with the required level of transparency, as it may make them vulnerable to competitors or put other finance at risk. While some financiers have worked effectively with governments and NGOs to reduce companies' reputational risk, including through LPs, such strategies can be better developed.

Lastly, long-term (beyond a 5-10 year horizon) project finance and investment returns can often be hard to guarantee. Governmental policy can change over longer time horizons, which might affect project returns. Furthermore, global events like the recent COVID-19 pandemic can also have significant effects on certain types of landscape financing mechanisms, for example by strongly reducing ecotourism revenue. In the long-term, these types of effects are increasingly likely to happen. Such uncertainties create strong disincentives to invest in landscape regeneration projects, as these often require a long term vision and financial inputs. Financial models that share and reduce longer-term risks are needed.

Finance institutions are organized internally for landscape investment 6.3

To expand into mixed-term, multi-sector, multi-actor landscape finance requires that financial institutions have the relevant mind-set, clarity of roles, internal rules and norms, and staff capacities.

One finds landscape finance being promoted today where decision-makers in financial institutions have a longer-term time horizon and value benefits for all stakeholders. While landscape regeneration is a long-term process, the main decision-makers around investment in natural resources and resource-based enterprises — financiers, government leaders and policymakers — have a short time horizon. Financiers who work primarily at the individual project level are required to finish those projects over the course of a couple of years in most cases, and not the 10 to 20 years required in many landscapes. Even relatively large funds often have an obligation to spend their money in just a few years.

A related issue is that financial institutions and corporations are still valuing and assessing investments based on an old economic model of shareholder value and short-termism. To transition to a regenerative economy, the perspective on value should be based on long-term value for all stakeholders, including impacts on biodiversity. Even when institutions and corporations do attempt to make this shift, they do not yet know how to value projects and investments in this way. The multitude

of frameworks for measuring the environmental and social value of projects, with no one universal framework, might also hinder such a valuation.

Landscape-wide finance does not have the track record to attract larger pools of money. There is a widespread belief that projects need to be large and involve large companies in order to have impact at scale. Yet, smallholder farmers and community resource management groups play a critical role in sustainable landscapes. Having rigorous investment cases, those that comprehensively demonstrate the value and structure of landscape investment, and technical information on the financial and/or business models of feasible landscape investments make it possible to categorize investment archetypes.

Financial institutions' rules, structures, and capacities must align with landscape investing to scale in landscape finance. Many financial institutions face organisational barriers limiting their participation in landscape finance. For example, development finance institutions often have separate programs for grant funding in landscapes and private sector investment finance. These are hard to connect in a given landscape or may even be operating in different landscapes. Staff in financial institutions need relevant knowledge and capacities. Even when the leaders of financial institutions see the value of integrated landscape investment, and establish new modes of finance, implementation is often limited by lack of in-house expertise. If staff do not have the technical knowledge and data needed to conduct a landscape investment program or project, they will not take it on.

6.4 *Government policies and strategies provide sufficient support for landscape investment*

Over the past few decades, many countries have begun to deploy landscape approaches in national and sub-national public programs, especially in forest, biodiversity and watershed management, for disaster-risk reduction, and for agricultural adaptation to climate change. These have largely been incorporated into government–run technical programs, direct public investments, or support to local Community Based Organizations (CBOs) and NGOs, using expenditures from public budgets, usually sector-specific. Some countries actively coordinate public expenditures with philanthropic funding for biodiversity conservation. By contrast, according to financiers interviewed by 1000 Landscapes for 1 Billion People, there is usually relatively little policy or program support to mobilize biodiversity-friendly private sector finance and investment, or to support local landscape actors or partnerships to do so (Scherr et al. 2022, draft). Government agencies, ministries and local governments often lack the mandate, expertise, resources, institutional relations or oversight mechanisms to play such roles. Even when governments are proactive, this is often ad hoc and not institutionalized. The 'Challenges' section of the country case studies in Chapter 8 provides examples of insufficient governmental support for landscape investment. The next section will draw lessons about how the public sector can play more robust roles in finance.

7. KEY GOVERNMENT ROLES IN MOBILIZING FINANCE: LESSONS FROM PUBLIC POLICY FOR INTEGRATED LANDSCAPE MANAGEMENT

The experience of ILF provides numerous lessons about how government policies and programs facilitate, or constrain, the mobilization of financial resources for biodiversity conservation jointly with other objectives. Government actions are helping to address the challenges identified in chapter 6. Many of these lessons are relevant for National Biodiversity Strategies and Finance Plans.

This section looks at five strategic national and sub-national government roles: defining a supportive policy framework, developing financial mechanisms and services, providing public funding and incentives for landscape investments, regulating landscape investment and finance, and promoting landscape-friendly market development (see table 7.1). Keys to success include choosing government roles and policy instruments strategically, and clarifying the respective roles of national and sub-national governments. Governments also need to understand the opportunities for, and constraints to, landscape-friendly investment by the private sector. By taking a learning approach, governments can build on innovations already being implemented in landscapes and gradually forge connections among key actors (adapted from Scherr et al., 2015).

Strategic roles of the national and sub-national governments in mobilizing landscape finance TABLE 7.1

Defining a policy framework that supports integrated landscape investment and finance	• Integrated strategies and public finance for sustainable development • Policies that explicitly support integrated landscape initiatives and partnerships • Coordination among public sector agencies • Legal and institutional mechanisms for landscape stakeholders to influence flows of finance and investment
Developing finance mechanisms and services	• Strengthening finance capacities of landscape organisations and local governments • Assistance in structuring inclusive, multi-sector and multi-project finance mechanisms • Financial coordination and support services • Engaging private business and finance institutions
Public funding and incentives for landscape investments	• Contributing to long-term, grant-based funding for LPs • Deploying national funds to projects in locally-endorsed landscape investments portfolios • Aligning public cross-sector expenditures with local landscape priorities • Co-financing long-term, inclusive landscape investments with the private sector • Incentivizing and reducing risks of landscape investment
Regulating landscape investment and finance	• Aligning and adapting natural resource management regulations • Enforcement of legal protections and standards • Landscape investment screening or regulation • Adoption and enforcement of international standards for sustainable investment and finance
Promoting landscape-friendly market development	• Connecting prospective funders with landscape investment opportunities • Promoting markets for landscape-friendly products and services

7.1 *Defining a policy framework that supports integrated landscape investment and finance*

ILM offers a powerful approach to achieve biodiversity targets, as well as other SDGs. Local LPs can help to deliver these objectives in collaboration with national and sub-national governments, in a coordinated and synergistic way that is adapted to local contexts and priorities. This has required policies that facilitate cross-sectoral action, explicitly support LPs and platforms, and establish legal and institutional mechanisms for landscape stakeholder platforms to influence flows of finance and investment. Working with LPs, national policymakers can establish a regular flow of information and feedback with actors on the ground. Policymakers must also work to better integrate nature-smart

planning into their systems to manage nature-related risks and opportunities in relation to socio-economic systems that drive nature-loss.

7.1.1 *Integrated strategies and public finance for sustainable development*

A "unity of purpose" is critical to enabling cross-sectoral action among sectors, ministries and different levels of government to align policies and action. A whole of economy approach should be considered in development plans and strategies that focuses on the drivers of, and reversal of, nature loss. Ministries of finance can play a key role in this by working on integrating nature-related risks into expenditure decisions and ensuring the systemic integration of these risks. In parallel, adequate funding needs to be provided for crucial spatial planning processes. At the national level this means not only endorsing an integrated approach to the SDGs, but supporting and connecting initiatives around low-carbon development, ecosystem based adaptation and agricultural green growth, and landscape restoration that explicitly incorporate biodiversity conservation and habitat restoration. For example, the 2030 Vision for the Barind Tract landscape in Bangladesh directly linked their landscape development strategy to national priorities, adapted to their own local context (Barind Tract,2017). Countries like Costa Rica and Benin have made major strides in establishing national policy frameworks that integrate sectoral strategies (ECLAC 2019; Republic of Benin 2018). Many other countries are also incorporating integrated strategies for biodiversity conservation in their NBSAPs, including Uganda, which has an explicit aim to develop guidelines for mainstreaming biodiversity into decision-making and budget decisions (see the case study in chapter 8.1).

7.1.2 *Policies that explicitly support integrated landscape initiatives and partnerships*

LPs require coherent support across the system of public policies. Most fundamentally, governments need to recognize landscape and seascape collaborative action as a legitimate mechanism to implement interrelated national as well as local policy priorities. Governments provide the legal framework for organizing and managing partnerships, define the scope for their input into public development plans, and enable government agencies to work with and support them, especially local governments through decentralisation policy (Scherr et al., 2022).

In the context of multi-level governance, national, sub-national, and local governments will have different roles because of their different objectives, obligations and policy instruments available (UNFSS 2021b). Local governments, and local branches of national agencies can be encouraged to participate as active members of LPs. In some cases, government entities may convene LPs, though other actors may be perceived as more 'neutral' facilitators. For example, Imarisha Naivasha in Kenya was formally established by the President's office, due to its high profile and involvement of international business actors (Kissinger, 2014). Policy frameworks to support LPs can most effectively be codesigned by policymakers, LPs, and businesses actively allying with landscape partners (Scherr et al. 2022).

Ministries of finance, in particular, can play a key role in sending clear policy signals that promote nature-smart practices in the sectors that can support these integrated landscape initiatives. Key actions could include developing nature-based valuation, metrics and decision support tools that value natural capital and using natural capital accounting practices that can be integrated into national accounts (Power et al., 2022).

At the same time, collaboration with non-governmental actors can also form a crucial pillar for setting up effective landscape initiatives and partnerships. Often NGOs are the driving forces behind the development of such partnerships. In Uganda, for example, a number of NGOs have formed the Northern Albertine Rift Conservation group to develop landscape-wide strategies (see Chapter 8.1 and Annex 2). However, interest from governmental actors to participate has been limited. Policies should incentivize and support collaborations between governmental actors and non-governmental organisations.

7.1.3 *Coordination among public sector agencies*

Policies encouraging coordination among sectoral agencies greatly facilitate integrated landscape planning, action, and monitoring. Policies such as regularizing land tenure and protecting land rights,

within an integrated landscape context, are critical to their success, scope of action, and capacity to manage overlapping legal rights (Buck et al., 2019). Smallholder communities, IPs and others need to have clear rights to self-governance of resources and development plans, access to resources for decision-support, and institutions to defend them (UNFSS 2021b).

Governments can set up "One Map" systems for all sectoral agencies to facilitate spatially explicit joint planning (Shahab, 2016). They can establish cross-sector monitoring and impact assessment at landscape scale, to reduce impact assessment costs and reduce risks of investors. From the case studies, in Uganda, the government has set up an inter-ministerial working group to align investments and subsidies between ministries and agencies (see Chapter 8.1 and Annex 2). In the Cagayan de Oro River Basin in the Philippines, a Memorandum of Agreement was enacted by local government units (LGUs) to work together to restore the integrated land-/seascape (see Chapter 8.2 and Annex 2). These local governments then allocate funds to restoration and agroforestry activities through a coordinated approach.

7.1.4 *Legal and institutional mechanisms for landscape stakeholders to influence flows of finance and investment*

A promising opportunity to implement national integrated sustainable development strategies, cost-effectively, is to facilitate financial flows to align with (and not undermine) the collective priorities reflected in the landscape investment portfolio. LPs can officially play a role in designing or coordinating the implementation of national sustainability initiatives at the local level. This process has been used most often with jurisdictional landscape initiatives where decentralisation has empowered local governments to play these roles (WWF 2021; IDH accessed 2022; TFA 2021). Biodiversity actions incorporated into these portfolios as part of climate, water, agriculture, infrastructure, and other programs have already addressed inter-sectoral tradeoffs and synergies.

Effective articulation of national and local governmental financial flows may require financial regulatory reforms in governance, legal agreements, tools, or mechanisms. Consultation with LPs, or oversight by them, can also be incorporated into mechanisms for transparency and accountability in public financial flows such as subsidies, procurement contracts, and infrastructure. For example, the Southern Agriculture Growth Corridor of Tanzania–SAGCOT and Imarisha Naivasha in Kenya have sometimes influenced national investment programs in their respective regions (Milder et al. 2013; Kissinger, 2014).

7.2 *Developing finance mechanisms and services*

National governments have also facilitated landscape investment by directly developing financial mechanisms and services. In well-established sectors like agriculture and energy, public, private and civic institutions have evolved to provide key services supporting finance structuring and mobilization. Because landscape finance is so new, governments have needed to facilitate 'building the market' and fill market gaps. Sometimes they have provided services directly through public agencies or catalyzed and incentivized the provision of services by businesses, NGOs, or foundations. Key services commonly needed are finance capacity strengthening of landscape organisations and local governments; assistance in structuring inclusive, multi-sector, multi-project landscape finance mechanisms; financial coordination and support services; and engagement of business and finance institutions.

7.2.1 *Strengthening finance capacities of landscape organisations and local governments*

Those facilitating ILM need knowledge and practical tools for all landscape and seascape regeneration elements: partnership development, landscape assessment, visioning and action planning, implementation and financing, and impact assessment (Heiner et al., 2017; Shames & Scherr, 2020). These provide the foundations for developing a robust landscape investment portfolio, establishing financial mechanisms, and engaging investors. But they also need stronger capacities around finance. LPs have demonstrably benefitted from access to data and training in applied tools such as the Landscape Investment and Finance Toolkit (LIFT) (Shames et al.

2017). In the Cagayan de Oro River Basin (see Chapter 8.3 and Annex 2), LIFT supported an assessment of financing needs for landscape investments and developing a strategy for mobilization. For example, the tool helped deepen understanding for how existing PES schemes could be expanded. Tools to support these processes are being further developed by the 1000 Landscape for 1 Billion People initiative.

Learning can be integrated into existing public and extension services training programs or through NGOs, businesses, or peer-to-peer landscape networks. For example, the Government of Tanzania utilized a Landscape-Climate Smart Agriculture curriculum for district government leaders (Buck et al., 2021). While its principal focus was climate-smart agriculture, training explicitly incorporated biodiversity and resulted in district Landscape Approach to Climate Smart Agriculture (L-CSA) plans with enhanced biodiversity programs.

Landscape facilitators and partnerships can also benefit from access to specialized expertise on landscape governance, relevant laws, inclusive 'green' and 'blue' business practices, design of new market mechanisms and design of integrated landscape monitoring systems, the economic valuation of nature, and assessment of climate and biodiversity risks in investment decision-making. Finance advisory services can be set up to support local governments and LPs. Most such services have been provided to date by specialized NGOs, such as IDH, Solidaridad or Tropical Forest Alliance, or by UN agencies, but broad access will require nationally-based institutions. The 1000 Landscapes for 1 Billion People initiative has begun to develop resources and delivery models for that purpose.

7.2.2 *Assistance in structuring inclusive, multi-sector and multi-project finance mechanisms*

While private financial institutions are becoming more involved in developing landscape finance mechanisms, government financial institutions and finance experts still play a key role. This is likely to continue for some time, and a more structured approach would accelerate scaling. National governments are setting up landscape funds, as in Peru's grant fund for non-commercial landscape projects (GRSM 2020c). New models for landscape bonds can build on examples like the Blue Bond of the Republic of Seychelles and the Nordic Investment Bank, or the IFC Forests Bond linked to the Kasigau Corridor initiative in Kenya. Design principles more explicitly for ILF include government programs that coordinate financing for public sector projects, and creating public-private partnerships to mobilize finance for infrastructure (Shames & Scherr, 2020). Governments have played a central role in setting up most payments for ecosystem services schemes, for both public and private financing (Schomers & Matzdorf, 2013). In the Philippines, for example, the government in collaboration with civil society organisations and an association of IPs, set up a PES scheme with a goal of protecting communities from flooding and ensuring potable water in downstream areas (see Chapter 8.3 and Annex 2). Governments have also led the way in helping banks to incorporate biodiversity into their lending practices, as with the GEF-UNDP 5-year project in five countries of Central America (GEF-UNDP 2014; Gross et al., 2016).

Landscape investment faces a particular challenge for inclusion of the millions of smallholder farmers and community groups with limited access to conventional finance. Governments are developing de-risking mechanisms, and mechanisms to disaggregate large pools of funds through a portfolio of small-scale investments of smallholders, SMEs, and cooperatives (Primo et al. 2021). For example, as part of the Community Management of Protected Areas Conservation initiative, the UNDP implemented a landscape-level grant fund for 13 years targeted at NGOs, community-based organisations, IPs, small-scale producers and SMEs selected by a local consultative body at the landscape level (Brown & Hay-Edie 2014). For investments in lands under communal or state land tenure, tailored governance, intermediation and public commitments may be needed to mobilize large-scale finance. Finance governance changes are being devized to improve access to finance by smallholders, SMEs, women, youth, and Indigenous communities, and to facilitate investment in communal and public lands (UNFSS 2021a; Louman et al.,2022) have identified in particular the importance of finance literacy and access to finance technology and services as central to improving the inclusivity of landscape finance.

Recently, new landscape finance mechanisms are enabling large pools of private capital to be invested across a set of coordinated, multi-sector landscape investments that jointly meet territorial priorities at scale (Shames & Scherr, 2020). National and multilateral development finance institutions in Europe and Latin America are important in such innovations (Ozment et al., 2021). There are intriguing opportunities for Community Development Finance organisations, usually co-funded by governments with a focus on health and social development, to evolve into Landscape Development Finance. For example, landscape or territorial banks that respond to territorial governance could play a crucial role in resource mobilization (Shames & Scherr 2020). Governments can encourage public and private financial institutions to reorganize their portfolios to serve cross-sectoral landscape investments.

7.2.3 *Financial coordination and support services*

To advance financial coordination and support services. Governments can help provide such services, as is commonly done for urban redevelopment but much less so in rural areas. Designated government agencies, working with or funding financial experts, can assist LPs and their members to develop investment-ready, spatially coordinated pipeline of projects.

Governments have also found they may need to provide business incubation services for inclusive green businesses that are aligned with the broader landscape action plan. While often provided by private sector actors interested to invest in these businesses, the small size and and higher risk of unfamiliar business models and market development mean that governments are typically a key player. In San Martin, there are budget designations within the ERDRBE for financial, technical and legal services at the landscape level. At a regional level, there is a focus on support for increasing market access and competitiveness across the region for low-emissions land use activities. In addition, several existing national programs support business plans, such as PROCOMPITE, a competitive fund that co-finances productive proposals to improves production chains and AGROIDEAS, a non-reimbursable fund which, in 2019, endorsed 280 business plans for a value of $35 million USD (GRSM, 2020c).

7.2.4 *Engaging private business and finance institutions*

Private businesses play a central role in landscape economies and resource management. Their engagement in LPs and their alignment with the landscape development strategy is a critical ingredient for success. Business leaders can incorporate landscape regeneration into their own business plans, and assist other actors to design and implement inclusive, green and blue business solutions and market-based incentives. Business allies can be influential in policy advocacy and financial mobilization. But many Landscape and Seascape Partnerships need assistance in reaching out to companies and clearly articulating the business case and financial viability of green, blue, and inclusive business models for regenerative economies. In the Murchison Semliki landscape in Uganda, a number of NGOs are working together with a variety of value chain companies as well as oil companies (see Chapter 8.1 and Annex 2). Through these partnerships, the private sector is actively engaged in landscape regeneration, and provides an opportunity for these companies to play a constructive role in policy advocacy.

Government programs have sometimes played a catalytic role in building bridges between companies and LPs. For example, the National government of Namibia facilitates 25-year partnerships between community concessions and hunting, safari, tourism and other private companies, depending on biodiversity resources, with a minimum of 25% of profits going to the communities, providing legal and negotiation services (GEF, 2006). Private companies collaborate with local governments in the UK to organize Landscape Enterprise Networks (LENS), a sophisticated mechanism for companies to invest in ecosystem services by farmers and other land managers in the landscape (Jobes, 2018).

7.3 *Public funding and incentives for landscape investments*

A third role for governments in landscape finance has been as a financier. While the private sector dominates the flows of finance in landscapes, integrated landscape investment is an “infant industry.” Public sector funding constitutes a large enough share

of overall financial flows in landscapes to impact outcomes directly and to catalyze and influence flows and patterns of private and civic investment. Five key dimensions have been government contributions to long-term, grant-based funding for LPs; deploying national funds to projects in locally endorsed landscape investment portfolios; aligning public expenditures in the landscape across sectors and levels; co-financing long-term, inclusive projects with the private sector; and incentivizing and reducing risks of landscape investments by the private sector.

7.3.1 *Contributing to long-term, grant-based funding for Landscape Partnerships*

Reliable grant financing is fundamental for LPs to play critical roles in convening, planning and coordinating, including support for developing landscape investment portfolios and mobilizing financing.LP support funding needs to be structured for the long term (20+ years). Such funding typically requires confidence in the governance of the Landscape Partnership, with mechanisms in place to provide transparency, minimize chances of corruption, and share benefits.

Some LPs have raised funds through services, fees, or commercial activities, but these are usually modest. Governments can use public finance to fund LP operations directly, co-fund costs to leverage other funders, or help to set up funding mechanisms with other actors. Models being used include place-based donor collaboratives, public and philanthropic grant programs, designated user fees, LP member contributions, designated resources from blended finance, trust funds, and bonds (Scherr et al., 2022). Examples include the U.S. Landscape Conservation Catalyst Fund (Network for Landscape Conservation n.d.) and the Local Disaster Risk Reduction and Management Fund in the Philippines (Congress of the Philippines 2010), which is funded on an annual basis by local governmental units in the Philippines (see Annex 2).

7.3.2 *Deploying national funds to projects in locally-endorsed landscape investment portfolios*

National governments are mobilizing or receiving large-scale funding for improved land and resource management, whether from taxes, bilateral or multilateral development assistance, private business investment or philanthropic donations. For the most part, these funds are received for sector-specific goals like climate change mitigation or food security, and are deployed 'vertically' to state, district and local levels for defined types of projects, often regardless of the local landscape context and with little local control. LPs offer striking opportunities to deploy these large pools of funds instead into projects that are already part of locally endorsed landscape actions plans and corresponding investment portfolios. This calls for suitable rules to be designed for deploying financial resources. The European Union's Common Agricultural Policy has established a program enabling local farmers to organize geographically to receive environmental payments against performance across a local watershed rather than on individual farms (Bartkowski et al., 2021). This model of central funds being used to fund landscape-organized investments is also being applied in Scotland's system of climate funding for their regional land use partnerships (Scottish Land Commission 2020).

7.3.3 *Aligning public cross-sector expenditures with local landscape priorities*

A central contribution of national and sub-national governments is aligning their sector investments–both asset and enabling–with the locally-agreed landscape strategy and for public programs and projects to be included explicitly in landscape investment portfolios. There are opportunities for synergy if public finance from different agencies and from different government levels, can be aligned, coordinated or pooled in the landscape. This has historically been a challenge, for administrative and political reasons. But innovative models are emerging. For example, Costa Rica's national policy to reduce deforestation put in place payments to farmers and landowners for ecosystem services and worked with the UNDP-implemented GEF Small Grants program to select landscapes, aggregate actors and support them to meet government requirements (GEF, 2021). The European Union's LIFE program has begun to provide public financing of investment proposals developed through bottom-up, place-based processes.

7.3.4 *Co-financing long-term, inclusive landscape investments with the private sector*

Governments have played a critical role in co-financing private sector projects in landscape investment portfolios. Blended finance models

have proliferated, with government co-investors acting to reduce project finance risk and ensure project design aligns with landscape priorities. For example, in 2019, the Minister of Infrastructure and Water Management signed an Agenda for the IJsselmeergebied coastal region, co-developed with 60 stakeholders, and allocated over $16M in funding from the central government for a mix of investments, including restoration, infrastructure, and incentive payments. The central government also funds technical support provided and organized by the local and central governments. This public funding is, in turn, catalyzing related business investment (BPIJ 2021).

7.3.5 *Incentivize and reduce risks of landscape investment*

Governments can deploy tax breaks, incentives, risk guarantees, and subsidies to incentivize landscape investment or to reduce project or investor risks. For example, in areas of high human-wildlife conflict in Namibia, villages were willing to designate their land as conservation areas because of government incentives giving them the benefits from sustainable use of natural resources on state land; this boosted biodiversity while improving community incomes (NACSO & MEFT 2021). Multi-pronged risk reduction strategies benefitting multiple stakeholders are developed in several African countries by Climate-KIC. Environmentalists and others actively advocate for redirecting perverse agricultural, energy, and other subsidies promoting degradation. It may be politically attractive to redirect such subsidies to support whole landscape investment portfolios that not only incentivize investments in nature, but also link these to broader investment strategies that generate jobs and economic development.

Governments can encourage or directly implement landscape performance assessments, such as LandScale, that document social and environmental impacts across the landscape, reducing expenses for companies that may wish to make claims of sustainable sourcing. Furthermore, governments can also support research into landscape-level regeneration strategies, environmental monitoring, and the development of investment support tools. In the Cagayan de Oro landscape in the Philippines, the management council actively supports such strategies and monitoring by local communities, which includes Indigenous Knowledge Systems and Practices (IKSP).

Finally, some governments can incentivize private landscape-friendly investments by shifting public cash subsidies away from degrading or unsustainable businesses toward regenerative businesses. For this to be considered by governments, it is essential to develop capacity-building for and understanding the importance of landscape regeneration among governmental representatives from different ministries.Meanwhile, governments can potentially craft public sustainable investment plans that mitigate social, environmental, and economic risks for businesses. For example, in the San Martin case, the development of the ERDRBE was based on the premise that there was no alignment across government plans and ministries for how to reduce deforestation, which then served as the basis for investment plans. Meanwhile, governments can craft public sustainable investment plans that mitigate social, environmental, and economic risks for businesses.

7.4 *Regulating landscape investment and finance*

Landscape investment has often required adapting existing government regulations or calling for new types of government guidelines or regulations at the local or national level.

7.4.1 *Aligning and adapting natural resource management regulations*

Effective, low-cost and efficient agriculture and natural resource regulation is an important element of the enabling environment for landscape investment. These may create, limit or constrain rights and obligations; mandate, limit, or prohibit certain activities, practices, or technologies; protect stakeholders from harm; protect wild species from harm; ensure adequate information; and influence incentives. Commercial and non-commercial landscape investors often face a nightmare of multiple and

conflicting regulations, not designed for projects and businesses that work across multiple sectors, like agriculture, water, biodiversity and forest, or that embed sustainability in their business models.

For example, in Florida (USA), a major multi-stakeholder wetlands restoration initiative of biodiversity and water agencies, NGOs and ranchers took years to develop a single, aligned regulatory framework to underpin its program of payments to ranchers for biodiversity and ecosystem services (Yoder & Chowdhury, 2018). In the Philippines, the government developed legislation specifically to support PES schemes (see Chapter 8.3). In Uganda, the NBSAP calls for the development of innovative financing mechanisms such as PES and environmental bonds (see Chapter 8.1).

7.4.2 *Enforcement of legal protections and standards*

Governments can further facilitate integrated landscape investment by enforcing legal protection and sustainability standards. This can apply to rules on traded products, certifications, or carbon and biodiversity offsets. They can design regulations to be applicable and practical in the context of integrated landscape investments. The NBSAP of Uganda calls for the development of biodiversity regulation in governmental legislation. It also contains a specific objective of no-net biodiversity loss in the oil rich regions of the country.

7.4.3 *Landscape investment screening or regulation*

Although not yet widely practiced, governments can develop guidelines and regulations that improve the enabling environment for landscape investment and finance. In situations with especially high-biodiversity value or threatened landscapes, governments may establish voluntary, or even mandatory, screening processes by local stakeholders for large-scale investments in landscapes, to ensure that they are aligned with, or do not undermine, stakeholder-endorsed landscape strategies and action plans. Examples include regulatory exemptions for inclusive green businesses contributing to defined landscape objectives, or zoning regulations designating "no-go" areas for polluting industries near areas designated as biodiversity-sensitive in the landscape plan.

7.4.4 *Adoption and enforcement of international standards for sustainable investment and finance*

New international reporting disclosure frameworks being developed by the Task Force on Nature-related Financial Disclosures (TNFD) and the Task Force on Climate-related Financial Disclosures (TCFD) could potentially be applied through a landscape lens. Governments can link to international bodies such as the Network for Greening the Financial Sector. In Uganda and Mexico, the development of REDD+ programs already offers standards that are used to generate sustainable investment and finance and ensure that a certain level of reporting occurs, though not yet through a landscape lens.

7.5 *Promoting landscape-friendly market development*

A fifth role for national and sub-national governments has been facilitating landscape finance as an "advocate"–actively marketing the projects in landscape investment portfolios to businesses and financiers and promoting market demand for landscape-friendly products and services.

7.5.1 *Connecting prospective funders with landscape investment opportunities*

The most common complaint of LPs is that they cannot find funding for projects in their investment portfolios, yet the most common complaint of finance institutions is the difficulty in finding a pipeline of investable projects (Scherr et al., 2022). Thus, government agencies – from agriculture, environment, commerce, trade, and other ministries–have begun to play a strategic role in "marketing" to relevant businesses and financiers the projects in biodiversity-friendly landscape investment portfolios. This requires developing detailed information on the landscape investment portfolio and component projects in order to provide clear information on financial and impact metrics. There is a parallel in urban redevelopment programs, and in state and national government agencies attracting foreign direct investment.

One example of these services is the Government of Ethiopia collaborating with private companies to organize an "investor fair" to mobilize funding from prospective investors for a portfolio of projects in several landscapes, as reported to the 2019 African Landscapes dialogue. Another is the project funding received by the Kenyan LP Kenvo through the funding platform Terramatch (AFR100/Terramatch Accessed 2022).

7.5.2 *Promoting markets for landscape-friendly products and services*

Both national and subnational governments can support landscape finance indirectly by increasing market demand for biodiversity-friendly products and businesses working in LPs or initiatives. One method is through public procurement of such products and services for government use, such as policies to use FSC-certified timber in public construction projects, purchasing food for school feeding programs from landscape-aligned suppliers, or showcasing landscape-branded products in market and trade fairs. In the case of San Martin, Peru, the development of regional branding and market development, to demonstrate sustainability performance and differentiation in line with the ERDRBE, is a priority investment to improving competitiveness and adding value to many products (GRSM 2020b).

Governments have also played strategic roles in helping landscape initiatives to establish and generate financial benefits through landscape branding. This strategy is most useful for landscapes that are notable for their history, beauty, conservation value, or agricultural heritage. For example, numerous governments have helped LPs apply for designation as World Heritage Sites, then used to support more sustainable–and more biodiversity-friendly–development strategies (Brown & Hay-Edie, 2014).

The Government of Mexico helped IPs in Sierra Gorda, Mexico form a Biosphere Reserve; for which that status has been used to mobilize funding for ecosystem services and other product marketing (GESIAP accessed 2022). Pu'er City in Yunnan, China, applied for its Tea Garden and Tea Culture to be recognized as a Globally Important Agricultural Heritage Site (GIAHS), and used this in marketing the high-quality, high-priced certified "ecologically-produced" tea, as part of a broader program to promote its rich environmental and cultural history (Havemann, 2015). Such designations can be used to market many other products in the landscape, making finance for those biodiversity-friendly businesses more attractive.

Governments have collaborated in setting guidelines for establishing landscape labels or a sustainable landscape certification, that incorporate–among other attributes–credible claims for biodiversity conservation or restoration, and strengthen the credibility of landscape claims. For example, South Africa's "Wine and Biodiversity Initiative," designed to protect the Cape Floral Kingdom, set up a landscape label for wine and other products, with support from government agencies (GESIAP Accessed 2022).

8. LANDSCAPE FINANCE CASE STUDIES: LESSONS LEARNED

This section of the report summarizes the main findings of three landscape finance case studies in Uganda, Mexico, and the Philippines. The full case studies may be found in Annex 2.

8.1 Introduction: Case studies on integrated landscape finance

8.1.1 Purpose of case studies and research questions

The three case studies presented in this document have been developed to draw lessons from the practical implementation of national biodiversity finance policy and landscape-level financial strategies. Three landscapes from different countries were selected:

- The Murchison-Semliki Landscape in Uganda
- The Yucatán Peninsula in Mexico
- The Cagayan de Oro Basin in the Philippines

The case studies review financial structures at the landscape level and the national policy framework for biodiversity finance and identify challenges for successful implementation in each country.
The lessons learned in these case studies provide insight into how national policy processes can be improved to facilitate integrated biodiversity finance on both the national and the landscape level.
The following case study descriptions are summaries that exclude elaborate detail on the relevant stakeholders and financing mechanism examples (this information is provided in the full case study descriptions in Appendix B).

8.1.2 Data used (Interviews, reports NBSAP and NBFP)

The case studies below were largely informed by a suite of interviews undertaken with stakeholders working in the landscape.. An overview of the interviews for this case study can be found in Annex A. These interviews included stakeholders from both the public and private sectors that are or were recently involved in biodiversity conservation and finance in the landscape. In addition, National Biodiversity Strategy and Action Plans (NBSAPs) and National Biodiversity Finance Plans (NBFPs) that were developed by the case study countries were also used extensively as background literature to describe the national policy framework.

8.1.3 Structure of each case study in relation to the global review

The full case study descriptions (Appendix B) provide several references to important sections of the synthesis report, which help to structure the case studies and to emphasize ILF approaches in these landscapes. Each case study is introduced with a general background of the landscape. Next, the case studies describe ILM approaches utilizing the framework that is laid out in section 5 of the synthesis report. Subsequently, an overview of stakeholders involved in integrated landscape management (ILM) as well as an overview of the financing mechanisms that form the basis for biodiversity conservation in the landscape are provided. Challenges for Integrated Landscape Finance (ILF) in the landscapes are then described and related to the challenges described in section 6 of the synthesis report. The case studies then provide information on the relationship between ILF in the landscape in relation to the respective NBSAPs and NBFPs, and governmental roles are discussed utilizing section 7 of the synthesis report as a framework. Lastly, several lessons learned from the case studies are identified to advance National Biodiversity objectives in other countries.

8.2 Murchison-Semliki Landscape of Uganda

8.2.1 Landscape type and challenges faced

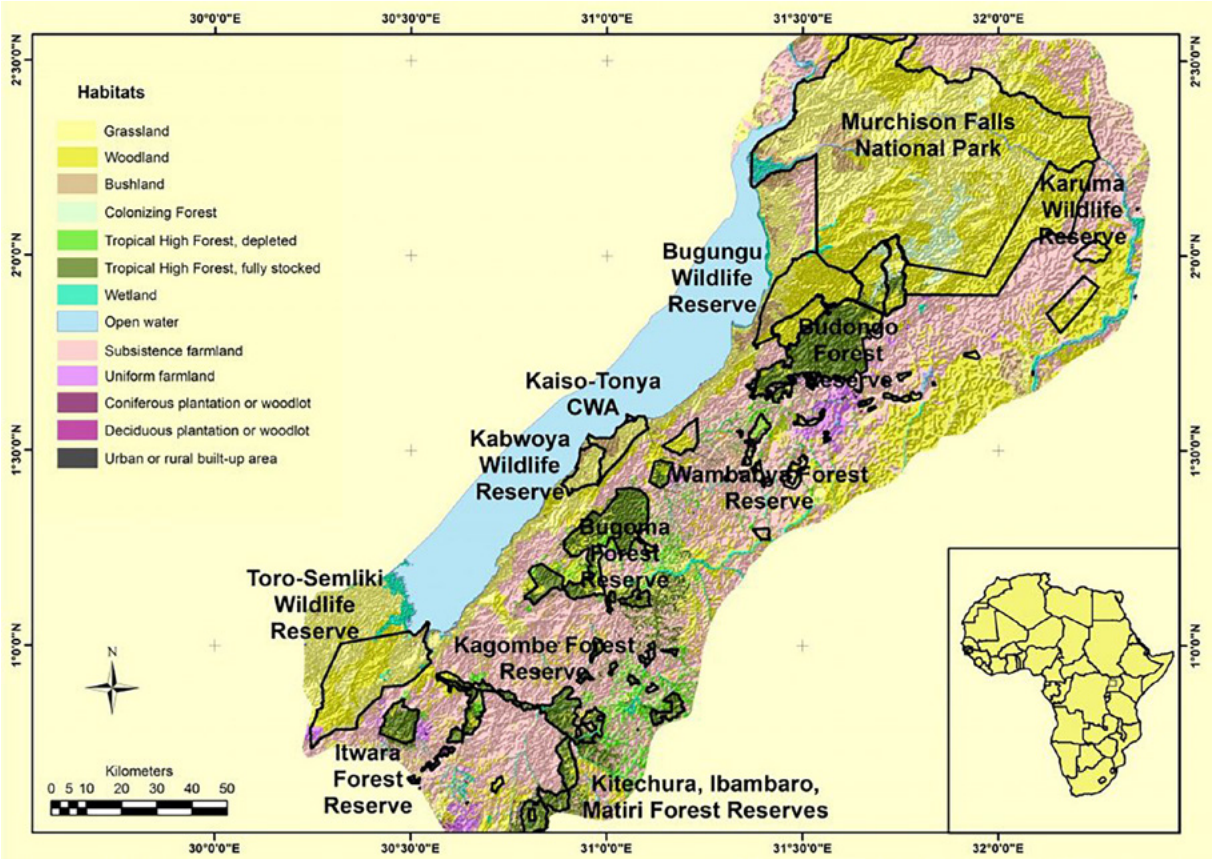
The Murchison-Semliki Landscape (MSL) is a diverse conglomeration of ecosystems in the western part of Uganda. The landscape is a biodiversity hotspot, part of the Albertine Rift region home to (Plumptre et al., 2007) an estimated 52% of bird species, 39% of mammal species, and between 15-20% of amphibian, reptile, and plant species that can be found on the continent of Africa according to Ecotrust Uganda. The landscape stretches from the Murchison Falls National Park at the northern part of Lake Albert to the Toro-Semliki Wildlife Reserve at the southern reaches of the lake, covering an area of more than 2.4 million hectares. The landscape harbours

savanna grasslands, woodlands, wetlands, tropical high forests, and freshwater lakes and rivers. These unique ecosystems, with varying conservation statuses, provide habitat for iconic species such as lions and chimpanzees.

The landscape is also home to 3.7 million people that depend on the regions natural resources. Communities depend on ecosystem services provided by the forests, in particular, for fuelwood, timber, and non-timber forest products. Additionally, the landscape provides a wide range of other ecosystem services that benefit local communities, such as water filtration, and services that benefit the global community, such as carbon retention and biodiversity. Lastly, the beauty of the landscape and its diverse ecosystems provide ample opportunities for economic growth through ecotourism.

The landscape is under economic development, with timber extraction, agriculture, and recent discoveries of oil all pressuring natural values. The fertile landscape and bountiful water resource make the landscape well-suited for agricultural purposes. Various valuable tropical tree species are harvested and both small- and large-scale agriculture occur in the landscape, with the most important cash crops being tobacco, sugar, tea, and cocoa. Transformation of natural areas into agricultural land has led to a decline in natural ecosystems in the landscape, threatening biodiversity and the provisioning of ecosystem services. The discovery of oil in the region has led to an influx of people, putting further strain on the landscape's natural resources.

FIGURE 8.2.1 Extent of the Murchison-Semliki landscape in Western Uganda.



Source: Mobilising More for Climate Project. Retrieved from https://www.momo4climate.org/where-we-work/uganda/murchison-landscape

8.2.2 *Approaches to Integrated Landscape Management*

Within the MSL one of the most important approaches to ILF, is the coordination of investments across complementary projects focused on biodiversity conservation through the NARC-G. This group primarily consists of national and international NGOs, but also occasionally cooperates with governmental agencies and the private sector. Within the platform there are coordinated efforts to attract financing from international donors, such as the EU and the World Bank. In addition to NARC-G, there is an inter-ministerial framework operating on the national level, which strives to coordinate efforts by government agencies towards national objectives. Within this framework the National Environment Management Authority (NEMA) is responsible for ensuring biodiversity conservation concerns are considered in governmental projects.

Within the MSL there are efforts to integrate conservation finance through value chain transformation. There are a number of value chain companies such as sugar, tobacco, and coffee traders that cooperate with NGOs to ameliorate their operations and to strive for more sustainable and organic farming practices in the landscape. Most of these projects are standalone, but through the NARC-G platform, efforts are coordinated. In addition, there are a number of large-scale projects such as REDD+ and the Mobilising More for Climate (MoMo4C) program that involve a collection of NGOs and value chain companies that seek collaboration with governmental agencies.

8.2.3 *Challenges*

- **Absence of clearly defined property and land tenure rights:** There is no clear land registry for large parts of Uganda. A lack of protection on land without a clearly defined owner can hinder a coordinated landscape approach, as there is no clear destination for the flow of funding. There is a lot of corruption in the land tenure rights system, which can affect the livelihoods of IPs and thus can affect sustainable management of community lands. This corruption can cause loss and inadequate distribution of financial resources, hindering efforts to achieve a coordinated landscape finance approach.
- **Dependence of governmental funding on ecotourism:** Ecotourism can be affected by global shocks, like COVID-19, that can affect generated funding. If governmental agencies depend on tourism too much, external effects may significantly impact conservation funding. Furthermore, it can over-incentivize governmental programs on biodiversity to focus on ecotourism development, which might hinder an integrated approach where decisions on the application of financing mechanisms might conflict with government funding sources.
- **Lack of awareness on conservation action plans:** Within Uganda, a long-term landscape vision and action plan for the MSL was developed by the NARC-G. However, there is a lack of awareness of the plan amongst relevant stakeholders, even within the public sector. This leads to different views on conservation and various projects, which might lead to inefficient use of financial resources and a lack of coordinated efforts on the landscape level.
- **High autonomy in local governments:** Local governments in Uganda enjoy a high degree of autonomy. This can lead to economic development being valued over environmental conservation targets developed in national policy. Consequently, local governments might lack the incentive to utilize public funds for biodiversity conservation efforts, particularly in the MSL, where the oil extraction industry is booming.

8.2.4 *Integrated landscape finance and national policy on biodiversity finance*

Uganda's National Environment Management Authority (NEMA) developed a National Biodiversity Strategy and Action Plan (NEMA, 2016). This was followed by a National Biodiversity Finance Plan in 2019 that describes how financial resources for biodiversity conservation should be raised to meet the objectives of the NBSAP (NEMA et al., 2019).

ILF in the MSL and national biodiversity targets support each other in a number of ways. Some projects in the landscape already use innovative financing mechanisms such as PES and REDD+ to mobilize financial resources for biodiversity conservation. These mechanisms require biodiversity

and ecosystem data to function as efficient mechanisms for distributing financial resources. In this way, the conservation projects at the landscape level support national objectives to monitor the performance of biodiversity financing, and to serve as economic instruments that strive to provide sustainable livelihoods for residents. Cooperation between various organisations and stakeholders involved in biodiversity conservation in the MSL in the NARC-G leads to an integrated utilisation of innovative economic mechanisms in the landscape.

Based on the NBSAP and NBFP, we can identify ways these contribute to ILF in the MSL and thus identify the role of national government. The NBSAP and NBFP envision solutions that facilitate a strong role of national government in integrated landscape approaches. Within the NBSAP, strategic objective 1 aims to strengthen stakeholder coordination and frameworks for biodiversity management. It describes activities aimed at developing integrated biodiversity management policies, guidelines for mainstreaming biodiversity into decision making, and a business case for biodiversity. These activities highlight the role of the government in defining a biodiversity policy framework to support ILF.

The NBSAP and NBFP also describe strategic objectives that envision a role for the government in developing finance mechanisms, increasing the availability of public funding for biodiversity conservation and regulating landscape investment. The plan promotes the development of innovative financing mechanisms through support for the development and incorporation of funding sources such as PES and environmental bonds. It also provides for a strategic objective specifically aimed at ensuring no net biodiversity loss in Uganda's oil-rich regions, including the MSL, through a biodiversity offset trust fund. The NBSAP provides for the elaboration of regulations surrounding biodiversity in national and sectoral policies. Overall, we can conclude that although the NBSAP and NBFP do not explicitly mention ILF approaches they do facilitate a national biodiversity framework that can support the development of ILF structures.

Lessons learned 8.2.5

- **Creating stakeholder platforms is essential:** Through the Northern Albertine Rift Conservation Group and the inter-ministerial framework different types of stakeholders (e.g. NGOs, governmental, private sector, community groups) discuss conservation issues in the landscape. Through the platform, cooperation between stakeholders can be achieved and new projects can be coordinated. This allows for landscape-wide coordination on the distribution of funds and can thus amplify progress towards national biodiversity targets.

- **Create unified goals for biodiversity conservation in a landscape:** Projects in the landscape generally have a similar focus on restoring buffer zones and/or ecological corridors through incentivizing local communities to manage their lands and forests sustainably, for example, via PES schemes, coordinated efforts between agribusinesses and small-scale farmers that promote sustainable agriculture, as well as REDD+ activities. This unity of purpose of projects in the landscape amplifies conservation efforts. In the MSL this is relevant, as it is a vast landscape with a large number of biodiversity projects operating in different areas. Governments can foster unity by setting common targets.

- **Creation of bankable investment projects to attract private finance:** Within the MSL, a large emphasis is placed on the creation of bankable investment projects, particularly through the MoMo4C program implemented by an NGO (Ecotrust). The program aims to build a climate-resilient MSL by engaging stakeholders from local communities, local government, private businesses, and civil society to support green business investments that enhance landscape restoration whilst improving community livelihoods. This emphasis has led to the creation of an expanding pool of bankable projects that can exponentially increase funds for conservation finance in the landscape. In doing so, progress towards national biodiversity targets is strengthened without an additional burden on public funds. Governments may direct subsidies to programs aimed at attracting private finance in this way.

8.3 *Yucatán Peninsula, Mexico*

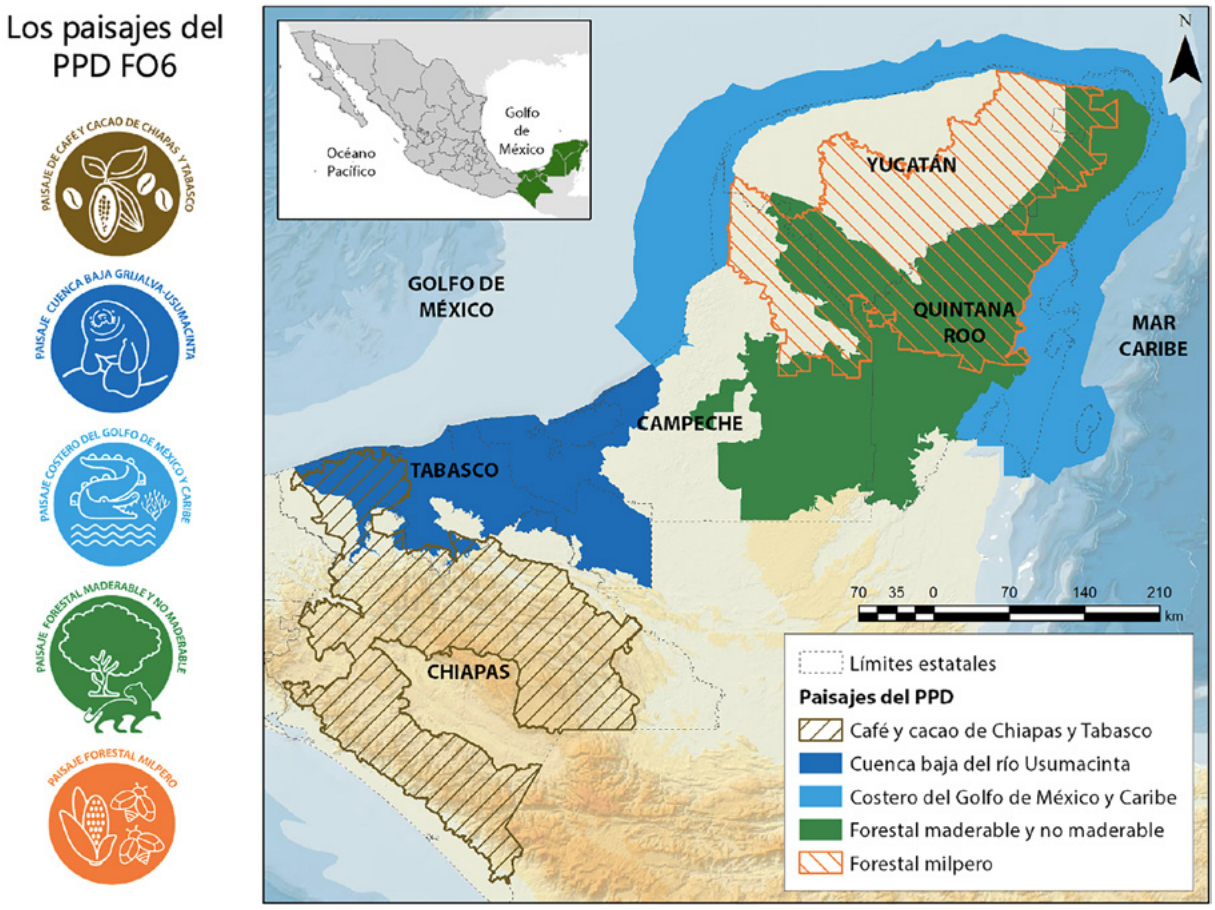
8.3.1 *Landscape type and challenges faced*

The YP, which spans approximately 181,000 km^2, is located in southeastern Mexico. It includes the states of Campeche, Yucatán, and Quintana Roo (Figure 8.3.3), but also extends into Belize and Northern Guatemala. The region hosts a unique ecology, with mangroves and lagoons along the coastline, dry forests northwest of the peninsula, moist forests in the middle, south and east of the region, and a coral reef that stretches 1,100 km of the east coast of the peninsula. Furthermore, PAs cover approximately one-third of the total YP territory.

The YP provides a range of ecosystem services, like carbon sequestration due to forest and mangrove coverage. For instance, it is estimated that forests in the area store 347 million tons of carbon above ground (Varns et al., 2018). The region is also home to a range of threatened and endangered flora and fauna, including certain species of birds, reptiles, sea life, and mammals. Significant cultural heritage values exist and are associated with the Maya Forest, home to vibrant Mayan communities.

A number of stressors exist within the YP. Around 800 km2 of tropical forested area is lost on a yearly basis due to land use change caused by extensive ranching and agricultural expansion (Global Forest Watch 2020). Overfishing, tourism, and urban development have resulted in eutrophication, vegetation loss, and contamination by solid waste and wastewater discharges in coastal lagoon systems. Moreover,

FIGURE 8.3.3 Yucatán Peninsula coastal zone (indicated in light blue)



Source: UN Small Grants Program. Retrieved from https://www.ppdmexico.org/paisajes

mangrove ecosystems have been degraded in the Caribbean area over time due to tropical storms and anthropogenic activity associated with the tourism industry. Coastal erosion is also prevalent and caused by a combination of sea level rise as well as the lack of appropriate zoning regulations for construction.

8.3.2 *Approaches to Integrated Landscape Management*

In the interviews and desk research for this case study, little evidence was found on the integration between different YP initiatives, and their coordination by one management body. Therefore, management activities are not well-aligned for common landscape targets. For example, top-down federal policies include Natural Protected Area (NPA) creation–one of the main instruments for protecting biodiversity and reducing deforestation in Mexico and the YP–and fisheries management.Nevertheless, the integration of coordination and communication among these top-down policies has not been achieved, which has hampered the effectiveness of marine management, for example. However, even though there is little evidence of ILM within the YP, there have been integrated management strategies in other parts of Mexico (e.g. Sierra Madre Oriental Ecological Corridor), as well as broader plans for such management that includes territory in Southern Mexico and other countries in Central America (e.g. the Mesoamerican Biological Corridor).

Some landscape management in the YP focuses on the restoration of ecosystem services. A government agency, The National Forestry Commission (CONAFOR), began implementing PES schemes in 2013 to pay ejidos (community landholdings) and other landowners for the conservation of forests for water supply, biodiversity, carbon storage, and agroforestry benefits. These payments act as a compensatory mechanism for the opportunity costs associated with time and money spent on forest preservation by landowners.

Other activities follow the global initiatives on climate change mitigation. For instance, in light of the rapid loss of forested areas in Mexico and the YP, state governments, local communities, civil society, and academia have come together to protect biodiversity and limit greenhouse gas emissions from deforestation and forest degradation. This initiative was supported by Alianza Mexico REDD+ (AMREDD), although they are no longer active in the region. Activities under AMREDD included the developing and adopting of best agricultural and silvopastoral practices, improved forest management, reforestation practices, fire management, and conservation, as well as the promotion of productive activities (e.g. ecotourism), agroforestry practices, land use plans, and capacity building.

Community-based ecotourism in PAs of the YP also serves to safeguard biodiversity. Ejidos and cooperativos (local cooperatives) offer small-scale tourism services. Tourism revenues from ejidos ecotours are typically directed back to local communities and environmental conservation.

8.3.3 *Challenges*

- **Lack of clarity:** There is fragmentation and complexity regarding implementation and enforcement responsibilities for fisheries. Therefore, government agencies involved in the management of fishery resources have not been able to develop arrangements that enable adequately coordinated management, and subsidies used to finance management are less effective. Poor coordination here implies that an integrated approach to fisheries management is also lacking.

- **Lack of integration:** Relatedly, there is a lack of established synergies among available funding and integration among separate biodiversity management activities (e.g., top-down measures such as fisheries management and administration of NPAs).

- **Subsidies:** Subsidies in the Primary sector in Mexico are allocated to agricultural and livestock activities, which have a negative impact on biodiversity. There is a large difference between the subsidies directed at agriculture and livestock compared to those for programs on biodiversity conservation. Cattle production and commercial agriculture land uses have tended to impede REDD+ financing effectiveness in limiting forest cover loss (Ellis et al., 2020). This means that even though governments are involved in REDD+ strategy, their involvement is not well integrated with their other policy-making decisions.

- **Financing gap:** There is a large yearly financing gap for the maintenance of NPAs and PES schemes. The NBFP states that an additional MXN$8,685 million pesos (~US$436 million) per year was required during 2017-2020 to bridge the financing needs for adequate biodiversity management.

- **Covid-19:** The covid-19 pandemic restricted travel to the YP, which had a negative impact on the ecotourism sector. Ecotourism in the area has been slow to recover. Subsidies intended to lessen the impact of the pandemic were often not received by ecotourism operators, which means that maintenance activities on ecotourism operator facilities that assure they meet regulations (e.g., for reforestation actions) were underfunded (Pedroza-Gutiérrez et al., 2021).

8.3.4 *Integrated landscape finance and national policy on biodiversity finance*

Mexico's NBSAP (CONABIO 2016) outlines six strategic axes and 24 lines of action through which the needs and priorities for attention to the country's biodiversity have been established, as well as the deadlines and the actors involved in its implementation, follow-up, and evaluation. Mexico's NBFP (BIOFIN México 2016) summarizes financing needs for biodiversity and describes a biodiversity financing solutions plan based on several core proposals. The NBSAP contributes to (future) ILF and management via establishing intersectoral integration for the coordination of actions for the implementation of various strategies. Whereas the NBFP promotes integration via a number of proposals bringing together several sectors to secure the effectiveness of financing solutions for biodiversity. The elements describe the strategic roles of the government in mobilizing (future) ILF.

The NBFP can facilitate landscape investment by developing financial mechanisms and services. The NBFP describes that the government can serve several roles in the mobilization of finance, for example, via incentives, legislation and engagement with international and private sector organisations. To fulfil this role, activities are identified, namely 1) to increase international cooperation for financing ecosystem-based adaptation; 2) to promote impact investment for biodiversity; and 3) to contribute to greening of the financial sector, by developing guidelines for companies or issuing green bonds for instance.

The role of government as a financier is specified in strategic axis 2 of the NBSAP, on conservation and restoration, and strategic axis 4 of the NBSAP, on attention to pressure factors through various lines of action. Moreover, the requirement of regulation for landscape investment is highlighted in strategic axis 6 of the NBSAP, on integration and governance. Specifically, the axis calls for harmonized and inclusive legal and institutional frameworks that guarantee the internalisation of criteria for the conservation and sustainable use of biodiversity in sectoral plans, programs and policies, as well as the involvement of different sectors and actors of society through several specific lines of action.

8.3.5 *Lessons learned*

- **Clear roles and responsibilities are vital:** Clear roles are needed among government agencies and different government layers to implement strong monitoring and enforcement frameworks. That is, National Biodiversity objectives should clearly highlight the responsibilities of decentralized government organisations and how these responsibilities are connected to the role of local stakeholders in biodiversity management. Clear roles may be implemented through institutional arrangements that highlight agreements on the division of respective responsibilities.

- **Spatial planning and coordination:** Spatially explicit planning and coordination among specific biodiversity management projects and their finance streams can practically facilitate the general objectives of a country's NBSAP and develop more focused financing proposals in the NBFP. Clarity on this planning also helps to define clear stakeholder roles.

- **Strong bottom-up community involvement:** Conservation relies on the participation of local communities. National Biodiversity objectives should describe how existing capacities can be strengthened and how generation of knowledge (e.g. by incorporating traditional knowledge of IPs may be facilitated, as well as how mechanisms and spaces for community participation in decision-making on biodiversity issues may be improved.

8.4 *Cagayan de Oro River Basin, The Philippines*

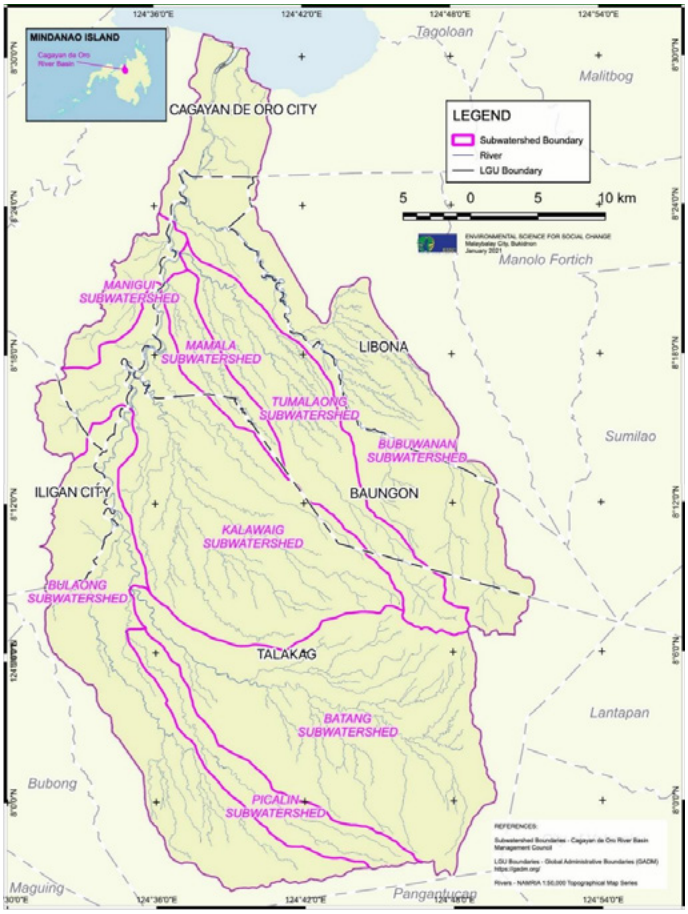
8.4.1 *Landscape type and challenges faced*

The Cagayan de Oro River Basin (CDORB) in the Philippines is the second largest river basin in Northern Mindanao, covering around 137,000 hectares and spanning three provinces, three municipalities, and two cities. Cultivated areas and grassland have the largest coverage of the basin, occupying 54% of the total area. Closed and open canopy forests have a combined area of 25%. In addition, the basin also contains population centers like Cagayan de Oro City.

The various landscapes within the CDORB are responsible for ecosystem service provision. Forested areas, riparian zones, and grasslands contribute to biodiversity benefits by hosting a range of flora and fauna, including threatened species of birds, mammals, and insects. Furthermore, households in downstream communities benefit from a well-functioning CDORB due to a stable supply of good quality water and riverine ecosystems acting as a flood control mechanism.

The CDORB also generates income for farmers. The agriculture sector is the third largest contributor to regional GDP in northern Mindanao. In particular, intensive activity takes place in the province of Bukidnon, where corn, rice, sugar, coffee, rubber, fruits, and vegetables are grown. Pineapples, bananas, and sugarcane are important exports of the region. The province is a major producer of poultry, hogs, goats, and cattle.

FIGURE 8.4.1 Cagayan de Oro River Basin (CDORB) watershed including major population centers



Source: BIOFIN Cagayan de Oro River Basin Profile, map developed by Environmental Science for Social Change, a member of the CDORBMC Technical Working Group

A number of challenges are faced within the CDORB. Vulnerabilities are present related to natural hazards such as tropical storms and flooding, which are projected to increase due to climate change, and land degradation because of unsustainable land use. The river basin aims to strengthen resilience via integrated watershed management and biodiversity conservation.

8.4.2 *Approaches to Integrated Landscape Management*

Watershed management within the CDORB focuses on landscape restoration of ecosystem services. Specifically, integrated management in the CDORB involves PES schemes. Broadly, PES policies are designed to compensate individuals for undertaking actions that increase the provision of ecosystem services. These policies can be funded by payments from beneficiaries of the provided services or by the government. A PES scheme was set up in the CDORB by the government, in collaboration with civil society organisations and an Indigenous Tribal Association, which involves Indigenous farming communities serving as ecosystem service sellers of high water infiltration to reduce flood risk, and the provision of potable water for downstream "buyers." Funding is managed by a third-party NGO. Another example includes a strategy pursued by an NGO which rewards IPs for protecting forests inside ancestral domain territories in the Mt. Kitanglad and Mt. Kalatungan range to protect cultural and biodiversity values. Moreover, a multinational company (MNCs) that is engaged in growing on the lower slopes of Mt. Kitanglad pays a tribal community to protect upland forested areas to ensure water for the irrigation of its plantations.

In addition to PES, other financing mechanisms in the CDORB are annual allocations earmarked for environmental restoration from LGUs, private businesses, and local community collaborations on restoration via community outreach, green investment initiatives from financial institutions, and sustainability opportunities for agroforestry provided by institutional investors and foundations. Importantly, the CDORBMC (Cagayan de Oro River Basin Management Council) is a coordinating body bringing together the stakeholder groups at the local, national, and international levels and seeks to uphold and implement interventions that boost biodiversity in the CDORB. Concretely, the CDORBMC supports ILM by supporting collaborative processes, landscape assessment, and the development of a common landscape vision and action plan. It accesses financing for its action plan and common targets, and contributes to ILF, via the use of LIFT that develops investment ideas, assesses their financing needs, scopes potential sources of financing, and devizes a clear finance mobilization strategy.

8.4.3 *Challenges*

- **Absence of a national land use plan:** Sectorized regulations may misclassify agricultural activities on steep slopes, meaning that agricultural activity risks land degradation. Without land planning, it becomes hard to target biodiversity finance where it matters.

- **Lack of technical guidance:** Some local governments have adopted regulations for setting up PES schemes, but with more technical guidance, other local governments in the CDORB could follow suit and upscale biodiversity financing in their localities.

- **Disconnect between national and local conditions:** Existing national policies do not adequately consider the socio-ecological characteristics of the CDORB. For instance, there is a lack or absence of technical data on the ecological state of PAs which hinders the targeting of biodiversity conservation funds to areas that are most in need or have the largest potential.

- **Establishing biodiversity monitoring tools:** Biodiversity monitoring tools have been developed in the past, but sustaining the effort remains a challenge based on the National Biodiversity Strategies and Action Plan (NBSAP) (DENR 2016).

- **General underfunding in the CDORB and lack of long-term support:** There is a funding gap, as the government has paid for developing a master plan for an integrated approach in the river basin but does not provide funding to execute (parts of) the plan. Government agencies prioritize short-term economic and social development projects, with limited funds for sustainable natural resource management.

8.4.4 *Integrated landscape finance and national policy on biodiversity finance*

The Philippines developed a National Biodiversity Strategy and Action Plan (NBSAP) in 2016 (DENR 2016). Financing needs and strategies for the objectives of the NBSAP were expanded upon in the National Biodiversity Finance Plan (NBFP) (BIOFIN 2016), which identifies a number of priority programs for biodiversity conservation.

In terms of the contribution of ILF in the landscape to National Policy objectives, there is significant support through PES schemes. Additionally, reforestation activities funded through PES schemes as well as government disaster prevention funds that are leveraged through the CDORBMC, contribute to sustainable biodiversity and water resource management. Upstream reforestation can lead to flood mitigation downstream and a consistent freshwater supply. Lastly, initiatives such as the CDORBMC can support the mainstreaming of biodiversity conservation into local and national planning processes by providing a platform for discussions between various stakeholders.

Studying how the NBSAP and NBFP facilitate ILF nationally and in the CDORB is also valuable. The NBSAP contains targets supporting ILF approaches. It provides spatially explicit targets by detailing actions focused on specific ecosystem types and conservation classification types, including PAs and Key Biodiversity Areas (KBAs), that include strengthening capacity for biodiversity conservation of public and private sector groups. Therefore, the government incentivizes a policy framework that supports ILF. This role of the government is further amplified in the NBSAP by a target that focuses on increasing the development of comprehensive land use plans under LGUs, which can form the basis for landscape-wide conservation and financing strategies.

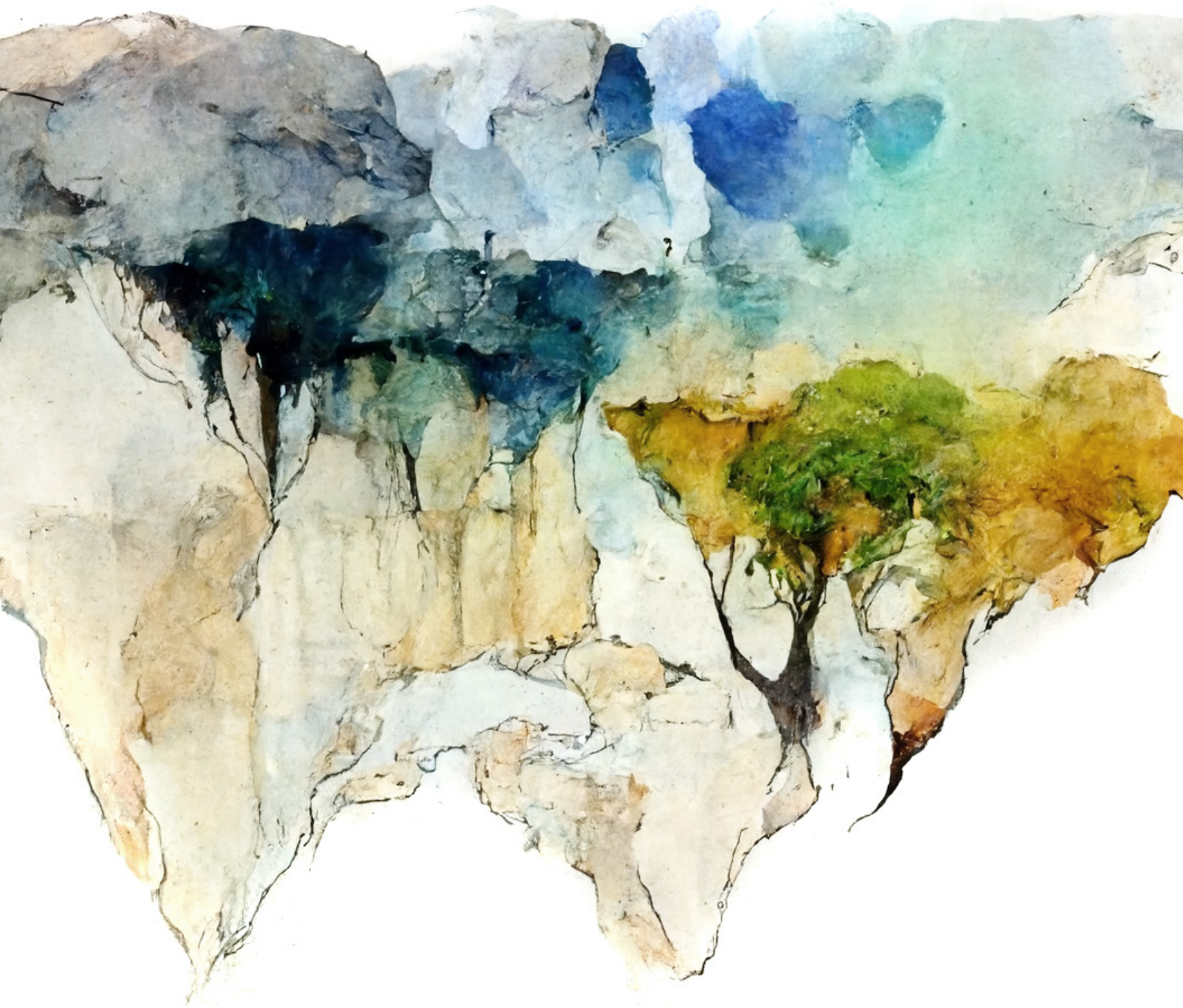
The NBFP provides a basis for a number of other roles for national government in ILF. It describes the need for generating additional revenues, combined with the focus on PAs and KBAs, can form the basis for a landscape-based financing approach where the government plays an active role in developing innovative means for biodiversity financing. The NBFP also prescribes an increase in public sector budgets and for the government to actively explore opportunities for increasing public funding on biodiversity. The NBSAP also sets targets on enforcement of regulations which could improve the investment climate by increasing biodiversity finance impact.

8.4.5 *Lessons learned*

- **Adequate coordination within stakeholders' platforms is essential:** In the CDORB, the CDORBMC supports collaboration from the bottom (communities) and top (national and international stakeholders). The CDORBMC also develops a common vision and action plan and is developing finance strategies and a Decision Support Tool (DST) to identify critical areas for rehabilitation and flood risk reduction. Coordination within this platform and developing a common vision and action plan lies at the basis of ILF. Government could support these activities through subsidies for tool development and coordination, for example.

- **Monitoring among grassroots communities to support capacity-building:** Via PES and other programs, entities in the landscape support capacity building and monitoring of activities. Integrating Indigenous Knowledge Systems and Practices (IKSP) are important, as these will be well-suited to local conditions. It is foreseen that the CDORBMC may build capacity, through training and development of the technical skills of grassroots communities to enable them to carry out management and monitoring activities. Monitoring amongst local communities can increase the attractiveness of the landscape for other funding sources, such as green finance and institutional investors, by providing support for measuring impact.

- **Development of landscape-specific tools to support biodiversity finance:** Two tools were used to support the generation and distribution of financial resources. LIFT assesses the financing needs for landscape investments, searches for viable sources of finance, and develops a clear strategy of mobilization. It brings together different financial players in the landscape, such as businesses and finance analysts. LIFT helped the CDORBMC understand how existing PES systems could be expanded. Also, a DST was developed for the landscape to help identify critical areas for rehabilitation and where the impact on flood risk reduction would be greatest.



9. RECOMMENDATIONS

As countries update and develop their post-2020 National Biodiversity Strategies and Action Plans (NBSAPs) and National Biodiversity Finance Plans (NBFPs), they may draw on the rich experience of integrated landscape finance (ILF) approaches described in this report. These approaches integrate the implementation of biodiversity actions at landscape scale into broader development and environment strategies, while helping to coordinate the interplay between land uses, ecosystems and species, and the people who manage and influence those landscapes.

A successful NBSAP should focus on strengthening the enabling environment through a national level planning process to support and incentivize integrated action at the territorial and landscape level. Aligned NBFPs will create strategies to close the funding gap to deliver the agreed upon national objectives. Governments can encourage this enabling environment through supportive policies, services and funding that incentivize and coordinate the activities of a wide range of relevant sectors to produce an integrated set of outcomes that includes biodiversity among other objectives.

The review of ILF and the three country case studies that form this report provide the basis for six recommendations that can help biodiversity leaders, especially in government, to strengthen national-level and local-level biodiversity planning and finance. Embedded within these recommendations are practical suggestions for those responsible for revising and developing NBSAPs and NBFPs to align to the new GBF.

We recognize that most NBSAPs and NBFPs are developed as separate processes with their own authors, institutional priorities and stakeholders. Yet the lens of ILF includes landscape visioning, investment priority setting and finance strategy within a single framework. Thus, we have integrated the recommendations for NBSAPs and NBFPs into the same section here so they can be more easily viewed as two parts of the same interrelated process. This perspective is particularly important now in the context of the post-2020 GBF, which emphasizes a 'whole of government' and 'whole of society' approach in its implementation. These recommendations are summarized in Table 9.1, and elaborated right.

Recommendations for developing National Biodiversity Strategies and Action Plans from the experience of integrated landscape finance **TABLE 9.1**

1. Facilitate alignment of financial flows for biodiversity, climate, land restoration, and economic development through cross-sectoral and multi-stakeholder policy coordination.	i. Align national and sub-national government policy and budgeting (for NBSAPs) ii. Coordinate implementation of the Rio Conventions and major initiatives around food, climate, water, and land (for NBSAPs and NBFPs) iii. Better link the development of NBSAPs and NBFPs by including indicative investment budgets in NBSAPs
2. Create spatially explicit, place-based plans that include biodiversity conservation in relation to other sustainable development goals.	i. Promote use of new spatial mapping tools (for NBSAPs) ii. Use spatial plans to inform financing plans (for NBFPs)
3. Promote finance models that support multiple projects with synergies for biodiversity and sustain action over a long-time horizon.	i. Align policy and legal frameworks to encourage shifts to multi-project, landscape-based finance and to reduce harmful investment (for NBSAPs and NBFPs) ii. Mobilize grant funding to support integrated investment planning (for NBSAPs and NBFPs)
4. Mobilize private investment within integrated multi-sector, place-based development plans that benefit biodiversity.	i. Involve private sector actors early in the planning process (for NBSAPs and NBFPs) ii. Partner with private investors aligned with biodiversity-friendly, place-based development strategies (for NBFPs)
5. Strengthen landscape-level institutions for long-term collaborative finance planning and implementation.	i. Provide public support for landscape institutions (for NBSAPs and NBFPs) ii. Strengthen capacities for landscape and other place-based finance (for NBSAPs and NBFPs)
6. Develop Technical Guidance and capacity development for countries to better align NBSAPs and NBFPs with GBF whole-of-society strategy.	

9.1 *Facilitate alignment of financial flows for biodiversity, climate, land restoration, and economic development through cross-sectoral and multi-stakeholder policy coordination*

Departments and agencies at different levels of government should align towards a shared vision and planning framework at the national level, with clear objectives and targets, so that they do not work at cross purposes. This core element of landscape-scale planning can be applied to national planning.

9.1.1 *Align national and sub-national government policy and budgeting (for NBSAPs)*

When the work of natural resource agencies like Agriculture, Forestry, Climate, Environment, Water, and others can be aligned with key ministries and departments like Economic Development, Finance, Infrastructure and Planning, their policy objectives become easier to achieve. Increasing funding from the public sector requires leveraging existing, emerging and standardized economic and financial tools, such as results-based budgeting, green budget tagging, planning processes and valuation tools for public expenditure for biodiversity, with clear values for nature. The BIOFIN methodology includes some guidance on how to achieve this cross-sectoral coordination in the service of biodiversity conservation based on years of experience developing biodiversity finance plans, although additional capacity building, facilitation services, and tools guidance are required (UNDP-BIOFIN 2018).

Along with coherence on policy, government budgets should be coordinated across ministries so that funds are allocated most efficiently towards a common set of goals that explicitly consider biodiversity. This will likely be the fastest way to decrease harmful spending and increase spending that improves biodiversity in public expenditures, even if all of these funds are not necessarily disbursed with biodiversity as their primary objective. Meanwhile, efforts to coordinate public funding can mitigate the risk of investments that harm biodiversity, undermining spending explicitly focused on biodiversity. The case of San Martin, Peru, provides an example of how this was done at a regional level. Through the Regional Government of San Martin's process of developing their Low Emissions Development Strategy (ERDRBE), national-level commitments on climate and biodiversity were aligned. Cross-ministerial and multi-level policies to define multiple specific objectives through priority actions and stakeholders were also developed and segmented at a regional, territorial, and landscape-level.

9.1.2 *Coordinate implementation of the Rio Conventions and major initiatives around food, climate, water, and land (for NBSAPs and NBFPs)*

At the international and national levels, implementation of the Rio Conventions—on biodiversity, climate, and land degradation—provides an important opportunity for integrated planning. The biodiversity community should embrace the agendas of the UNFCCC and the UNCCD and work with these Conventions to develop common messaging and action around integrated national and landscape-scale investment planning.

UNCCD provides a possible model for this. Countries do not elaborate national "land degradation" plans that are analogous to NBSAPs for biodiversity. Rather, the approach is to integrate the Convention's outcome targets into related national planning processes (e.g. climate, biodiversity, planning, finance, etc). While a similar approach for biodiversity would be a departure from the current system, shifting a national biodiversity plan to have a greater focus on championing biodiversity targets across sectors could incentivize more robust biodiversity mainstreaming efforts and cross-sectoral coordination.

Meanwhile, major international, regional, and national initiatives on climate, land, food, and water have recently been launched that could have huge impacts—positive or negative—on biodiversity. These efforts, funded by governments, multilateral agencies, philanthropies, and the private sector are deploying resources that dwarf those biodiversity targets. One of the biggest opportunities of the NBSAPs, NBFPs and biodiversity policy more generally, is to mobilize and monitor the incorporation of biodiversity targets into their planning, funding and implementation.

9.1.3 *Better link the development of NBSAPs and NBFPs by including indicative investment budgets in NBSAPs*

NBFPs are vehicles for integrated financial planning at the national level, particularly when they are well connected to an NBSAP based on an integrated national strategy. Unfortunately, the current NBSAP and NBFP processes are often de-coupled. One of the main reasons is that they often do not share the same understanding of where most biodiversity loss or degradation originates across sectors and geography. To bridge this gap, NBSAPs and NBFPs could be developed and updated based on the same 'root cause analysis' and prioritisation process. Another main reason for this disconnect is that many NBSAPs do not include any costing or budget data that the developers of NBFPs can use as a starting point. So one of the most effective ways to better link these processes is for NBSAPs to provide detailed information on proposed actions and results. When enough information exists NBSAP developers could create indicative investment budgets that are linked to clear quantifiable actions and targets. NBFPs that are being developed in the new GBF can then use these as a point of departure with an understanding of the budgeting gap that should be defined collaboratively with the ministries of economy, finance, and/or planning. Ideally developers of NBFPs would also have access to the stakeholders involved in developing the NBSAPs so they can ask more detailed questions, if needed. The report includes a number of examples of how such indicative investment estimates have been generated at a large regional or landscape scale.

9.2 *Create spatially explicit, place-based plans that include biodiversity conservation in relation to other sustainable development goals*

While biodiversity conservation requires strong supportive policy at the national level, its achievement is ultimately a place-specific land and habitat management enterprise that must be tailored to the needs of particular species and biological communities across fairly large diverse areas. Therefore, national biodiversity policies should encourage the development of plans at the territorial or landscape scale. While most NBSAPs and NBFPs do not currently include such comprehensive spatial plans, new spatial and financial planning tools make that widely feasible.

9.2.1 *Promote use of new spatial mapping tools (for NBSAPs)*

Spatial analyses at the national, sub-national and landscape scales will need to be based on cross-sectoral mapping and data collection methods involving a wide range of stakeholders in the context of NBSAP development and updating. A variety of tools have recently been developed, such as the UN Biodiversity Lab, or are being created that can help governments align their mapping processes for a wide range of activities—from agriculture and protected area management to infrastructure and urban planning–in ways that demonstrate interactions among them. Using existing tools can help avoid redundancy, reduce costs, enhance cooperation, and help identify national, regional and landscape priorities The CBD can support these efforts by developing a library of resources that could be accessed by national, state, and local governments looking to build their capacities in this area.

9.2.2 *Use spatial plans to inform financing plans (for NBFPs)*

These spatial plans make it possible to identify alternative sets of current and potential investments, and evaluate the economic and ecological impacts of those investments on one another's profitability and risk. Such analyses can also assess their collective potential to generate landscape-scale economic, social, and ecological impact for multiple stakeholders. Aggregating the financing needs of promising sets of investments can provide estimates for more realistic financing plans at the landscape or regional scale. For example, in San Martin, Peru, regional Economic-Ecological Zoning informed the targeting stakeholders to engage in the development of their intervention strategy and financing plan. Using emerging models of spatial finance and investment analysis tools can also support the planning, implementation and monitoring of biodiversity objectives in more reliable ways at a landscape-scale. In turn, these landscape, regional or sub-national financing estimates and data can be aggregated into national finance strategies.

9.3 Promote finance models that support multiple projects with synergies for biodiversity and sustain action over a long-time horizon

For long-term impact on the conservation, restoration, and sustainable use of biodiversity, coherent landscape- and ecosystem-wide actions by multiple land users are needed. This requires tailor-made investment strategies targeting different land users across the landscape and across economic sectors, who can tap and coordinate finance from a wide range of public, private, and civic sources. These investment strategies also need to be enabled by policy across scales.

9.3.1 Align policy and legal frameworks to encourage shifts to multi-project, landscape-based finance and to reduce harmful investment (for NBSAPs and NBFPs)

Supportive policy is needed to incentivize and provide a legal basis for innovative multi-project landscape financing mechanisms and positive landscape-scale outcomes in general. There are a variety of ways that NBSAPs can support the development of new finance mechanisms that align with a landscape-scale transformation strategy. NBSAPs that encourage the development of sub-national and landscape-specific strategies and action plans can call for strengthening finance capacities of landscape organisations and local governments; provide financial coordination and support services; and even assist in structuring inclusive, multi-sector and multi-project finance mechanisms.

They can align national-level policies and roles across relevant ministries. They can also reform incentives, subsidies and programs, particularly through the Ministry of Finance, Planning or Economy (depending on the country), to reduce nature-degrading investments and support nature-positive land-use investments across landscapes in the country. For example, market-based mechanisms often require defined land and property rights, which need to be appropriately embedded in national legislation. Some countries are beginning to use green national accounts. Financial regulations and central bank interventions can be designed to incentivize biodiversity conservation to maintain the benefits of nature for communities across landscapes.

NBFPs, through the BIOFIN process, take a systemic view of biodiversity at a national level. This includes analyses of root causes, as well as policy and institutional reviews, current biodiversity expenditure analyses and financial needs assessments. If applied at the landscape-scale, similar kinds of analyses inform the development of aligned landscape-scale finance solutions that fill the specific finance needs - across projects and time scales - that have been identified in those landscapes and deliver the objectives defined nationally. A variety of emerging financial models can be utilized in these contexts that evaluate investment opportunities within a landscape or regional context. Examples described in this report include landscape funds, landscape bonds, place-based donor collaboratives and landscape-oriented payments for ecosystem services.

9.3.2 Mobilize grant funding to support integrated investment planning (for NBSAPs and NBFPs)

NBSAPs can support integrated landscape-scale action by pursuing spatial planning and targeting at a national level that indicates geographic priorities, providing grant finance, and support services to multi-stakeholder landscape, territorial- and area-based investment planning processes in those priority areas. Such grant funding can then be included in the NBFPs as one of the priority implementation mechanisms to achieve the objectives outlined in the NBSAPs at the territorial or landscape-scale.

These grants could be used for building sustainable development strategies and action plans that incorporate biodiversity goals in the localized context, and mobilize financing for locally prioritized activities. They could be incorporated into blended finance mechanisms to de-risk and attract private-sector investment. Such funding could be provided to local governments, landscape or territorial partnerships, or integrated finance facilitators, as well as for incubation of biodiversity-friendly businesses within these investment clusters.

9.4 Mobilize private investment within multi-sector, place-based development plans that benefit biodiversity

For private sector businesses, investors, and financial institutions who are dependent on land and natural resources, there can be strong motivations to collaborate with other actors in their zones of operation or supply chains to meet sustainability challenges, including biodiversity conservation. Motivations may include reduced risks from climate change, water shortages, natural resource disasters, and community conflicts; co-financing of critical built and natural infrastructure; increased profits from new markets; meeting company sustainability commitments; reputational benefits; more cooperative relations with workers and supply chain actors; or alliances for policy advocacy. ILF provides some lessons for engaging the private sector.

9.4.1 *Involve private sector actors early in the planning process (for NBSAPs and NBFPs)*

An integrated landscape management (ILM) process encourages all relevant stakeholders, including local communities, government agencies across sectors and levels, NGOs, researchers, etc., to participate early-on in visioning and planning at a landscape-scale. Private sector actors–large companies and SMEs–are central to achieving many biodiversity goals, but they have typically been under-represented in early NBSAP planning. Meaningfully engaging landscape initiatives and investment plans, when possible, can support a 'whole of society' approach when facilitated well. Outreach efforts to the private sector should also be prioritized. This could be aided through early outreach by environmental ministries to other ministries (finance, economic development, etc) which have better connections and outreach methods to the private sector.

For NBFPs, private sector outreach is already an important element which should continue to be emphasized. To the extent that these plans focus increasingly on sub-national and landscape-level financial planning, private sector engagement strategies must become more localized. This means a greater focus on SMEs, cooperatives and other actors that are critical planning partners at a local level. A variety of models, tools and methodologies from integrated landscape management and finance initiatives could serve as models of these efforts.

9.4.2 *Partner with private investors aligned with biodiversity-friendly, place-based development strategies (for NBFPs)*

Governments can play a catalytic role to unlock private sector investment. They can create a trustful ecosystem for nature-positive investment by incentivizing and co-financing projects, initiatives or financial mechanisms that are aligned with landscape-scale goals balancing production and protection needs.

To be financially viable, many biodiversity-friendly businesses in a landscape may have the potential to generate commercial gains via sound business case implementation. However, they may not have a strong track record or are not seen as sufficiently profitable in the short term. Public development finance institutions are well positioned to ensure public biodiversity and other values by reducing private investment risks. They can facilitate the 'crowding in' of capital from national and international investors by contributing to business incubation and technical assistance or providing guarantees and insurance, among other services.

9.5 Strengthen landscape-level institutions for long-term, collaborative finance planning and implementation

This report reinforces the centrality of landscape-level action for achieving national biodiversity policy goals. But the success of action at this scale, and financing for it, is very dependent on enabling policy and programs at a national level.

9.5.1 *Provide public support for landscape institutions (for NBSAPs and NBFPs)*

We recommend that the processes for developing NBSAPs and NBFPs include explicit elements to strengthen landscape-level institutions that are

working to achieve a constellation of locally- and nationally-important goals on biodiversity within sustainable development strategies.

A national initiative to strengthen public policy support for landscape-level institutions could begin by creating a multi-sector task force to assess current and potential provision of services for Landscape Partnerships (LPs) and dialogue platforms. This would include capacity building, technical, legal, and financial services. Based on this assessment, and consultations with representatives of LPs, the task force could propose programs to improve these offerings. At a subnational or regional level, establishing a coordination and monitoring team can track key objectives, the use of public funds, and ensure vertical and horizontal policy alignment for landscape and territorial scale action.

9.5.2 *Strengthen capacities for landscape and other place-based finance (for NBSAPs and NBFPs)*

A key component of such an institutional strengthening agenda could be establishing national capacity building programs on ILF for government and territorial actors, landscape leaders, and public, private and civil society funders. These programs could support the implementation of strategies and action plans described in the NBSAPs and funded through the NBFPs. These institutions could offer support on all elements of ILM, such as convening, action planning, and monitoring. It could also include a focus on key elements of landscape finance, including finance assessments, financing strategy development, and finance mechanism design. This would enable the deployment of biodiversity-aligned investment programs at the landscape- as well as national-level, ensuring a 'whole of government' and 'whole of society' approach.

Develop Technical Guidance and capacity development for countries to better align NBSAPs and NBFPs with GBF whole-of-society strategy 9.6

While the above recommendations provide general guidance on action that can be taken, implementing many of the recommendations will require new capacities, tools and processes for the NBSAPs and NBFPs to align more directly with the post-2020 GBF. We thus encourage the CBD, the GEF and other supporters to improve and develop a set of user-friendly technical guidance resources for those responsible for developing and implementing the NBSAPs and NBFPs to guide them, according to their own unique country context, in the implementation of these recommendations, such as building on the existing NBSAP forum. Some of these could be developed as pooled resources across the relevant Conventions. They could also support countries to begin the process of NBFPs as part of the already approved "Umbrella program to Support Development of Biodiversity Finance Plans" funded by the GEF.

One focus would be information on tools available that can be adapted for various stages of NBSAP and NBFP processes. For example, a section would cover available mapping and prioritization tools that developers of NBSAPs can use to identify landscapes that require more intensive support.Another would focus on tools for NBFPs that support spatial investment planning. These can also build on the existing UN Biodiversity Lab spatial datasets. The guidance package would also include training resources for using these tools.

Another set of resources could focus on implementing ILM and ILF for landscapes that are targeted in the national strategies. These could draw on capacity building modules being developed by the 1000 Landscapes for One Billion People initiative, among others, that are building user-friendly resources on a range of these topics such as landscape platform convening, partnership facilitation and landscape finance strategy development.

ANNEX 1: SUMMARY OF THE LANDSCAPE FINANCE FRAMEWORK

1. *Developing a strategy for landscape transformation*

a. Develop a strategy for landscape transformation to meet the collective long-term vision of the landscape partners.
b. Identify and evaluate (broadly) sets of *key activities* and their sequence and spatial organisation that could lead towards landscape transformation.
c. Estimate potential landscape sustainability *benefits* from these activities.
d. Initial assessment of financial flows (private, public, civic, philanthropic; all relevant sectors); can be iterative.

2. *Defining the Prospective Landscape Investment Portfolio*

a. Define proposed *Landscape Investment Portfolio*– both asset and enabling investments–the intervention and leverage points that together can transform the whole system. Include synergies and tradeoffs among investments, key risks, etc. Include integrated and coordinated investments among companies and between companies, government, NGOs, and communities.
b. Design the *institutional actions* to improve the enabling environment/governance, to support the transformation investment strategy (refers to governance within the landscapes, not the of the Landscape Partnership).
c. Business modelling, e.g. determine the value, the beneficiaries, how to extract value in the form of cash flow, and risks (for new types of businesses or projects).

3. *Business/project design, incubation or scaling of key component landscape investments*

a. For known investments and projects and established businesses and organisations, begin implementation.
b. For new business models or less experienced businesses or organisations, provide incubation and technical assistance services to develop investable projects in the Landscape Investment Portfolio.
c. For businesses and projects, evaluate key financing needs.
d. Develop metrics for tracking economic, ecological, social, and inspirational impacts of the business or project.

4. *Identifying or designing finance mechanisms to support the portfolio of investments and projects, or subsets of them*

a. Identify, design/develop financial and risk mitigation mechanisms to address funding gaps for key landscape portfolio investments.
b. Design financial or institutional mechanisms to facilitate access to finance for farmers, communities, and SMEs.
c. Design and coordinate complementary sets of mechanisms that together will address the profitability, risk, interdependence, inclusiveness, and multi-dimensional benefits of investments, including required interventions in financial governance and how to set priorities in their development.

5. *Securing financial resources and commitments for the landscape investment portfolio that contribute to the transformation strategy*

a. Find, engage, and organize financial actors, and secure resources for the financial mechanisms developed.
b. Track finance mobilization, flows, and impacts.

Source: 1000L 2023 (forthcoming).

ANNEX 2: FULL LANDSCAPE CASE STUDIES

A. INTRODUCTION

Case studies on integrated landscape finance

A.1 *Purpose of case studies and research questions*

The three case studies presented in this document have been developed to draw lessons from the practical implementation of national biodiversity finance policy and landscape-level financial strategies. Three landscapes from different countries were selected:

- The Murchison-Semliki Landscape in Uganda
- The Yucatán Peninsula in Mexico
- The Cagayan de Oro Basin in the Philippines

The case studies review financial structures at the landscape level and the national policy framework for biodiversity finance in each country and identify challenges for successful implementation. The lessons learned in these case studies provide insight into how national policy processes can be improved to facilitate integrated biodiversity finance on both the national and the landscape levels

A.2 *Data used (interviews, reports, NBSAPs, and NBFPs)*

The case studies below were largely informed by a suite of interviews undertaken with stakeholders working in the landscape. An overview of the interviews for this case study can be found below in A.4. These interviews included stakeholders from both the public and private sector that are or were recently involved in biodiversity conservation and finance in the landscape. In addition, National Biodiversity Strategy and Action Plans (NBSAPs) and National Biodiversity Finance Plans (NBFPs) that were developed by the case study countries were also used extensively as background literature to describe the national policy framework.

A.3 *Structure of each case study in relation to the section of the global review used*

Each case study is introduced with a general background of the landscape. Next, the case studies describe Integrated Landscape Management approaches utilizing the framework that is laid out in section 5 of the synthesis report. Subsequently, an overview of stakeholders involved in integrated landscape management as well as an overview of the financing mechanisms that form the basis for biodiversity conservation in the landscape are provided. Challenges for Integrated Landscape Finance (ILF) in the landscapes are then described and related to the challenges described in chapter 6 of the synthesis report. The case studies then provide information on the relationship between ILF in the landscape in relation to the respective NBSAPs and NBFPs, and governmental roles are discussed utilizing section 7 of the synthesis report as a framework. Lastly, several lessons learned from the case studies are identified to advance National Biodiversity objectives in other countries.

A.4 *Interviews to support the case studies*

Interviews Uganda Case Study

Ms. Monique Akullo
National Environmental Management Authority

Mr. Ronald Kaggwa
National Planning Authority

Mr. Candia Leone
Ministry of Wildlife, Tourism, and Antiquities
Senior Wildlife Officer

Mr. Stephen Muwaya
Ministry of Agriculture, Animal Industry, and Fisheries
UNCCD National Focal Point

Mr. Freddie Kalibwani
Ecotrust

Mr. Richard Lamprey
Consultant

Ms. Charity
World of Bees

Mr. Joshua Rukundo
Chimpanzee Sanctuary and Wildlife Conservation Trust

Interviews Mexico Case Study

Ms. Ines lopez
Cobi

Mr. Sebastien Proust
SGP

Mr. Lorenzo Rosenzweig
FMCN

Ms. Pilar Jacobo
WWF - Bezos Foundation

Mr. Alfredo Arellano
Consultant and former Minister of Environment, Quintana Roo

Mr. Juan Bezaury
Senior consultant on conservation finance

Ms. Maria Andrade
ProNatura

Interviews Philippines case study

Ms. Anabelle Plantilla
BIOFIN

Mr. Adriaan Ruijmschoots
VEI – Dutch water operators

Mr. Jan Willem den Besten
IUCN NL

Ms. Hilly Roa-Quiaoit
Involved in multi-stakeholder platform CDROBMC

Ms. Annadel Cabanban
Mr. Jeroen Jurriens
Wetlands International

Ms. Wendy Clavano
Local bank

Source: iStock. Lake Albert, Nationaal Park Murchison Falls, Uganda

B. UGANDA

Integrated landscape finance in the Murchison-Semliki landscape

B.1 *Landscape type and challenges faced*

MSL is a diverse conglomeration of ecosystems in the western part of Uganda. The landscape is a biodiversity hotspot, part of the Albertine Rift region home to (Plumptre et al., 2007) an estimated 52% of bird species, 39% of mammal species, and between 15-20% of amphibian, reptile, and plant species that can be found on the continent of Africa according to Ecotrust Uganda.

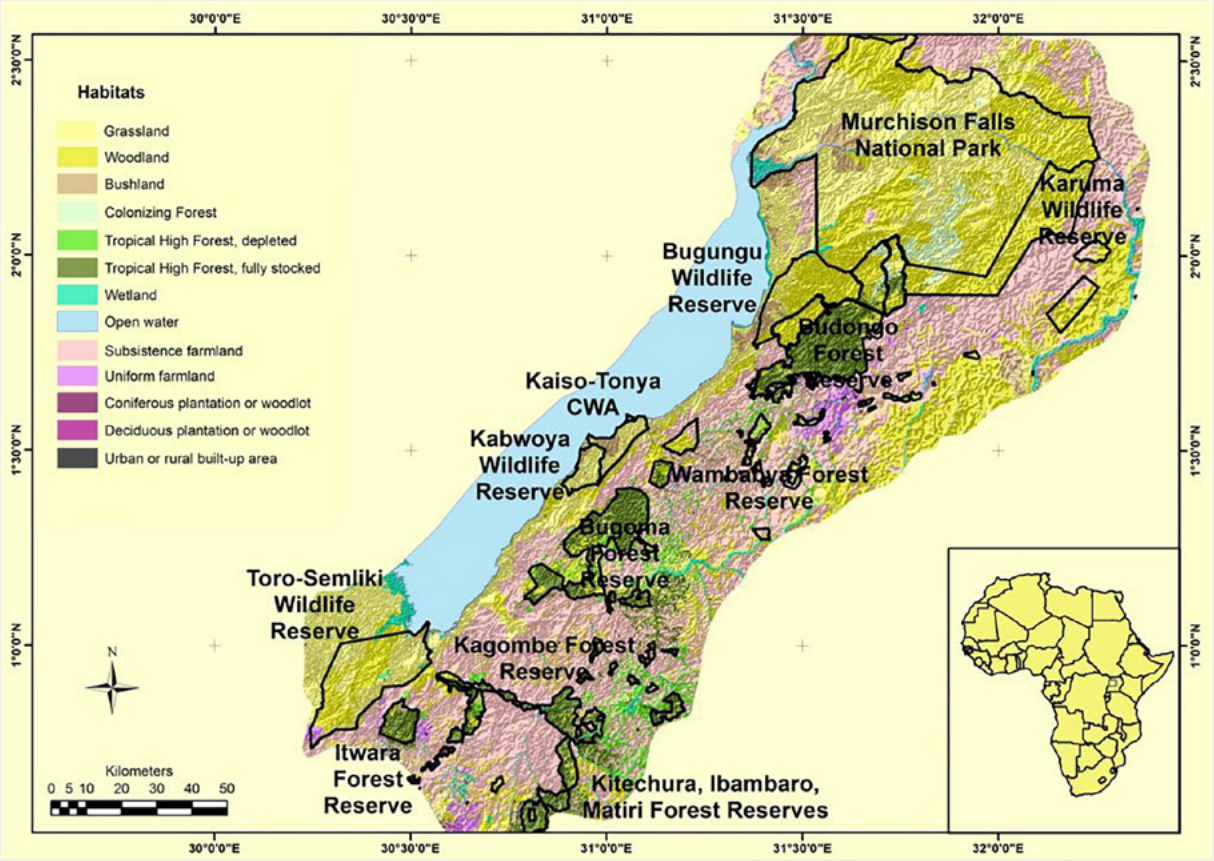
The landscape stretches from the Murchison Falls National Park at the northern part of Lake Albert to the Toro-Semliki Wildlife Reserve at the southern reaches of the lake, covering an area of more than 2.4 million hectares. The landscape harbours savanna grasslands, woodlands, wetlands, tropical high forests, and freshwater lakes and rivers. These unique ecosystems, with varying conservation statuses, provide habitat for iconic species such as lions and chimpanzees.

The landscape is also home to 3.7 million people that depend on the regions natural resources. Communities depend on ecosystem services provided by the forests, in particular, for fuelwood, timber, and non-timber forest products. Additionally, the landscape provides a wide range of other ecosystem services that benefit local communities, such as water filtration, and services that benefit the global community, such as carbon retention and biodiversity.

Lastly, the beauty of the landscape and its diverse ecosystems provide ample opportunities for economic growth through ecotourism.

The landscape is under economic development, with timber extraction, agriculture, and recent discoveries of oil all pressuring natural values. The fertile landscape and bountiful water resource make the landscape well-suited for agricultural purposes. Various valuable tropical tree species are harvested and both small- and large-scale agriculture occur in the landscape, with the most important cash crops being tobacco, sugar, tea, and cocoa. Transformation of natural areas into agricultural land has led to a decline in natural ecosystems in the landscape, threatening biodiversity and the provisioning of ecosystem services. The discovery of oil in the region has led to an influx of people, putting further strain on the landscape's natural resources.

FIGURE B.1 Extent of the Murchison-Semliki landscape in Western Uganda.



Source: Mobilising More for Climate Project. Retrieved from https://www.momo4climate.org/where-we-work/uganda/murchison-landscape

B.2 *Approaches to integrated landscape management*

Conserving biodiversity while at the same time stimulating economic development in the remote MSL is a balancing act that requires alignment of investments across economic sectors. ILF in such a vast and diverse area necessitates the use of a range of financing mechanisms that are context specific and requires coordination between stakeholders. There are multiple organisations working in the MSL on biodiversity conservation, employing a variety of sustainable financing mechanisms.

Within the MSL, one of the most important approaches to ILF is the coordination of investments across complementary projects focused on biodiversity conservation (see Section 5.1 of the report for more detail on ILF approaches) through the NARC-G. This group primarily consists of national and international NGOs but also occasionally cooperates with governmental agencies and the private sector. Within the platform, there are coordinated efforts to attract financing from large international donors such as the EU and the World Bank. The platform has a primary objective of ensuring that the high biodiversity forests in the landscape are conserved. However, in doing so, it also strives to improve the livelihoods of local farmers.

In addition to the NARC-G, it was mentioned in the interviews that there is an inter-ministerial framework that operates on the national level and strives to coordinate efforts by ministries and government agencies toward national objectives. Within this framework the National Environment Management Authority (NEMA) is responsible for ensuring biodiversity conservation concerns are considered in governmental projects.

Besides these coordination efforts that operate primarily on a top-down basis, within the MSL, there are also efforts to integrate conservation finance through value chain transformation (see Chapter 5.1 of the report for more detail on ILF approaches). There are a number of value chain companies, such as sugar, tobacco and coffee traders, that cooperate with NGOs to ameliorate their operations and to strive

Source: iStock. Murchison Falls National Park, Uganda

for more sustainable and organic farming practices in the landscape. Most of these projects aim to reduce deforestation in the landscape and to incentivize farmers to replant native tree species. These types of projects are often standalone, but through the NARC-G platform efforts are coordinated to an extent. Finally, there are a number of large scale projects, such as REDD+ and the MoMo4C program that involve a collection of NGOs and value chain companies and seek collaboration with governmental agencies.

However, it is essential to note that the coordination mechanisms described above only sometimes function at full capacity and efficiency (e.g. the NARC-G platform has been inactive during the COVID-19 pandemic). Nevertheless, they do add to conservation efforts in the landscape and form a basis for further integration of landscape financing in the MSL.

Source: iStock. farmer drying coffeebeans in the sun, Uganda

B.3 *Stakeholders*

B.3.1 *Grassroot communities*

Grassroots communities in the MSL consist primarily of small-scale farmers who mostly practice subsistence farming. With the increase in oil exploration and extraction, a lot of new people move to the landscape that often also will practice small-scale or subsistence farming. To improve the resilience of the landscape, innovative business models are developed to financially compensate farmers for sustainable practices.

B.3.2 *Agribusinesses*

Various corporations operate in the national and international landscape, cultivating sugar, coffee, tobacco, and other crops. A number of these are involved in conservation projects in the landscape, where they operate to land purchases for the development of forest connectivity corridors. They also work on incentivizing small-scale farmers in the region to engage in sustainable agriculture and to practice agroforestry.

B.3.3 *Oil Companies*

Oil was discovered in the 1920s in Uganda, but recently, the oil industry has boomed in the MSL. Oil extraction can provide vital economic growth to the region, but it also negatively affects biodiversity in the direct vicinity of oil wells through, for example, the construction of infrastructure. The government of Uganda has pledged to mitigate biodiversity losses and is working with oil companies to offset them. TotalEnergies represents an example of an oil company working to offset its impact on biodiversity.

B.3.4 *LGUs and Governmental Agencies*

Due to the vastness of the MLS, there are a large number of local councils that are involved in the different conservation projects in the landscape. Important stakeholders on the national level include the Ministry of Water & Environment of Uganda; the Ministry of Agriculture, Animal Industry and Fisheries; the Uganda Wildlife Authority (UWA); the Ministry of Tourism, Wildlife and Antiquities; the National Environment Management Authority (NEMA); and the Ministry of Works and Transport, which are working under an inter-ministerial cooperation framework to align investments within landscapes in Uganda.

B.3.5 *Civil Society and Academia*

Civil society organisations such as NGOs form an essential part of nature conservation projects in the MLS by connecting potential biodiversity financiers with grassroots communities. The most important national NGO is Ecotrust Uganda, which develops a range of business cases for landscape resilience and manages a carbon credit mechanism to compensate small-scale farming communities for restoration. International NGOs operating in the landscape are the World Conservation Society (WCS) and the International Union for the Conservation of Nature (IUCN).

B.3.6 *Northern Albertine Rift Conservation Group*

The NARC-G is a platform where NGOs, and public and private sector actors, can discuss conservation issues in the landscape. During the COVID-19 pandemic, group meetings were limited, and there is now a need to develop a unified vision.

B.3.7 *Institutional Funders*

Banking and financial institutions, as well as institutional investors and foundations, play a role in the MSL. Through projects such as MoMo4c, these stakeholders can be involved in financing projects and stakeholders that consider biodiversity in their operations.

B.4 *Financing mechanisms and funding sources in the MSL*

B.4.1 *Payment for Ecosystem Services*

PES models, i.e., financial incentives offered to local communities in exchange for sustainably managing natural resources that provide ecological services, are utilized in the MSL in the Bugoma-Budongo Corridor project. This project aims to maintain an ecological corridor between the Bugoma forest and the Budongo forest, tropical forests that are home to chimpanzees and numerous other species of animals. PES is used in this context to encourage reforestation by local communities through financial incentives. Specifically, between 2020-2023, landholders owning 1,800 hectares of land that will be reforested with 720,000 trees will participate in a sustainability strategy based on PES to ensure climate resiliency and biodiversity conservation. In the NBFP of Uganda, the government envisions a national PES system that strives to expand the use of such schemes in the country.

B.4.2 *Public Funding*

In Uganda, public sector funding for nature conservation and landscape management is primarily leveraged through governmental agencies such as the Uganda Wildlife Authority (UWA). The UWA largely draws its financing from revenue streams generated through (eco)tourism, which it is mandated to do by the Ugandan Government. These revenues finance about 70-75% of its operations, with the government providing the rest directly.In this way, governmental funding of nature conservation is already based on alternative financing models and is not purely based on consolidated public funds.

B.4.3 *Philanthropic Funding*

Within the MSL, many projects are funded through philanthropic grants and donations. These projects are primarily financed through international NGOs and development agencies. The projects initiated by the WCS are an example of this. There are three main initiatives of WCS in the landscape, i.e. to support conservation of large carnivores in the MSL, to monitor the impact of oil developments in the landscape, and to contribute to the REDD+ project in the MSL.

B.4.4 *Biodiversity Offsetting*

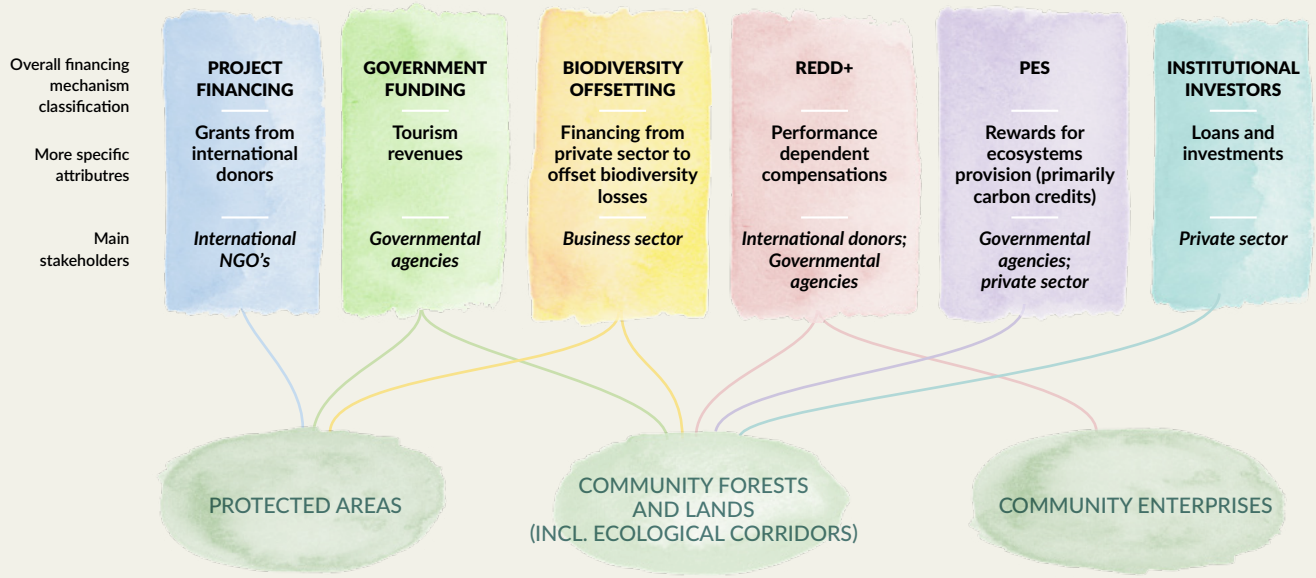
In biodiversity offsetting, companies that affect biodiversity through their operations compensate by supporting biodiversity conservation elsewhere. The process of offsetting can be initiated voluntarily or mandated by law. In the case of Uganda, the former is responsible for some of the conservation finance in the landscape. The MSL is open for oil exploration as there is no legislation that prevents it nor any that mandates biodiversity offsetting, as the extraction of oil can provide a substantial boost to the economic growth of the country.

However, there are efforts to mitigate, avoid, or compensate for the loss of biodiversity resulting from oil explorations and extractions. This can be done by partnerships between the oil companies and conservation organisations, where oil companies provide funds to compensate for their effects on biodiversity by promoting its protection elsewhere. Within the landscape, a concrete example of such a mechanism is the Tilenga project. The Tilenga project is based on a partnership between the UWA and TotalEnergies, where the latter supports the conservation efforts of the UWA to compensate for the effects it is having in the areas where it is extracting oil.

B.4.5 *Impact and Institutional Investing*

In the MSL, there are a number of organisations that are actively working on attracting institutional investors such as banks to invest in sustainable small-scale farmers. MoMO4C is an example of a project that operates over the entire landscape and attempts to form a bridge between small-scale farmers and institutional investors. By building capacity in the fields of ecologically sustainable farming and monitoring performance amongst small-scale farmers and farmer cooperatives, the project helps to make investments and loans for small-scale farmers more attractive for institutional investors. In doing so, the ultimate goal is to generate more funding for sustainable agriculture in the landscape and to improve livelihoods.

FIGURE B.4.5 Murchison-Semliki Landscape schematic overview of the Integrated Landscape Finance structure.



UGANDA
Murchison-Semliki landscape

B.4.6 *REDD+*

REDD+ is a United Nations program that aims to reduce carbon emissions by providing financial incentives to developing countries for combating deforestation and degradation of forests. In addition, the program should also include the alleviation of poverty and the conservation and restoration of biodiversity. In Uganda, the Ministry of Environment and Water leads the REDD+ project and is assisted in the MSL by various NGOs and the private sector. REDD+ provides a funding mechanism for reducing deforestation and thus benefits biodiversity conservation and restoration, by helping maintain ecological corridors.

B.5 *Challenges*

Based on the interviews with stakeholders in the landscape, a number of challenges for ILF in the MSL were identified. The challenges may also be viewed as general policy and/or contextual constraints to national policy objectives.

- *Absence of clearly defined property and land tenure rights:* In large areas within Uganda, there is no clear land registry. A lack of protection on land without a clearly defined owner can hinder a coordinated landscape approach, as there is no clear destination for the flow of funding. Furthermore, land tenure rights are not secure for local smallholders and/or IPs living near the national parks. Indeed, the corruption in the land tenure rights system can affect the livelihoods of IPs, and, in turn, influence the sustainable management of community lands. Corruption can cause loss and inadequate distribution of financial resources, and thus hinder efforts for achieving a coordinated landscape finance approach. These issues can also prevent the creation of good investment environments on a landscape level, disincentivizing private and institutional investment.

- *Dependence of governmental funding on ecotourism:* Ecotourism provides an environmentally sustainable source of income, even though it can be affected by global events and shocks, such as the COVID-19 pandemic, that can drastically influence the amount

of funds that are generated. Consequently, if governmental agencies depend highly on tourism, external effects can have a significant impact on governmental conservation funding. Furthermore, it can over-incentivize governmental biodiversity programs to also focus on ecotourism development, which might hinder an integrated landscape approach where decisions on the application of financing mechanisms might conflict with government funding sources.

- *Lack of awareness on conservation action plans:* Within Uganda, a long-term landscape vision and action plan for the MSL was developed by the NARC-G. However there is a lack of awareness of the plan amongst relevant stakeholders, even within the public sector. This leads to different views on conservation and a variety of projects that might lead to inefficient use of financial resources and to a lack of coordinated efforts on the landscape level.

- *High autonomy in local governments:* Local governments in Uganda enjoy a high degree of autonomy. This can lead to situations where economic development is valued over environmental conservation targets envisaged in national policy. Consequently, there might be a lack of incentive among local governments to utilize public funds for biodiversity conservation efforts, particularly in the MSL where the oil extraction industry is booming.

B.6 *Integrated landscape finance and national policy on biodiversity finance*

To counter biodiversity loss in Uganda, the National Environment Management Authority (NEMA) of Uganda developed a National Biodiversity Strategy and Action Plan; its second version was released in 2016 and covers 2015-2025 (NEMA, 2016). This was followed by a National Biodiversity Finance Plan in 2019 that describes the ways in which financial resources for biodiversity conservation should be raised to meet the objectives of the NBSAP (NEMA, 2019).

In Uganda, the National Biodiversity Finance Plan describes three primary strategies for financing the objectives set out under the National Biodiversity Strategies and Action Plan. The first strategy is to develop and implement a biodiversity and ecosystem index to monitor the performance of biodiversity investment and payments for ecosystem services. The second one is to enhance the use of economic instruments as incentives for biodiversity conservation and management. The third one is to scale up innovative biodiversity management and conservation actions that enhance livelihoods and increase national revenue.

ILF in the MSL and national biodiversity targets support each other in a variety of ways. As described in earlier sections, a variety of landscape projects already use innovative financing mechanisms, such as PES schemes and REDD+, to mobilize financial resources for biodiversity conservation. These mechanisms require biodiversity and ecosystem data to function as efficient mechanisms for distributing financial resources. In this way, conservation projects on the landscape level support the first national objective to monitor the performance of biodiversity financing. Congruently, these innovative financing mechanisms also support the second and third national objectives, as they are economic instruments that strive to improve biodiversity and provide sustainable livelihoods for residents of the landscape.

Cooperation between the various organisations and stakeholders involved in biodiversity conservation of the MSL in the NARC-G leads to an integrated utilisation of innovative economic mechanisms in the landscape. In doing so, biodiversity outcomes are enhanced and progress is made to achieve the objectives set out in the NBSAP and NBFP of Uganda.

Based on the NBSAP and NBFP, we can also identify how these can contribute to ILF in the MSL and thus identify the role that the national government can be expected to play in facilitating ILF in Uganda. Section 7 of the report describes key government roles in mobilizing ILF. Though the NBSAP and the NBFP in Uganda do not specifically mention landscape approaches, they do envision solutions that can facilitate a strong role for the national government in integrated landscape approaches.

Within the NBSAP of Uganda, the first strategic objective aims to strengthen stakeholder coordination and frameworks for biodiversity management. It describes activities that are aimed at developing integrated biodiversity management policies, developing guidelines for mainstreaming biodiversity into decision-making, and establishing a business case for biodiversity. These activities highlight the role of the Ugandan government in defining a biodiversity policy framework (see section 7.1) that can support ILF.

The NBSAP and NBFP also describe strategic objectives that envision a role for the government in developing finance mechanisms (see section 7.2), increasing the availability of public funding for biodiversity conservation (see section 7.3), and regulating landscape investment (see section 7.4). The plan promotes the development of innovative financing mechanisms through support for the development and incorporation of funding sources such as PES and environmental bonds. It also provides for a strategic objective specifically aimed at ensuring no net biodiversity loss in the oil rich regions of Uganda, which includes the MSL, through a biodiversity offset trust fund. The NBSAP provides for the elaboration of regulations surrounding biodiversity in national and sectoral policies.

Overall, we can conclude that although the NBSAP and NBFP do not explicitly mention ILF approaches, they facilitate a national biodiversity framework that can support the development of integrated landscape finance structures.

Source: iStock. Picking tea leaves, Kibale, Uganda

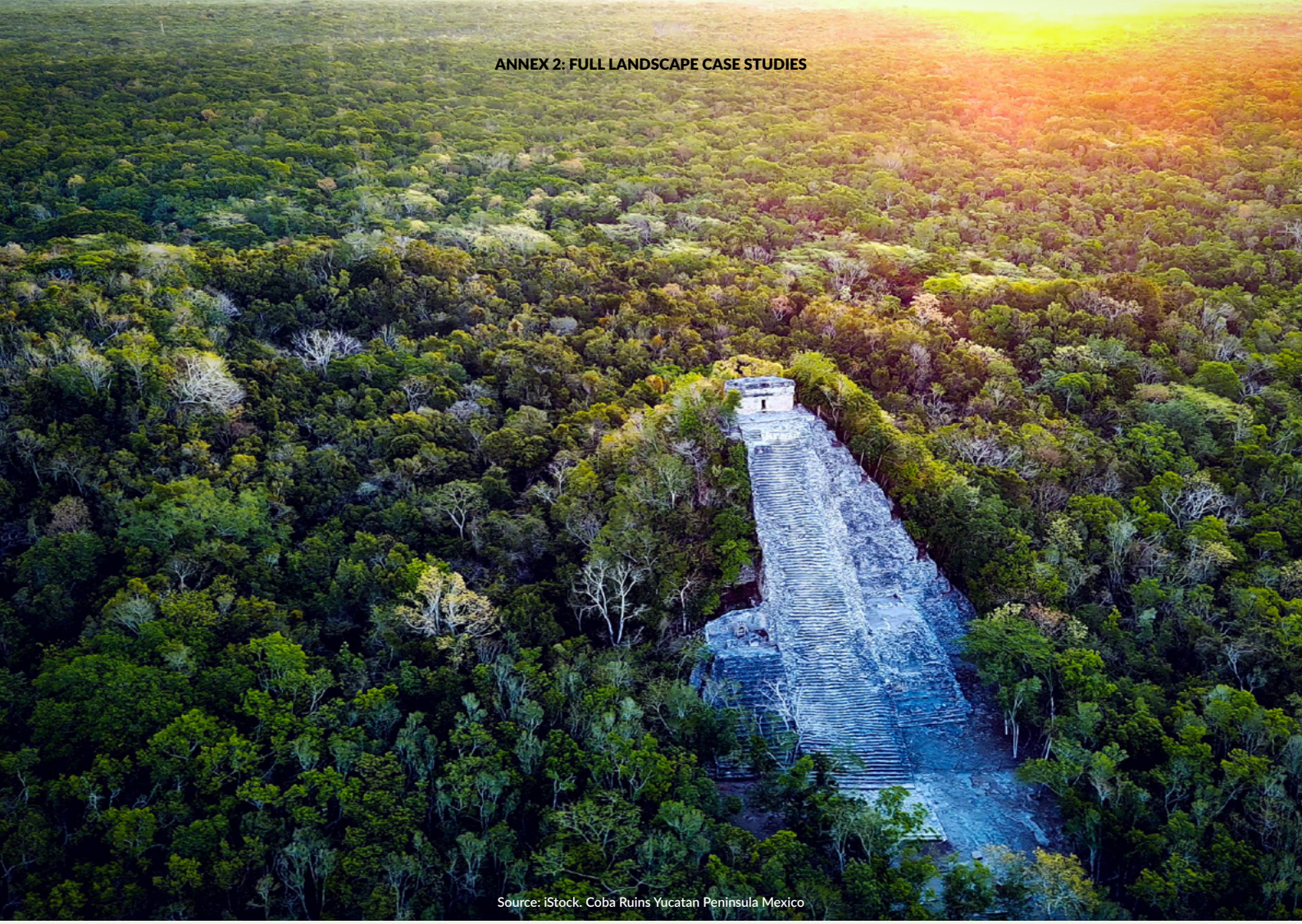
B.7 *Lessons learned*

As shown in the previous sections, ILF in the MSL faces a variety of challenges but also forms an approach that can provide a strong contribution to advance National Biodiversity objectives in Uganda. Taking into account both the challenges and opportunities of ILF in this case study, there are a number of lessons that can be learned from biodiversity finance in the MSL:

- **Creating stakeholder platforms is essential:** Through the Northern Albertine Rift Conservation Group and the inter-ministerial framework different types of stakeholders (e.g. NGOs, governmental, private sector, community groups) discuss conservation issues in the landscape. Through the platform, cooperation between stakeholders can be achieved and new projects can be coordinated. This allows for landscape-wide coordination on the distribution of funds and can thus amplify progress towards national biodiversity targets.

- **Create unified goals for biodiversity conservation in a landscape:** Projects in the landscape generally have a similar focus on restoring buffer zones and/or ecological corridors through incentivizing local communities to manage their lands and forests sustainably, for example, via PES schemes, coordinated efforts between agribusinesses and small-scale farmers that promote sustainable agriculture, as well as REDD+ activities. This unity of purpose of projects in the landscape amplifies conservation efforts. In the MSL this is relevant, as it is a vast landscape with a large number of biodiversity projects operating in different areas. Governments can foster unity by setting common targets.

- **Creation of bankable investment projects to attract private finance:** Within the MSL, a large emphasis is placed on the creation of bankable investment projects, particularly through the MoMo4C program implemented by an NGO (Ecotrust). The program aims to build a climate-resilient MSL by engaging stakeholders from local communities, local government, private businesses, and civil society to support green business investments that enhance landscape restoration whilst improving community livelihoods. This emphasis has led to the creation of an expanding pool of bankable projects that can exponentially increase funds for conservation finance in the landscape. In doing so, progress towards national biodiversity targets is strengthened without an additional burden on public funds. Governments may direct subsidies to programs aimed at attracting private finance in this way.



Source: iStock. Coba Ruins Yucatan Peninsula Mexico

C. MEXICO

Integrated landscape finance in the Yucatán Peninsula

C.1 *Landscape Type and Challenges Faced*

The YP, which spans approximately 181,000 km^2, is located in southeastern Mexico. It includes the states of Campeche, Yucatán, and Quintana Roo (Figure C.1), but also extends into Belize and Northern Guatemala.

The region hosts a unique ecology, with mangroves and lagoons along the coastline, dry forests northwest of the peninsula, moist forests in the middle, south and east of the region, and a coral reef that stretches 1,100 km of the east coast of the peninsula. Furthermore, PAs cover approximately one-third of the total YP territory.

The YP provides a range of ecosystem services, like carbon sequestration due to forest and mangrove coverage. For instance, it is estimated that forests in the area store 347 million tons of carbon above ground (Varns et al., 2018). The region is also home to a range of threatened and endangered flora and fauna, including certain species of birds, reptiles, sea life, and mammals. Significant cultural heritage values exist and are associated with the Maya Forest, home to vibrant Mayan communities.

A number of stressors exist within the YP. Around 800 km^2 of tropical forested area is lost on a yearly basis due to land use change caused by extensive ranching and agricultural expansion (Global Forest Watch 2020). Overfishing, tourism, and urban development have resulted in eutrophication, vegetation loss, and contamination by solid waste and wastewater discharges in coastal lagoon systems. Moreover, mangrove ecosystems have been degraded in the Caribbean area over time due to tropical storms and anthropogenic activity associated with the tourism industry. Coastal erosion is also prevalent and caused by a combination of sea level rise as well as the lack of appropriate zoning regulations for construction.

Nevertheless, a number of stressors exist within the YP. Around 800 km^2 of tropical forested area is lost on a yearly basis due to land use change caused

FIGURE C.1 Yucatán Peninsula coastal zone indicated in light blue

Source: UN Small Grants Program. Retrieved from https://www.ppdmexico.org/paisajes

Source: iStock. Paddling on Bacalar lake, Mexico.

by extensive ranching and agricultural expansion (Global Forest Watch 2020). This is exacerbated by government subsidies that promote extensive cattle and maize production. Overfishing, tourism, and urban development have resulted in eutrophication, vegetation loss, and contamination by solid waste and wastewater discharges in coastal lagoon systems. Moreover, in the Caribbean area, mangrove ecosystems have been degraded over time due to tropical storms and anthropogenic activity associated with the tourism industry. Coastal erosion is also prevalent and caused by a combination of sea level rise as well as a lack of appropriate zoning regulations for construction. Various initiatives have promoted responsible fishing practices and ecotourism, as well as the sustainable management, conservation, and restoration of protective ecosystems.

Approaches to Integrated Landscape Management C.2

Section 5.1 of the report refers to several approaches for the initiation of integrated landscape management supported by national biodiversity strategy and finance plans: 1) Locally driven financing of landscape transformation, with the involvement of local authorities in charge of the landscape, as well as national and international stakeholders; 2) In contrast, investments may be coordinated in a top-down manner across complementary projects with a broad sustainability purpose. The main objective here is often improved land governance by working with public sector agencies at the national level and perhaps funding from

international funders. Integration here is not initiated by local LPs; 3) Another approach is to develop an integrated landscape agenda via improvements in the sustainability of value chains of internationally traded commodities. For instance, international agencies may fund projects to protect and restore landscapes by targeting private companies that are directly or indirectly involved in production activities that have an impact on the sustainable land use practices in a given region; 4) The last approach involves landscape restoration of ecosystem services. The motivation comes from the interdependence of a number of actors that rely on a degrading common pool of natural resources.

In the interviews and desk research for this case study, little evidence was found on the integration between different initiatives in the YP, and their coordination by one management body. Therefore, management activities are not well-aligned for common landscape targets. Natural Protected Area (NPA) creation–one of the main instruments for protecting biodiversity and reducing deforestation in Mexico and the YP–and fisheries management are top-down federal policies. Nevertheless, the integration of coordination and communication among these top-down policies has not been achieved, which has hampered the effectiveness of marine management, for example. However, it is important to note that even though there is little evidence of integrated landscape management within the YP, there have been integrated management strategies in other parts of Mexico (e.g. Sierra Madre Oriental Ecological Corridor), as well as broader plans for such management that includes territory in Southern Mexico and other countries in Central America (Mesoamerican Biological Corridor).

Source: iStock. Turquoise water at Xel-Ha, Cancun, Mexico.

Some landscape management in the YP focuses on restoration of ecosystem services, with some government involvement in implementation. A government agency, The National Forestry Commission (CONAFOR), began implementing PES schemes in 2013 to pay ejidos (community landholdings) and other landowners for the conservation of forests for water supply, biodiversity, carbon storage, and agroforestry benefits. These payments act as a compensatory mechanism for the opportunity costs associated with time and money spent on forest preservation by landowners. PES in this context relates to approach 4), and the scheme is paid for by government subsidies.

Some activities follow the global initiatives on climate change mitigation. For instance, in light of the rapid loss of forested area in Mexico and the YP, state governments, local communities, civil society, and academia, have come together to protect biodiversity and limit greenhouse gas emissions from deforestation and forest degradation. This initiative was supported by Alianza Mexico REDD+ (AMREDD), although they are no longer active in the region. The overarching objective was to achieve net zero deforestation by 2030. Activities under AMREDD included the developing and adoption of best agricultural and silvopastoral practices, improved forest management, reforestation practices, fire management, and conservation, as well as the promotion of productive activities (e.g. ecotourism), agroforestry practices, land use plans, and capacity building.

Community-based ecotourism in PAs of the YP also serves to safeguard ecological biodiversity. Ejidos and cooperativos (local cooperatives) offer small-scale tourism services and control access to archeological ruins. Tourism revenues from ejidos ecotours are typically directed back to local communities and environmental conservation.

C.3 Stakeholders

C.3.1 National Government

The national government implements top-down measures, such as NPAs and regulation of the fisheries sector. The federal government also provides subsidies for PES schemes and is involved in implementing the REDD+ strategy.

C.3.2 State and Local Government

Various state, municipal, and local governments of Campeche, Yucatán, and Quintana Roo have a stake in the YP (via e.g., integration of REDD+ policies).

C.3.3 Ejido and Other Landowners

Ejido and other landowners carry out conservation via PES schemes and ecotourism, for instance. Furthermore, REDD+ strategies work closely with local communities on, for example, forest protection, and sustainable agriculture activities in the YP.

C.3.4 Civil Society and Academia

Civil society and academia have been actively engaged in, for example, REDD+ during the preparation of the national strategy and in implementing actions. For instance, regional REDD+ project activities were managed by the Mexican NGO AMREDD, which aligns with Table 5.2 of the report on types of ILF support services insofar as they facilitate coordination, including the development of a common landscape vision and action plan, and contribute to finance strategy.

C.3.5 International Organisations

International organisations like the UNDP are involved in funding activities, via, for example, the Global Environment Facility Small Grants Program (GEF SGP) for ecotourism and implementation of REDD+ activities. Furthermore, AMREDD was funded by USAID (2021).

C.3.6 Fisheries

The main fisheries operating inside the YP are finfish, octopus, shrimp, snail, lobster, shark, crab, sea cucumber stone crab. They are bound by national policy on sustainable fishing practices.

Source: iStock. Jungle Tree.

C.4 Financing mechanisms and funding sources in the YP

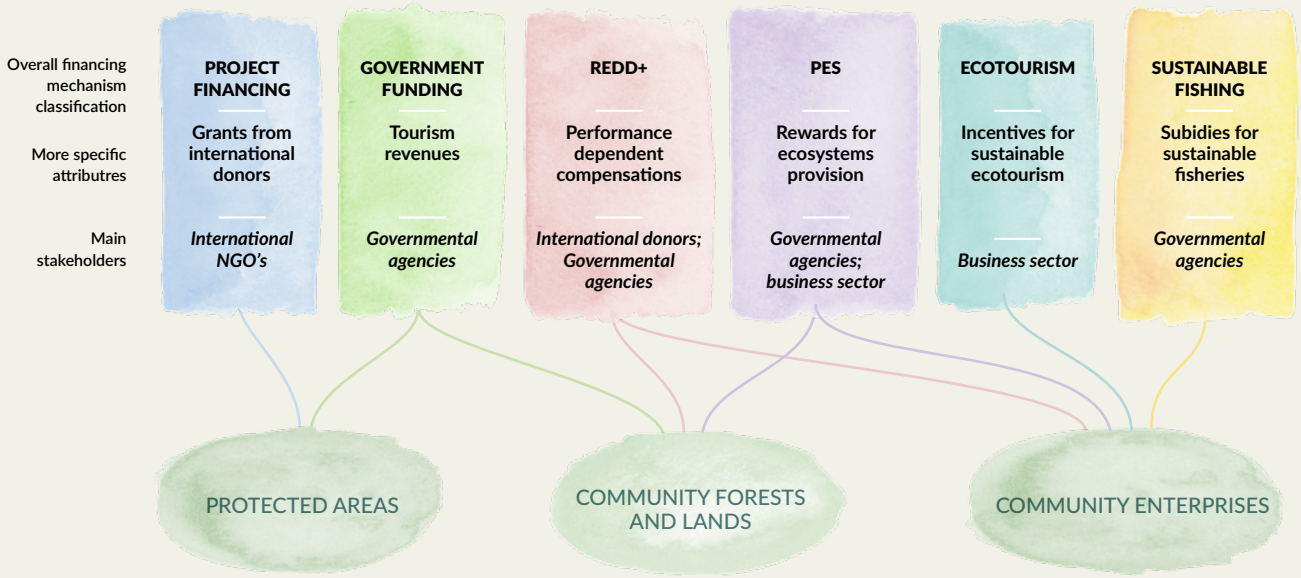
C.4.1 Natural Protected Areas

There are 63 designated PAs on the peninsula receiving government funding (Miteva et al. 2019). The National Commission of Protected Natural Areas (CONANP), a federal agency, is in charge of protecting and administrating NPAs in Mexico. NPAs are created by a Presidential order and management of NPAs is set in accordance with the General Act of Ecological Equilibrium and Environmental Protection. At the national level, according to CONANP, there is a financial gap for maintainingNPAs of MXN$1,128 million per year.

C.4.2 Payment for Ecosystem Services

A five-year program was started in 2018, for which CONAFOR allocated the equivalent of US$2.5 million, to compensate landowners in YP states for the opportunity costs of leaving forests intact. The average payment is US$88 per hectare/year, which is subsidized by the federal government (Varns et al., 2018). Note that, since the program only lasts for five years, it does not incentivize long term forest management, meaning that forests are in the same vulnerable position once the program has ended. Overall, PES schemes are underfunded because government subsidies insufficiently cover the estimated financing needs for biodiversity management through PES. Nationally, CONAFOR estimated the financing needs at MXN$3,868 million.

FIGURE C.4.5 Mexico case study Integrated Landscape Finance (ILF) mapping.



MEXICO
Yucatán Peninsula

C.4.3 *Reducing Emissions from Deforestation and Degradation (REDD+) Strategy*

AMREDD received funding from USAID. Subnational activities in the YP were initiated in 2010 via CONAFOR, AMREDD and the UNDP. UNDP implemented sustainable forest production with CONAFOR and small local-based grants for sustainable rural development practices. A project was also formed to develop the national monitoring, reporting, and verification component. A focus has been on strengthening state and municipal jurisdictions to integrate REDD+ policies and implement low-carbon rural development strategies. Activities have also included establishing learning communities and piloting low-carbon land use strategies, such as sustainable forestry, silvopastoral systems, low-input agricultural intensification and diversification, and ecotourism.

C.4.4 *Ecotourism*

Community-based ecotourism, such as that occurring in PAs of the YP, is being supported by the GEF SGP implemented by UNDP. Broadly, ecotourism in the YP consists of visitations by tourists to natural areas to enjoy, appreciate, and study their attractions (e.g., the landscape, flora, and fauna) while leaving the landscape relatively undisturbed. To understand how ecotourism finances biodiversity conservation, one ecotourism operator, Community Tours Sian Ka'an, earmarks 5% of its ecotourism revenues for local conservation activities. States with a strong network of ecotourism cooperatives include Quintana Roo and Yucatán.

C.4.5 *Sustainable Fishing*

The mangroves, estuaries, lagoons, and coral reefs of the YP provide high marine diversity and ample fishing opportunities. The YP contributes around 10% of the total value of fisheries landings in Mexico (Coronado et al., 2020). Top-down measures from the federal government define fisheries management in the YP. The National Fisheries Commission (CONAPESCA) oversees the development of fisheries management and is financed by subsidies from the federal government that aim to facilitate the monitoring and surveillance activities of CONAPESCA, for instance. Unfortunately, overlapping and unclear responsibilities of state agencies regarding some implementation activities exists, which has created an environment whereby fishers have had to fill these gaps through local rules and arrangements (Méndez-Medina et al., 2020).

C.5 *Challenges*

A number of challenges regarding the securing of sufficient funding and establishment of synergies among available funding for the implementation of integrated landscape management projects in the YP have been established based on interviews among stakeholders, as well as a review of the National Biodiversity Strategies and Action Plan (NBSAP) (CONABIO 2016) and National Biodiversity Finance Plan (NBFP)(BIOFIN México 2016) of Mexico and the academic literature. The challenges may also be viewed as a general policy and/or situational factor constraints to national policy objectives.

- *Lack of clarity:* There is fragmentation and complexity regarding implementation and enforcement responsibilities for fisheries. Therefore, government agencies involved in the management of fishery resources have not been able to develop arrangements that enable adequately coordinated management, and subsidies used to finance management are less effective. Poor coordination here implies that an integrated approach to fisheries management is also lacking.

- *Lack of integration:* Relatedly, there is a lack of established synergies among available funding and integration among separate biodiversity management activities (e.g., top-down measures such as fisheries management and administration of NPAs).

- *Subsidies:* Subsidies in the Primary sector in Mexico are allocated to agricultural and livestock activities, which have a negative impact on biodiversity. There is a large difference between the subsidies directed at agriculture and livestock compared to those for programs on biodiversity conservation. Cattle production and commercial agriculture land uses have tended to impede REDD+ financing effectiveness in limiting forest cover loss (Ellis et al., 2020). This means that even though governments are involved in REDD+ strategy, their involvement is not well integrated with their other policy-making decisions.

- *Financing gap:* There is a large yearly financing gap for the maintenance of NPAs and PES schemes. The NBFP states that an additional MXN$8,685 million pesos (~US$436 million) per year was required during 2017-2020 to bridge the financing needs for adequate biodiversity management.

- *Covid-19:* The covid-19 pandemic restricted travel to the YP, which had a negative impact on the ecotourism sector. Ecotourism in the area has been slow to recover. Subsidies intended to lessen the impact of the pandemic were often not received by ecotourism operators, which means that maintenance activities on ecotourism operator facilities that assure they meet regulations (e.g., for reforestation actions) were underfunded (Pedroza-Gutiérrez et al., 2021).

C.6 *Integrated landscape finance and national policy on biodiversity finance*

Mexico's NBSAP (CONABIO 2016) outlines six strategic axes and 24 lines of action through which the needs and priorities for attention to the country's biodiversity have been established, as well as the deadlines and the actors involved in its implementation, follow-up, and evaluation. These lines align with the Strategic Plan 2011-2020 of the CBD and the Aichi Targets, and the SDGs. Mexico's NBFP (BIOFIN México 2016) summarizes financing needs for biodiversity and describes a biodiversity financing solutions plan based on several core proposals.

The NBSAP can contribute to (future) ILF and management by establishing intersectoral integration for the coordination of actions for the implementation of various strategies. The NBFP can promote integration via a number of proposals bringing together several sectors to secure the effectiveness of financing solutions for biodiversity. These elements of the NBSAP and NBFP relate to section 7 of this report. The elements describe governments' strategic roles in mobilizing (future) ILF. Furthermore, the report describes how the policy framework, as laid out in the NBSAP and NBFP, contributes to integrated finance for biodiversity, by considering the roles of government as defined in section 7 of this report.

The NBFP can facilitate landscape investments by developing financial mechanisms and services (see section 7.2 of this report). The NBFP describes that the government can serve several roles in the mobilization of finance, via, for example, incentives, legislation and engagement with international and private sector organisations. To fulfil this role, activities are identified, namely 1) to increase international cooperation for financing ecosystem-based adaptation; 2) to promote impact investment for biodiversity to introduce a financing approach with the private sector; and 3) to contribute to greening of the financial sector, e.g., by developing guidelines for companies and/or issuing green bonds.

The direct role of government as a financier (section 7.3 of this report) is specified in strategic axis 2 of the NBSAP, on conservation and restoration, and strategic axis 4 of the NBSAP, on attention to pressure factors through various lines of action. Government budget and national planning should be aligned with the SDGs according to the NBFP.

Moreover, the requirement of regulation for landscape investment (section 7.4 of this report) is highlighted in strategic axis 6 of the NBSAP, on integration and governance. Specifically, the axis calls for harmonized and inclusive legal and institutional frameworks that guarantee the internalisation of criteria for the conservation and sustainable use of biodiversity in sectoral plans, programs and policies, as well as the involvement of different sectors and actors of society through several specific lines of action. Furthermore, government promotion of landscape-friendly market development (section 7.5 of this report) via promoting markets for landscape-friendly products and services (e.g. organic, green, fair trade, and local economic interest products) is mentioned in strategic axis 3 of the NBSAP on sustainable use and management.

There are several opportunities to improve biodiversity management more generally regarding the case study based on national policy. The YP may benefit from improved knowledge and valuation of biodiversity and ecosystem services to inform the levels of payments for PES schemes (strategic axis 1 of the NBSAP on knowledge). In addition, the prevalence of agricultural and livestock activity expansion has harmed biodiversity and REDD+ policy effectiveness. Therefore, the government may consider spending subsidies directed at agricultural activities in a different way, for example, in sustainable agricultural practices.

The promotion of ecotourism in the YP, which aims to educate tourists on biodiversity and conservation issues, resulted in some progress on strategic axis 5 of the NBSAP on education, communication and environmental culture. The integration of strong bottom-up community involvement, e.g., ecotourism, PES and REDD+ strategies, on the national agenda implies that strategic axis 6 of the NBSAP has been in development to some extent as well.

The NBFP indicates several financing gaps and needs, implying that biodiversity financing may be currently lacking in the YP for NPAs and PES, in contrast to core proposal 3 of the NBFP on financial mechanisms for conservation. There is little mention of private and financial sector partnerships on biodiversity conservation in the YP, contrary to core proposals 4 and 5 of the NBFP on sustainable business and impact investments for biodiversity and greening of the financial sector, respectively. The YP was part of an international concerted effort on biodiversity financing through REDD+, in line with core proposal 6 of the NBFP on the implementation of support solutions.

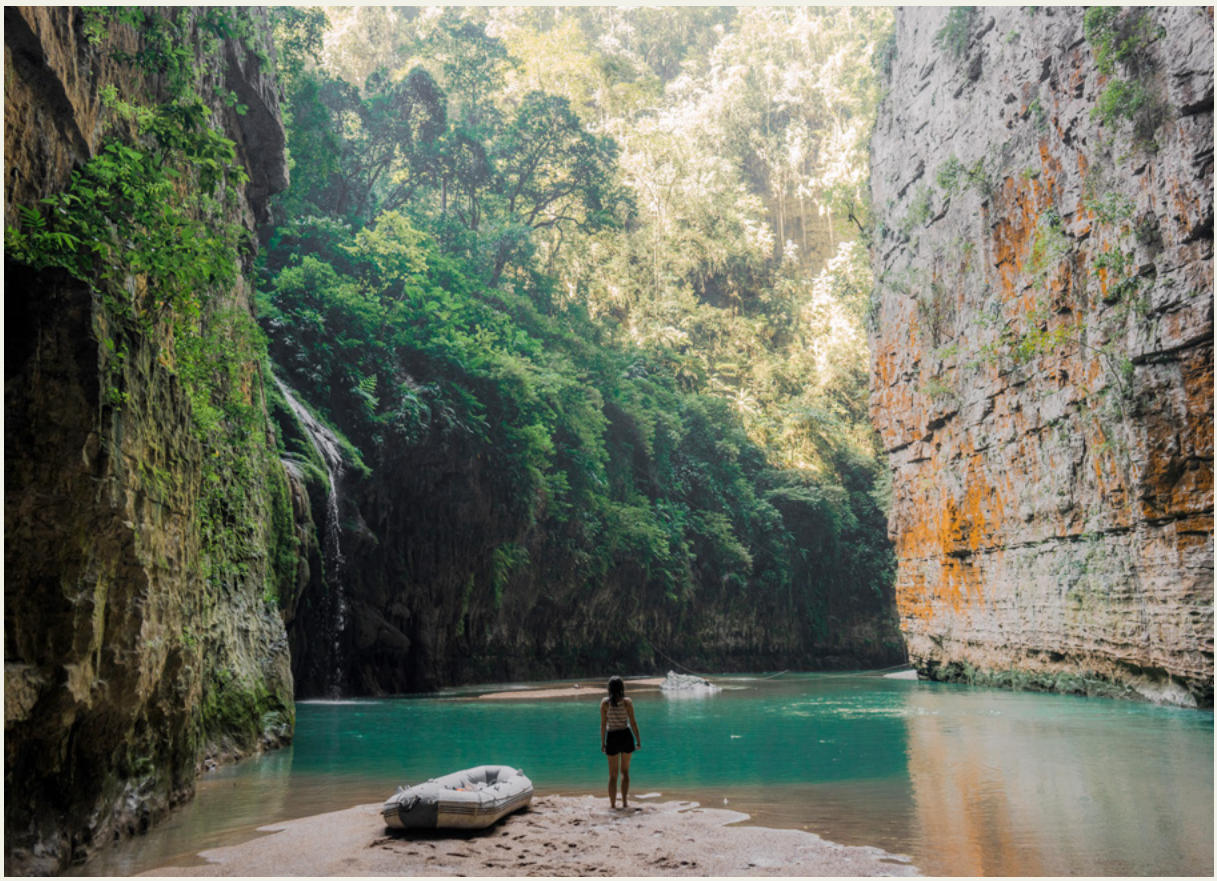
C.7 *Lessons learned*

As shown in the previous sections, ILF in the YP faces a variety of challenges. However, there are opportunities for contributing to the advancement of National Biodiversity objectives in light of these challenges. From the information shared in the previous sections and based on interviews with stakeholders in the landscape, there are a number of lessons that can be deduced:

- **Clear roles and responsibilities are vital:** Clear roles are needed among government agencies and different government layers to implement strong monitoring and enforcement frameworks. That is, National Biodiversity objectives should clearly highlight the responsibilities of decentralized government organisations and how these responsibilities are connected to the role of local stakeholders in biodiversity management. Clear roles may be implemented through institutional arrangements that highlight agreements on the division of respective responsibilities.

- **Spatial planning and coordination:** Spatially explicit planning and coordination among specific biodiversity management projects and their finance streams can practically facilitate the general objectives of a country's NBSAP and develop more focused financing proposals in the NBFP. Clarity on this planning also helps to define clear stakeholder roles.

- **Strong bottom-up community involvement:** Conservation relies on the participation of local communities. National Biodiversity objectives should describe how existing capacities can be strengthened and how generation of knowledge (e.g. by incorporating traditional knowledge of IPs may be facilitated, as well as how mechanisms and spaces for community participation in decision-making on biodiversity issues may be improved.



Source: iStock. Turquoise river, Mexico.

Source: iStock. Maria Cristina Falls Philippines

D. PHILIPPINES

Integrated river basin finance in the Cagayan de Oro

D.1 *Landscape type and challenges faced*

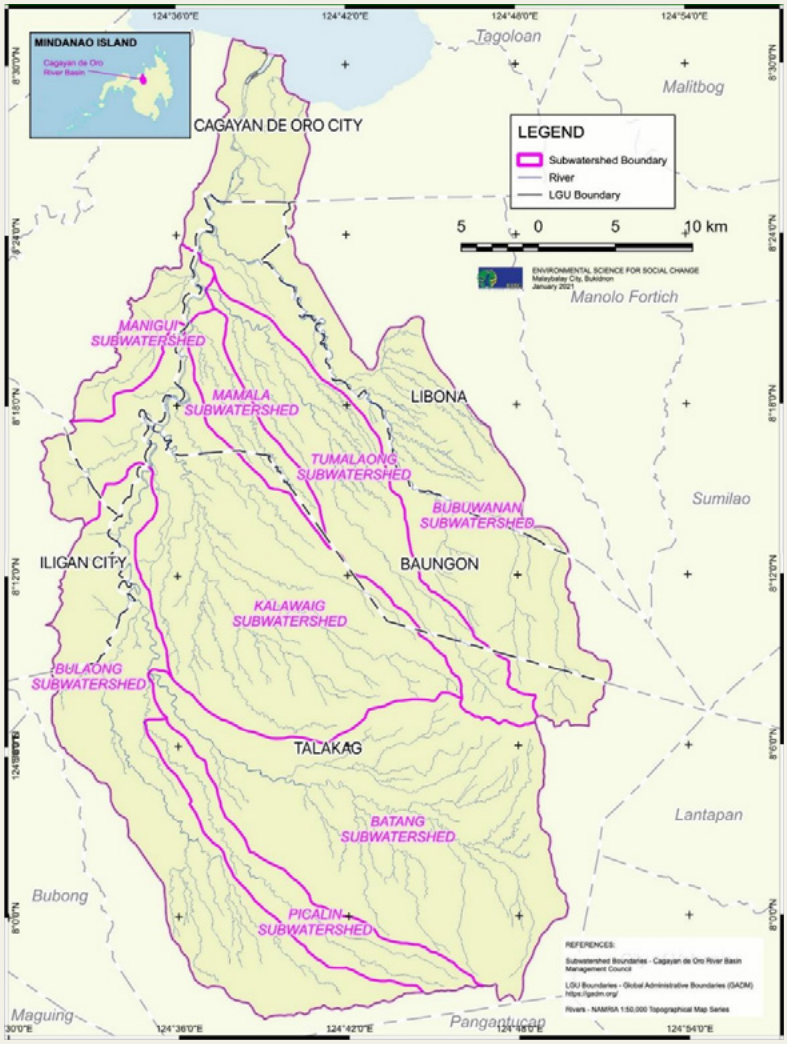
The Cagayan de Oro River Basin (CDORB) in the Philippines is the second largest river basin in Northern Mindanao, covering around 137,000 hectares and spanning three provinces, three municipalities, and two cities. Cultivated areas and grassland have the largest coverage of the basin, occupying 54% of the total area. Closed and open canopy forests have a combined area of 25%. In addition, the basin also contains population centers like Cagayan de Oro City.

The various landscapes within the CDORB are responsible for ecosystem service provision. Forested areas, riparian zones, and grasslands contribute to biodiversity benefits by hosting a range of flora and fauna, including threatened species of birds, mammals, and insects. Furthermore, households in downstream communities benefit from a well-functioning CDORB due to a stable supply of good quality water and riverine ecosystems acting as a flood control mechanism.

The CDORB also generates income for farmers. The agriculture sector is the third largest contributor to regional GDP in northern Mindanao. In particular, intensive activity takes place in the province of Bukidnon, where corn, rice, sugar, coffee, rubber, fruits, and vegetables are grown. Pineapples, bananas, and sugarcane are important exports of the region. The province is a major producer of poultry, hogs, goats, and cattle.

A number of challenges are faced within the CDORB. Vulnerabilities are present related to natural hazards such as tropical storms and flooding, which are projected to increase due to climate change, and land degradation because of unsustainable land use. The river basin aims to strengthen resilience via integrated watershed management and biodiversity conservation.

FIGURE D.1 Cagayan de Oro River Basin (CDORB) watershed and major population centers



Source: BIOFIN Cagayan de Oro River Basin Profile, map developed by Environmental Science for Social Change, a member of the CDORBMC Technical Working Group

D.2 *Approaches to integrated landscape management*

Section 5.1 of the report refers to several approaches for the initiation of integrated landscape management supported by national biodiversity strategy and finance plans: 1) Locally driven financing of landscape transformation, with the involvement of local authorities in charge of the landscape, as well as national and international stakeholders; 2) In contrast, investments may be coordinated in a top-down manner across complementary projects with a broad sustainability purpose. The main objective here is often improved land governance by working with public sector agencies at the national level and perhaps funding from international funders. Integration here is not initiated by local LPs; 3) Another approach is to develop an integrated landscape agenda via improvements in the sustainability of value chains of internationally traded commodities. For instance, international agencies may fund projects to protect and restore landscapes by targeting private companies that are directly or indirectly involved in production activities that have an impact on the sustainable land use practices in a given region; 4) The last approach involves landscape restoration of ecosystem services. The motivation comes from the interdependence of a number of actors that rely on a degrading common pool of natural resources.

Watershed management within the CDORB has an explicit focus on approach 4. Specifically, integrated management in the CDORB involves PES schemes. Broadly, PES policies are designed to compensate individuals for undertaking actions that increase the provision of ecosystem services. Usually PES schemes incentivize smallholder farmers or landowners to engage in land management and conservation activities. These activities can be funded by payments from beneficiaries of the provided services if property rights are well-established and payment transaction costs are absent or very small.

In addition to PES, other financing mechanisms in the CDORB are annual allocations earmarked for environmental restoration from LGUs (approach 2), private business and local community collaborations on restoration (approach 1), green investment initiatives from financial institutions, as well as various sustainability opportunities provided by institutional investors and foundations.

Section 3.4 elaborates on several examples for each financing mechanism. Importantly, the CDORBMC (Cagayan de Oro River Basin Management Council) is a coordinating body that brings together several of these stakeholder groups at the local, national and international levels and seeks to uphold and implement interventions that boost biodiversity in the CDORB. Concretely, the CDORBMC supports integrated management by supporting collaborative processes, landscape assessment, and development of a common landscape vision and action plan. It accesses financing for its action plan and common targets, and contributes to ILF, via the use of LIFT that develops investment ideas, assesses their financing needs, scopes potential sources of financing, and devizes a clear finance mobilization strategy.

Stakeholders D.3

Grassroots Communities D.3.1

In the CDORB, grassroots communities consist of smallholder farmers carrying out ecological restoration and artisan fishermen belonging to Indigenous communities, as well as ageing IPs, i.e. “knowledge holders.” Downstream communities benefit from the maintenance of the CDORB.

Agribusinesses D.3.2

MNCs, like Del Monte Foods, Dole Food Company, Sumifro Philippines Corporation and Agrinanas Development Co., Inc., operate plantations in the CDORB. Unifrutti, another MNC, has no territorial presence in the CDORB, but is involved in corporate environmental policy there. Some locally owned agribusinesses also exist in the CDORB.

LGUs D.3.3

Three municipal governments, one provincial government, and two city governments have a stake in the CDORB via mandates on sustainable land management, biodiversity-friendly agriculture, and are also involved in funding.

D.3.4 *Civil Society and Academia*

Civil society organisations such as NGOs and academia (including three universities) have been part of forming the CDORBMC and mediating dialogue among partner groups. NGOs provide technical expertise and farmer training, among others. For example, the non-profit organisation Hineleban Foundation partners with IP to implement reforestation activities. Universities and colleges provide science-based knowledge support developing projects and farming.

D.3.5 *CDORBMC*

This multi-stakeholder management body includes national government agencies, LGUs, private businesses, civil society, academia, IP groups and farmers, among others. Its overarching objective is to protect, preserve, rehabilitate, and manage the CDORB. CDORBMC currently has no government budget and relies on international partners and attributed programs of partner agencies to incubate programs. International partners include organisations like Wetlands International, who support the CDORBMC with the development of a Decision Support Tool for identifying relationships between land-use and flooding and with business planning.

The activities of the CDORBMC align with Table 5.2 of the report on types of ILF support services insofar as they facilitate coordination, including the development of a common landscape vision and action plan, and contribute to the finance strategy.

D.3.6 *Other Funders*

Banking and financial institutions, as well as institutional investors and foundations, can contribute to biodiversity conservation through green investments, grants and loans. These are often aimed at securing a financial return while at the same time generating beneficial impact for the environment and biodiversity. These funders can be classified as (for profit) landscape development companies (see Table 5.2) since they develop and earn money as commercial partners in landscape investments.

Financing mechanisms and funding sources in the CDORB D.4

Payment for Ecosystem Services D.4.1

In light of the vulnerability of communities living around the CDORB to severe flood and typhoon events, a PES scheme was set up by the government, in collaboration with civil society organisations and the Indigenous Miarayon-Lapok-Lirongan-Tinaytayan Tribal Association (MILALITTRA) in 2014. The scheme involves Indigenous farming communities living in the Mt. Kalatungan Range Natural Park, who serves as ecosystem service sellers. More specifically, the communities ensure high water infiltration capacity of forested areas, thereby reducing flood risk, and the provision of potable water for downstream 'buyers' in the city of Cagayan de Oro. Funding is managed by a third-party NGO (Xavier Science Foundation). Another example of a PES scheme includes a strategy pursued by the Kitanglad Integrated NGOs (KIN), i.e., the Talama trust fund, which rewards IPs for protecting forests inside ancestral domain territories in the Mt. Kitanglad range to protect cultural and biodiversity values. The overarching aim of the Talama trust fund is to encourage the sustainability of Indigenous systems and conservation practices.

Moreover, another PES scheme is managed by Unifrutti Philippines through the Hineleban Foundation. Unifrutti Philippines is engaged in growing on the lower slopes of Mt. Kitanglad and pays a tribal community for protecting upland forested areas to ensure the continuous flow of water for irrigation of its plantations. Unifrutti contributes an annual amount per hectare according to its banana and pineapple plantations to the Talaandig Tribe of Bukidnon. Technical expertise is provided to IP by Hineleban partners.

Government Funding D.4.2

Under the Local Disaster Risk Reduction and Management Fund, LGUs allocate funds yearly for restoration and agro-forestry activities. The CDORBMC ensures the annual budgets are approved for restoration. One example is in 2013, following LGUs enacted the destruction brought by Typhoon Sendong, an inter-LGU Memorandum of Agreement

in the CDORB to work together to restore the integrated land-/seascape. The LGUs utilized the fund as a finance source.

D.4.3 *Private Business-Community Collaborations*

Private businesses, which recognize the benefits of maintaining environmental values as part of their value chain, also collaborate with local communities on restoration. For instance, businesses supply opportunities for local communities through partnerships, with engagement in agroforestry and forest protection for water security through modern and Indigenous knowledge and farming techniques. In particular, Del Monte Plantation and Dole have implemented community outreach based on environmental initiatives via their corporate social responsibility programs. For example, the Del Monte Foundation donated 10,000 Indigenous tree seedlings to the CDORBMC.

D.4.4 *Green Investments*

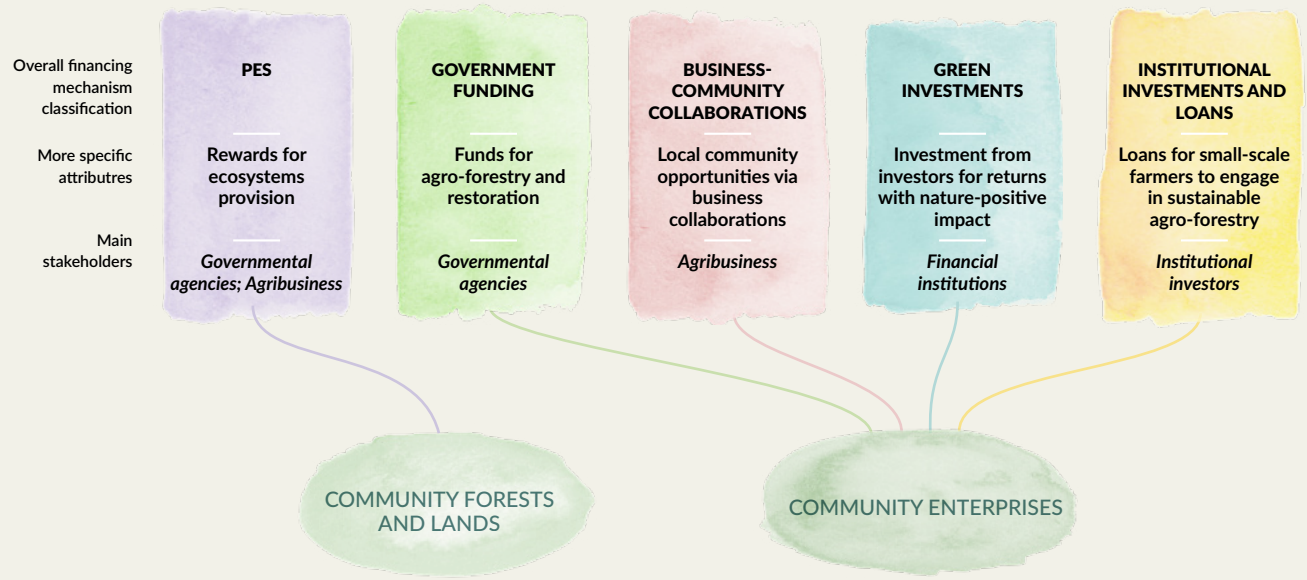
Green investments by financial institutions, like banks, contribute towards the long-term financing of environmental restoration in the CDORB. Banks and other loan providers offer opportunities via grants, loans, and training for local community cooperatives. Green investments empower local communities to partake in restoration while ensuring sustainable food supply and income support.

D.4.5 *Institutional Investors and Foundations Opportunities*

Institutional investors and foundations provide local communities with opportunities to develop sustainable local technologies on agroforestry. More specifically, local communities can showcase and develop agroforestry demonstration sites and sustainable technologies, and forest protection initiatives via these funders.

The financing mechanisms present in the CDORB are categorized into two groups, i.e. those that focus on sustainable management of forests or land by local communities (Community Forests/Land) to improve livelihoods, and those that aim to improve, develop, and/or upscale sustainable business presence to contribute to landscape conservation (Community Enterprises) (Figure D.4.5).

FIGURE D.4.5 Philippines case study Integrated Landscape Finance (ILF) mapping.



THE PHILIPPINES

Cagayan de Oro River Basin (CDORB)

D.5 *Challenges*

A number of challenges regarding the implementation of integrated landscape management projects in the CDORB have been established based on interviews among stakeholders, as well as a review of the National Biodiversity Strategies and Action Plan (NBSAP) (DENR, 2016) and National Biodiversity Finance Plans (NBFP) (BIOFIN, 2016) of the Philippines. The challenges may also be viewed as a general policy and/or situational factor constraints to national policy objectives.

- *Absence of a national land use plan:* Sectorized regulations may misclassify agricultural activities on steep slopes, meaning that agricultural activity risks land degradation. Without land planning, it becomes hard to target biodiversity finance where it matters.

- *Lack of technical guidance:* Some local governments have adopted regulations for setting up PES schemes, but with more technical guidance, other local governments in the CDORB could follow suit and upscale biodiversity financing in their localities.

- *Disconnect between national and local conditions:* Existing national policies do not adequately consider the socio-ecological characteristics of the CDORB. For instance, there is a lack or absence of technical data on the ecological state of PAs which hinders the targeting of biodiversity conservation funds to areas that are most in need or have the largest potential.

- *Establishing biodiversity monitoring tools:* Biodiversity monitoring tools have been developed in the past, but sustaining the effort remains a challenge based on the National Biodiversity Strategies and Action Plan (NBSAP) (DENR 2016).

- *General underfunding in the CDORB and lack of long-term support:* There is a funding gap, as the government has paid for developing a master plan for an integrated approach in the river basin but does not provide funding to execute (parts of) the plan. Government agencies prioritize short-term economic and social development projects, with limited funds for sustainable natural resource management.

D.6 *Integrated landscape finance and national policy on biodiversity finance*

The Philippines developed a National Biodiversity Strategy and Action Plan in 2016 (DENR, 2016), which is the third update of the plan since ratifying the CBD. Its main purpose is to improve human well-being through three main objectives. These three objectives are CBD objectives, namely conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of benefits arising from the utilisation of genetic resources. Import interventions that the NBSAP envisions to reach these objectives are restoration of ecosystem functions, promotioning biodiversity-friendly livelihoods, and strengthening law enforcement.

Financing needs and strategies for achieving these objectives are described in the National Biodiversity Finance Plan for the Philippines (BIOFIN, 2016), identifying a number of priority programs for biodiversity conservation. In the context of the CDORB, there are three priority programs that are the most relevant, which include a program on banking on biodiversity by conserving Indigenous species and crop varieties, a program on biodiversity and water resource management, and a program on improving resilience and reducing vulnerabilities.

When we study the contribution of ILF in the Cagayan de Oro Landscape to these priority programs, and thus to national biodiversity targets, we can make a number of observations. Within the landscape there is significant support through PES schemes for Indigenous communities practicing heritage agriculture and conserving biodiversity, which conserves Indigenous species and varieties. These PES schemes operate both through private sector funding as well as through other funding sources.

Additionally, reforestation activities in the landscape that are funded through PES schemes, as well as government disaster prevention funds that are leveraged through the CDORBMC, contribute to sustainable biodiversity and water resource

management. Upstream reforestation can lead to flood mitigation downstream and a consistent freshwater supply. Lastly, initiatives such as the CDORBMC can support the mainstreaming of biodiversity conservation into local, regional and national planning processes by providing a platform for discussions between various stakeholders. In this way, consensus on what is needed for biodiversity conservation can be reached.

It is also valuable to study how the NBSAP and NBFP for the Philippines facilitate ILF nationally and in the CDORB. The NBSAP contains targets that provide strong support to the development of ILF approaches in its borders. It provides spatially-explicit targets by detailing actions focused on specific ecosystem types and conservation classification types including PAs as well as KBAs. Importantly, the NBSAP sets a target (target 12; DENR, 2016) for strengthening the capacity for biodiversity conservation of public and private sector groups in terrestrial and marine PAs and KBAs. In doing so, the government incentivizes the creation of a policy framework that supports integrated landscape investment and finance (see section 7.1). This role of the government is further amplified in the NBSAP by a target that focuses on increasing the development of comprehensive land use plans under LGUs. This can form the basis for landscape wide conservation strategies and a basis from which integrated financing strategies can be developed.

The NBFP provides a basis for a number of other roles that the national government can play in ILF. It describes the need for generating additional revenues which in combination with a focus on PAs and KBAs can form the basis for a landscape based financing approach where the government plays an active role in developing innovative means for biodiversity financing (see section 7.2). At the same time the NBFP also prescribes an increase in public sector budgets and for the government to actively explore opportunities for increasing public funding on biodiversity, including through mechanisms such as debt swaps (see section 7.3). With regards to regulating landscape investment and finance (see section 7.4), the NBSAP sets targets on enforcement of environmental regulations which could improve the investment climate by increasing biodiversity finance impact. The NBSAP and NBFP at present do not provide any concrete basis for the government in promoting landscape-friendly market development (see section 7.5).

Source: iStock. White water rafting Cagayan river, Mindanao, Philippines

D.7 *Lessons learned*

As shown in the previous sections, ILF in the Cagayan de Oro landscape faces a variety of challenges but also provides valuable opportunities for contributing to advance the National Biodiversity in the Philippines. From the information shared in the previous sections and based on interviews with stakeholders in the landscape, there are a number of lessons that can be learned from ILF in the Cagayan de Oro landscape:

- **Adequate coordination within stakeholders' platforms is essential:** In the CDORB, the CDORBMC supports collaboration from the bottom (communities) and top (national and international stakeholders). The CDORBMC also develops a common vision and action plan and is developing finance strategies and a DST to identify critical areas for rehabilitation and flood risk reduction. Coordination within this platform and developing a common vision and action plan lies at the basis of ILF. Government could support these activities through subsidies for tool development and coordination, for example.

- **Monitoring among grassroots communities to support capacity-building:** Via PES and other programs, entities in the landscape support capacity building and monitoring of activities. Integrating Indigenous Knowledge Systems and Practices (IKSP) are important, as these will be well-suited to local conditions. It is foreseen that the CDORBMC may build capacity, through training and development of the technical skills of grassroots communities to enable them to carry out management and monitoring activities. Monitoring amongst local communities can increase the attractiveness of the landscape for other funding sources, such as green finance and institutional investors, by providing support for measuring impact.

- **Development of landscape-specific tools to support biodiversity finance:** Two tools were used to support the generation and distribution of financial resources. LIFT assesses the financing needs for landscape investments, searches for viable sources of finance, and develops a clear strategy of mobilization. It brings together different financial players in the landscape, such as businesses and finance analysts. LIFT helped the CDORBMC understand how existing PES systems could be expanded. Also, a DST was developed for the landscape to help identify critical areas for rehabilitation and where the impact on flood risk reduction would be greatest.

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