Harmony in action for land restoration: Linking social protection, financial inclusion and disaster risk finance

A guide for UNCCD Parties

United Nations
Convention to Combat Desertification

UNU EHS

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Foreword

In a world where as much as a quarter of all land no longer sustains life as well as it once did, land restoration is essential. Decades of farm expansion, mining, forestry and urban sprawl have left vast tracts of land devoid of healthy soils, adequate water or intact ecosystems. The need to reverse this trend is widely recognized, including by the current UN Decade on Ecosystem Restoration 2021-2030, and international efforts to improve degraded land—or to fight the land-degrading effects of climate change—have been gathering momentum around the globe.

Many of these initiatives, however, have focused on improving land health and ecological functioning while giving little thought to the estimated 3.2 billion people—most of them in developing countries—whose livelihoods depend on degraded land. Indeed, many land restoration efforts involve trade-offs that prioritize environmental goals over the economic and social interests of local people—even though land degradation and deforestation are estimated to cost about $6.3 trillion in losses from reduced food productivity, water shortages and other impacts.

As this report makes abundantly clear, it doesn't have to be this way: land restoration can help ecosystems, slow biodiversity loss and help reverse climate change, and it can improve incomes, ensure adequate food and water and make local communities more prosperous and resilient. Improving the lives and fortunes of people can easily become co-benefits in our efforts to improve degraded land.

These co-benefits emerge when human well-being and prosperity are considered alongside ecological recovery as equal measures of land restoration success. Incorporating social protection objectives within restoration projects, for instance, adds the benefits of alleviating local poverty, inequality and poor health by ensuring support through pension plans, unemployment benefits and public works.

Adopting the shared objectives of financial inclusion, meanwhile, adds access to affordable financial services, credit and insurance, so local people can make the most of better crop yields or other economic opportunities arising from restored land. Integrating disaster risk finance instruments further ensures that devastating floods, storms or other natural hazards don't simply erase the advantages of coordinated, simultaneous progress toward land restoration, social protection and financial inclusion.

This report serves as an indispensable roadmap for policymakers. It draws pathways to where the objectives of land restoration, social protection, financial inclusion and disaster risk management intersect. Other objectives not directly addressed here—such as challenging inequitable access to land or to land-use rights—are also important, but the shared policy goals described here can be generally applied. They provide an essential first step in ensuring that local people and communities are not sidelined by the often-narrow focus of land restoration efforts.

This guide is about empowering the synergies found in the broad, shared goals of land restoration, social protection, financial inclusion and disaster risk management, with a commitment to leaving no one behind. These synergies can make land restoration fair and equitable, respecting land rights and the tenure of those who often rely on these lands as both a home and as a source of livelihood. By centering inclusivity and equity, this approach aims to build a sustainable future in which all communities benefit from restored and resilient landscapes.

I'm grateful to everyone who helped deliver this important report. May it serve as a powerful catalyst for those who will use it wisely to make land restoration efforts benefit both people and the planet.

Ibrahim Thiaw

Executive Secretary

United Nations Convention to Combat Desertification

Executive Summary

The prevalence of land degradation is evident at a global scale. Between 20 and 40 per cent of the world's land surface is degraded or is undergoing degradation. This is primarily driven by the expansion of agriculture, mining and urban sprawl. The results are wetland drainage, soil erosion and loss of biodiversity. These, in turn, are aggravated by more intense and frequent weather extremes triggered by climate change. The deterioration of land and natural resources has serious impacts on livelihoods, food security and the overall resilience of people, communities and societies at large.

Land restoration is widely recognized as an effective approach to addressing these challenges, meeting human needs and improving biosphere stewardship. Land restoration not only aims to avoid, reduce and reverse land degradation, but it also supports more productive landscapes, addresses climate change and reduces biodiversity loss. Furthermore, it opens the opportunity for fostering sustainable livelihoods, decent work and human well-being.

To date, however, land restoration activities have also presented problems. Many of these activities, for example, focus on improving biodiversity or on sequestering carbon without due considerations for the well-being of those affected. This is despite the need for these activities to deliver co-benefits, such as income opportunities or improved agricultural yields, to incentivize and facilitate local acceptance and participation and to make the activities effective.

Integrating the policy objectives of social protection and financial inclusion, along with disaster risk finance instruments, within land restoration efforts can help ensure these co-benefits. Carefully incorporating them into land restoration activities can make land restoration outcomes more equitable, especially where trade-offs between different land-use aims result in negative effects for certain stakeholders. Social protection relies on different policy instruments for safeguarding people from poverty and risks to their livelihoods and for ensuring their well-being. Examples of these policy instruments are pension plans, unemployment benefits and public work. Financial inclusion supports access to useful and affordable financial products and services, such as credit and insurance. For example, efforts to ensure financial inclusion can involve promoting financial literacy or supporting microcredit schemes. Disaster risk finance instruments support the work of land restoration, social protection and financial inclusion policy instruments by addressing the fiscal impacts of natural hazards and enhancing resilience.

Recognizing this, the UNCCD COP decision 20/COP.15 para 5[1] requested guidelines to support the design of inclusive policies to make land restoration more attractive in terms of social protection, financial inclusion and disaster risk finance. In response, this guide describes the policy objectives of land restoration, social protection and financial inclusion, as well as the instruments of disaster risk finance, and identifies opportunities for building synergies between them. Three iterative steps are presented to guide the design of coherent policy instruments and programmes for land restoration, social protection, financial inclusion and disaster risk finance that leverage synergies to achieve their shared objective of enhancing human well-being. In this way, the document directly builds on and complements other guides intended to direct the effective and equitable implementation of land restoration initiatives, such as the Standards of Practice to Guide Ecosystem Restoration published in 2024 by FAO, SER and IUCN as a contribution to the United Nations Decade on Ecosystem Restoration 2021-2030.

[1] UNCCD COP decision 20/COP.15 para 5 requests "to develop guidelines for Parties on the design of policy options that make ecological restoration attractive in terms of financial inclusion, social protection and adaptive safety nets and contingent finance and reserve funds to support land users, especially women, youth, indigenous people, and other vulnerable groups, to reduce the additional burden caused by the added cost of land degradation driven by climate change and human induced activities and processes;" (UNCCD 2022, decision 20/COP.15 para 5).

Land restoration shares common objectives with social protection, financial inclusion and disaster risk finance.

Land restoration has the objective of contributing to food security and human well-being by avoiding, reducing and reversing land degradation and its impacts on livelihoods and health. Food security and human well-being are also central objectives for policy instruments aimed at social protection, financial inclusion and disaster risk finance. Social protection policy instruments aim to protect and improve living conditions. Financial inclusion policy instruments, meanwhile, aim to enhance economic conditions for financially disadvantaged people by providing access to useful and affordable financial products and services. Disaster risk finance aims to enhance the financial resilience of vulnerable communities to the impacts of natural hazards and thus contributes to food security and human well-being. The often-shared objectives among land restoration, social protection, financial inclusion and disaster risk finance present opportunities for leveraging synergies between them.

Leveraging synergies between land restoration, social protection, financial inclusion and disaster risk finance can increase people's resilience, generate co-benefits and make land restoration outcomes more equitable.

Land restoration, social protection and financial inclusion can play a pivotal role in supporting communities during times of hardship by enhancing their capacity to prepare for, cope with and adapt to environmental, social and financial shocks. Land restoration can decrease the negative impact of natural hazards and improve the reliability of the natural resources that communities depend on. Social protection also aims at reducing vulnerabilities of people and communities to natural hazards and other types of shocks. Financial inclusion can leverage investments in land restoration and increase financial resilience. Disaster risk finance can serve as an enabling financing mechanism for land restoration, social protection and financial inclusion by supporting the quick recovery of livelihood-supporting natural resources from the impacts of disaster. Leveraging synergies between land restoration, social protection and financial inclusion can help address conflicts between ecological, climatic, economic and social objectives and contribute to better and more equitable land restoration outcomes.

Guidance on how to leverage synergies

Building on the common objectives of land restoration, social protection, financial inclusion and disaster risk finance and recognizing the diversity of policy instruments relevant to each, this guide describes three iterative steps to guide the design of coherent policies which facilitate land restoration outcomes that are equitable and suitable to particular contexts.

Step I. Explore pathways to design coherent policies

Step I requires selecting one of three pathways to create coherence between financial inclusion, social protection, disaster risk finance and land restoration. The selection of one or more of the pathways for the design of policies to enhance coherence between the different objectives depends on the enabling environment for policy development (Step II) and on the context in which the policies will be implemented (Step III).

Pathway i: Design or adapt stand-alone policy instruments with co-benefits

Integrating social protection and financial inclusion policy objectives in the design of stand-alone land restoration policy instruments can substantially contribute to policy coherence. For instance, information-based land restoration instruments, such as training on sustainable agricultural practices, can target disadvantaged female farmers to provide decent work and mitigate chronic poverty by improving agricultural yields and creating co-benefits that address social protection. Simultaneously promoting financial literacy can further contribute to financial inclusion objectives. Similarly, social protection and financial inclusion instruments can contribute to land restoration objectives by, for example, promoting land restoration public works or by linking low-interest loans to environmentally friendly practices. The integration of land restoration objectives into the design of stand-alone social protection and financial inclusion policy instruments can also reduce the risk of conflict from competing objectives. For instance, while increased economic activity in response to financial

inclusion and social protection policy instruments can pose risks to the environment (e.g., by unsustainably intensifying agriculture), the simultaneous integration of land restoration objectives ensures these activities are always directed towards nature-positive goals.

Pathway ii: Combine multiple policy instruments into programmes

Combining policy instruments that address different policy objectives into one programme led by one organization or consortium of organizations can improve outcomes and reduce the negative consequences of efforts to achieve land restoration, social protection and financial inclusion or to use disaster risk finance. For example, providing vulnerable individuals access to low-interest loans while also providing them with training on tree nursery can more effectively and efficiently support both land restoration and financial well-being compared to stand-alone efforts to support these objectives independently. In circumstances in which land restoration directly conflicts with other policy objectives, policy programmes that seek to combine all objectives may provide a useful compromise. For instance, a logging ban to protect a forest might have negative effects on forest workers if only environmental policy instruments are being used. If, on the other hand, a programme includes environmental policy instruments combined with social protection instruments, the negative impacts on the well-being of forest workers can be minimized.

Pathway iii: Coordinate and align multiple policy instruments and programmes

Coordinating and aligning multiple existing policy programmes and policy instruments by different organizations aimed at land restoration, financial inclusion, social protection and disaster risk finance can more comprehensively address the broad socioeconomic systems that contribute to land degradation. Their coordination and alignment can help transform dominant land-use systems and value chains to reduce land degradation while creating social and economic opportunities. For example, shifting from an economic system that relies on inexpensive timber to a system based on more valuable timber products or on sustainably sourced non-timber forest products, such as honey or medicinal herbs, can simultaneously improve livelihoods while reducing forest loss and degradation.

The three pathways require different strong enabling environments for policy development (Step II). In general, the design of coherent stand-alone policy instruments (Pathway i) requires a lower level of cross-sectoral coordination than either combining multiple policy instruments (Pathway ii) or coordinating and aligning multiple policies programmes (Pathway iii). The latter two pathways require, for instance, more interactions of different stakeholders working to achieve different policy objectives. Nevertheless, the two pathways also have a greater potential to make policy instruments more effective and efficient over the long term and to help transform the human-ecological system by ensuring social, financial and environmental objectives are equitably addressed.

Step II. Review the enabling environment for policy development and implementation

Selecting the most appropriate pathway(s) for enhancing coherence between different policy objectives needs a thorough understanding of the enabling environment for policy development and implementation. This requires a review of existing political priorities and commitment timelines for land restoration, social protection, financial inclusion and disaster risk finance. Also needed is a comprehensive understanding of the current level of policy coherence and the existing funding and personnel capacities for policy coordination, financing and implementation. Important capacities include the ability to engage stakeholders in the policy design as different organizations and their experiences with land restoration practices can inform policy design and support implementation.

Improving the enabling environment can support combining multiple policy instruments. It can also help when coordinating and aligning different policy programmes and policy instruments. However, weaknesses in the enabling environment should not result in reduced efforts to design coherent stand-alone policy instruments.

Step III. Consider safeguards in policy design to ensure equitable land restoration outcomes

The design and development of land restoration policy instruments can be guided by established principles and standards of practice to safeguard equitable land restoration outcomes. To develop targeted

land restoration policies, policymakers should first evaluate the landscapes that require restoration and identify the appropriate land restoration practices. To prioritize pathways for creating coherence between land restoration, social protection, financial inclusion and disaster risk finance, policymakers should also appraise costs, stakeholder interests and ecological outcomes, considering both immediate and long-term impacts. Emphasizing the role of gender, youth, indigenous peoples and local communities in policy design and implementation helps to safeguard equitable land restoration outcomes and can yield more innovative and effective practices.

By providing often disadvantaged groups access to land and financial products and by supporting their engagement in land restoration through social protection instruments, ecosystems and human well-being can both be equally supported. Disadvantaged groups should therefore be actively involved in land restoration policy design, not merely as beneficiaries but as essential contributors. This will enhance the effectiveness of policy instruments over the long term by promoting equity of land restoration outcomes and leveraging knowledge for more effective and efficient land restoration.

List of Acronyms and Abbreviations

ASP	Adaptive Social Protection
BFP	Bolsa Floresta Programme (“Forest Allowance Programme”)
CBD	Convention on Biological Diversity
CCA	Climate Change Adaptation
COP	Conference of the Parties
DRR	Disaster Risk Reduction
DRF	Disaster Risk Finance
EbA	Ecosystem-based Adaptation
EPWP	Expanded Public Works Programme
FAO	Food and Agricultural Organization of the United Nations
GEF	Global Environmental Facility
HARITA	Horn of Africa Risk Transfer for Adaptation
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
IWMP	Integrated Watershed Management Programme
LDN	Land Degradation Neutrality
MCII	Munich Climate Insurance Initiative
MNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MNREGS	Mahatma Gandhi National Rural Employment Guarantee Schemes
NbS	Nature-based Solutions
NGOs	Non-governmental organization
SDG	Sustainable Development Goal
SLM	Sustainable Land Management
OECD	Organization for Economic Co-operation and Development
PES	Payment for Ecosystem Services
PSNP	Productive Safety Net Program
UERPP	Urban Employment and Reemployment Program
UNCCD	United Nations Convention to Combat Desertification
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNU-EHS	United Nations University Institute for Environment and Human Security
WOCAT	World Overview of Conservation Approaches and Technologies

Glossary

Adaptive social protection Helps build "the resilience of poor and vulnerable households by investing in their capacity to prepare for, cope with, and adapt to shocks: protecting their wellbeing and ensuring that they do not fall into poverty or become trapped in poverty as a result of the impacts" (Bowen and others, 2020, p. 6).

Climate change adaptation "The process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects" (IPCC, 2019a).

Climate change mitigation "A human intervention to reduce emissions or enhance the sinks of greenhouse gases" (IPCC, 2019a).

Crop insurance "Insurance coverage designed to protect farmers, processors, and wholesalers from climate risks which threaten harvests. Insurance payouts by such schemes can be delivered directly to farmers or the more broadly affected community, depending on the design of the mechanism"(InsuResilience Global Partnership, 2023).

Disaster risk reduction Efforts "aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development" (UN General Assembly, 2016).

Disaster risk finance Finance instruments that address "the fiscal impacts and economic losses caused by natural hazards (e.g., cyclones, droughts, earthquakes, floods) and supports countries to increase their financial resilience to natural[-induced] disasters" (GFDRR, 2016).

Ecological restoration Aims—as part of a wider continuum of land restoration activities—to recover native ecosystems or landscapes to the condition they would be in if degradation had not occurred, while allowing for environmental change (drawing on Gann and others, 2019; Nelson and others, 2024).

Ecosystem "A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit" (IPBES, 2018, p. 658).

Ecosystem services "The benefits people obtain from ecosystems. In the Millennium Ecosystem Assessment, ecosystem services can be divided into supporting, regulating, provisioning and cultural" (IPBES, 2018, p. 658).

Equitable land restoration outcomes Outcomes of land restoration policy instruments and programmes that promote the well-being of all stakeholders, particularly vulnerable groups, by reducing the negative effects caused by land restoration policies and maximizing their potential benefits by integrating ecological, social and economic objectives.

Financial inclusion A policy objective for ensuring individuals and businesses have "access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit, and insurance – delivered in a responsible and sustainable way" (World Bank, 2022a).

Land "A terrestrial bio-productive system that comprises soil, vegetation, other biota, and the ecological and hydrological processes that operate within the system" (UNCCD, 1994, p. 4).

Land degradation "Refers to the many processes that drive the decline or loss in biodiversity, ecosystem functions or their benefits to people and includes the degradation of all terrestrial ecosystems" (IPBES secretariat, 2019).

Land restoration "A continuum of activities that avoid, reduce, and reverse land degradation with the explicit objective of meeting human needs and improving biosphere stewardship" (UNCCD, 2022c, p. 4).

Land use "The human use of a specific area for a certain purpose (such as residential, agriculture, recreation, industrial, and so on). Influenced by, but not synonymous with, land cover. Land-use change refers to a change in the use or management of land by humans, which may lead to a change in land cover" (IPBES, 2018, p. 662).

Livelihood "[C]omprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base" (UNCCD, 2022d).

Nature-based solutions "[A]ctions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services and resilience and biodiversity benefits" (UNEA, 2022 EA.5/Res.5).

Policies A broad term referring to different policy instruments, policy programmes and policy-oriented activities, such as the coordination and alignment of different policy instruments, that help to achieve policy objectives.

Policy coherence "The systematic promotion of mutually reinforcing policy actions across government departments and agencies creating synergies towards achieving the agreed objectives" (IPBES, 2018).

Policy instruments Tools used to achieve policy objectives. These can include regulatory, financial and information-based instruments, such as land use plans, cash transfers, contingency funds and training.

Policy objective A desired policy outcome that can be achieved in various ways using different policy instruments or policy programmes. In this guide, policy objectives refer to the objectives of land restoration, social protection and financial inclusion, and disaster risk finance.

Policy programme A combination of multiple policy instruments aimed at achieving one or several policy objectives.

Social protection A policy objective that encourages "[n]ationally defined system of policies and programmes that provide equitable access to all people and protect them throughout their lives against poverty and risks to their livelihoods and well-being"(Global Partnership for Universal Social Protection, 2019).

Sustainable Land Management "The use of land resources, including soils, water, animals and plants, for the production of goods to meet changing human needs, while simultaneously ensuring the long-term productive potential of these resources and the maintenance of their environmental functions" (IPBES, 2018, p. 668).

Synergies "Linking processes in a way that increases the effects of the sum of the joint activities beyond the sum of individual activities, and thus making efforts more effective and efficient"(SCBD, 2019, p. 88).

1. Introduction

> "Our planet, the lives of all its inhabitants, and our future prosperity depend on the conservation, wise use, sustainable management, and restoration of land resources. **Our challenge is to motivate, enable, and implement regenerative land use practices for both short-term recovery and long-term resilience."** (UNCCD, 2022c, p. 152)

Anthropogenic factors such as deforestation, wetland drainage, overgrazing and the expansion of agricultural, industrial and urban areas are the most significant causes of land degradation. This global problem is further exacerbated by climate change (IPCC, 2019b). Estimates suggest that between 20 and 40 per cent of the global land area is degraded or degrading (UNCCD, 2022c), affecting 3.2 billion people residing in these areas (Le and others, 2016) and their natural resources. Economic activity valued at about $44 trillion per year—more than half of the world's gross domestic product—is moderately or highly reliant on natural capital, including all the ecosystem services that nature provides to people, such as pollination, maintaining water quality and disease control (WEF, 2020b).

The impacts of deforestation and land degradation alone cost the global economy an estimated $6.3 trillion in losses from reduced food productivity, less water availability and other impacts on ecosystem services (Sutton and others, 2016). Most severely hit are individuals and communities living and working on degraded land. The situation is particularly concerning for the world's smallholder farmers, who are under "immense strain from land degradation, insecure tenure, and a globalised food system that favours concentrated, large-scale, and highly mechanized agribusiness "(UNCCD, 2017, p. 11; Box 1). Many of them are being trapped in a downward spiral of land degradation and poverty fuelled by declining agricultural productivity and increasing water scarcity (UNCCD, 2022c). The interdependence between land and climate and, in particular, their differentiated impacts on the most vulnerable is highlighted in the Intergovermental Panel on Climate Change (IPCC) Special Report on Climate Change and Land (IPCC, 2019b).

Currently, around 2.3 billion people live in water-stressed countries (CRED and UNISDR, 2018). By 2050, more than half of the world's population could be exposed to severe water scarcity, affecting global grain production (High-Level Panel on Water, 2018; Veolia Water North America, IFPRI, 2011). Yet, almost $7 trillion from the world's public and private sectors flow annually into activities that have direct negative impacts on nature and its ecosystem services (UNEP, 2023b). These include subsidies and other financial incentives that encourage unsustainable agricultural practices, excessive logging and the continued use of fossil fuels. Meanwhile, nature-based solutions, such as land restoration, are supported by only $200 billion per year and remain critically underfunded. This amount is estimated to be just a third of the funding necessary to reach the world's biodiversity, climate and land degradation neutrality targets by 2030 (UNEP, 2023b).

Meanwhile, estimates suggest that nature-positive policies around the globe could generate more than $10 trillion in new business annually and create 395 million jobs by 2030 (WEF, 2020a). One estimate calculates that every dollar invested in restoring degraded land has the potential to generate $7 to $30 in economic benefits (Verdone and Seidl, 2017). These economic benefits make a clear case for policies that support scaling up land restoration initiatives that benefit nature and people.

1.1 Accelerating land restoration through social protection, financial inclusion and disaster risk finance

The UN Decade on Ecosystem Restoration, launched in 2021, reflects a growing interest in nature restoration. Much of the recent work to implement land restoration, however, has focused on climate change mitigation or on improving the conditions of degraded ecosystems. Far less effort has been made to integrate any consideration of the livelihoods of populations affected by land degradation. Land restoration is a proven and cost-effective solution to help reverse climate change and biodiversity loss. Land restoration is also effective at creating sustainable livelihood opportunities for people, improving incomes, securing food and water supplies and making individuals and communities less vulnerable to the impacts of climate change (UNCCD, 2022c). The delivery of co-beneficial outcomes, in which the improved functioning of land ecosystems contributes both to tackling the climate and biodiversity crises and to ensuring better, more sustainable livelihoods, can incentivize and enable land restoration (Di Sacco and others, 2021). Land restoration policies are important tools for encouraging these co-benefits. However, trade-offs between the environmental versus economic objectives of land restoration are often necessary, and, historically, the environmental objectives of most funders are given priority over the economic and social interests of local communities. Thus, the implementation of land restoration policies often reflects an inherent power imbalance and often fails to ensure that the interests of local communities are prioritized and safeguarded (Löfqvist and others, 2023).

Ensuring people have the capacity to overcome poverty and to manage and safeguard risk throughout their lives is a key objective of social protection policies. Similarly, financial inclusion policies aim to improve people's economic conditions by supporting their access to useful and affordable financial products and services. These services support business development and provide protection against financial shocks. In emergencies or in cases of climate-affected catastrophe, social protection and financial inclusion often depend upon disaster risk finance instruments to provide financial support. Thus, strategically harmonizing land restoration, social protection and financial inclusion policy objectives, while leveraging opportunities available through disaster risk finance instruments, can support positive outcomes for people and nature.

Recognizing this, the 15th Conference of the Parties (COP 15) of the United Nations Convention to Combat Desertification (UNCCD) in 2022 requested the development of a guidance document to support "the design of policy options that make ecological restoration attractive in terms of financial inclusion, social protection and adaptive safety nets and contingent finance and reserve funds to support land users, especially women, youth, indigenous peoples and other vulnerable groups, to reduce the additional burden caused by the added cost of land degradation driven by climate change and human induced activities and processes" (UNCCD 2022, decision 20/COP.15 para 5).

While the COP decision speaks of "ecological restoration," this guide focuses on the broader concept of land restoration (see Section 2.1) to include a wider range of initiatives and policies that can meet the different conditions and needs of each country.

1.2 The structure of this guide

This document is intended to support the design of coherent policies for land restoration, social protection, financial inclusion and disaster risk finance that encourage synergies to achieve their shared objective of enhancing human well-being. The guide comprises four chapters. After Chapter 1 sets out the context for the report, Chapter 2 describes the policy objectives, policy instruments and practices related to land restoration, social protection (including adaptive social protection) and financial inclusion. It also describes disaster risk finance (including contingent finance and reserve funds) as a key support tool for implementing coherent policies aimed at social protection, financial inclusion and land restoration.

Chapter 3 presents guidelines for designing coherent policy instruments and programmes that simultaneously consider land restoration, social protection, financial inclusion and disaster risk finance to ensure land restoration outcomes that are equitable and suitable for a given context. These guidelines comprise three iterative steps: Step I introduces three pathways that can be used to promote policy coherence between land restoration, social protection and financial inclusion. All stakeholders in land restoration projects should decide which pathway is the best for their particular contexts by reviewing the characteristics of the enabling policy environment as described in Step II. Similarly, Step III elaborates on factors that should be considered when designing policy instruments or programmes to effectively and efficiently address socioeconomic needs and ecological outcomes.

Chapter 4 concludes by highlighting the document's key messages. Case studies referenced throughout the document are described in detail following the conclusion of the guide.

Box 1: The global food system is a key driver of land degradation

Today, half of all habitable land is used for agriculture, leaving 37 per cent for forests, 11 per cent for shrub and grasslands and one per cent for areas covered by freshwater. A final one per cent of land is used for urban areas and infrastructure, including cities, towns, villages and roads (Ritchie and Roser, 2019). Between 1999 and 2013, about 20 per cent of the global vegetated land surface showed declining productivity[1]. This is also the case for cropland, despite considerable efforts to enhance its productivity (Cherlet and others, 2018). A major driver of land degradation is the global food system in its current form. Agriculture continues to expand at the cost of natural forests and, to some extent, grasslands. A strong driver of this expansion is commercial agriculture, especially the production of beef, palm oil and soybeans that serve as animal fodder (UNCCD, 2017). Around 80 per cent of deforestation in Southeast Asia, Africa and Latin America is caused by food systems. In Latin America, commercial agriculture is linked to about 70 per cent of forest loss in the region. In Africa and Asia, local/subsistence and commercial agriculture similarly contribute to deforestation (around 35 per cent each). Forests that are not lost are often subject to significant forest degradation. In Latin America and Asia, more than 70 per cent of forest degradation is driven by logging and timber extraction. In Africa, fuelwood and charcoal production are responsible for more than 50 per cent of forest degradation (Hosonuma and others, 2012). Indirect drivers also play a role in land degradation in these regions (and elsewhere). Among these indirect drivers are "demographic trends, land tenure, changing consumer demand for land-based goods and services, macroeconomic policies based on rapid growth, inequitable governance systems and public policies and institutions encouraging investments that suppress cross-sector coordination" (UNCCD, 2017).

[1] Land productivity is one of three land-based indicators for measuring progress towards the land degradation neutrality (LDN) targets under the UNCCD. Improved land productivity alone, however, is not sufficient as a metric of reduced land degradation as its increase might be at the cost of other land resources, such as soil quality and water availability. It therefore needs to be analysed in the context of wider anthropogenic land use (Cherlet and others , 2018).

1.3 Target audience

This guide is designed to be relevant to a wide range of actors contributing to policymaking for land restoration, social protection, financial inclusion and disaster risk finance. The audiences include national or subnational ministries and government entities tasked with cross-sectoral coordination, such as planning ministries, ministries of finance or presidential offices. Non-governmental organizations, UN agencies, private actors and research institutes, which often support or influence different steps of policymaking, can benefit from these guidelines, as well as corporations and other private actors involved in implementing land restoration efforts.

While the guide is designed to support government policymakers at national and subnational levels, non-government organizations can also lead initiatives for designing land restoration policy instruments and programmes that incorporate social protection, financial inclusion and disaster risk finance. In the latter case, governments still can assume a key role and support non-governmental organizations by creating an enabling environment for them.

2 Policy objectives, instruments and practices

This chapter describes the three policy objectives (land restoration, social protection and financial inclusion) and the key supporting policy instrument (disaster risk finance) that are the subject of this guide. It offers an overview of the three objectives and provides a description of some of the policy instruments and practices commonly employed to achieve them. Among the useful policy instruments for supporting the three policy objectives is disaster risk finance (including contingent finance and reserve funds). This important funding instrument for coherent policymaking is also described in this chapter.

2.1 Land restoration

Although the UNCCD COP decision (decision 20/COP.15 para 5, see chapter 1) mandating this report speaks of "ecological restoration", this guide addresses the broader concept of land restoration, which includes a wider range of practices and ecosystems. This wider focus helps to connect this guide to the UNCCD target to achieve land degradation neutrality (LDN). It also permits this guide to address a broad range of available policy instruments suitable for different national contexts and ecosystems.

The term land restoration refers to a "continuum of activities that avoid, reduce, and reverse land degradation with the explicit objective of meeting human needs and improving biosphere stewardship" (UNCCD, 2022c, p. 4). Land restoration's aim to avoid, reduce, and reverse land degradation suggests its direct alignment with the LDN targets (Figure 2) adopted by Party Countries to the UNCCD (UNCCD, 2015). As the sole legally binding international agreement linking the environment and sustainable development to sustainable land management (UNCCD, 2024), the UNCCD plays an essential role in increasing the restoration of degraded lands, while ensuring land continues to contribute to human well-being. Land restoration is also essential for targets identified in the two other Rio Conventions: the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC) (van der Esch and others, 2022). Similarly, land restoration is the subject of a variety of other global and regional initiatives—many of which contribute directly to the commitments made under the three conventions (Box 2).

Box 2: International commitments and initiatives for land restoration

The UN Decade on Ecosystem Restoration, 2021-2030, serves as a rallying call for the protection and revival of ecosystems for the benefit of people and nature around the world. Led by the United Nations Environment Programme (UNEP) and the Food and Agriculture Organization of the United Nations (FAO), its mission is to halt the degradation of ecosystems and to create political momentum and on-the-ground initiatives to advance ecosystem restoration. The Decade initiative is collaborating with several agencies, including the three Rio conventions, other international conventions and initiatives such as the Bonn Challenge. The Bonn Challenge is a voluntary, global initiative centered around forest landscape restoration to meet national priorities and international commitments, such as the UN sustainable development goals (SDGs) and the UNCCD's land degradation neutrality (LDN) targets, among others. Since being launched in 2011, the Bonn Challenge has become one of the world's largest programmes for realizing existing national priorities related to forest and landscape restoration (Dave and others, 2017). Regional and international partners, including the International Union for Conservation of Nature (IUCN), support the Bonn challenge by providing technical assistance to countries, such as help in assessing restoration opportunities.

By 2022, 115 countries around the world were committed to land restoration targets under one or more of the three Rio Conventions or the Bonn Challenge. About 1 billion hectares are undergoing restoration or are targeted for restoration between 2020 and 2030 (with a few commitments extending to 2040). Almost half of all the land to be restored is in sub-Saharan Africa. Regional initiatives, such as, the AFR100 initiative support these efforts. For instance, AFR100 aims to restore 100 million hectares of degraded and deforested land in sub-Saharan Africa by 2030. In Central and South America, the Initiative 20x20 aims to restore 50 million hectares of deforested and degraded land by 2030 (van der Esch and others, 2022).

Overall, international land restoration initiatives can be classified into two categories based on their main objectives: 1. initiatives aimed at ecosystem restoration and protection and 2. initiatives aimed at improved land management and rehabilitation. Although these land restoration commitments cover a range of land-use types, most address forest and agricultural land cover (van der Esch and others, 2022).

Although many regional groups and countries have committed to restoration initiatives, a lack of alignment between national plans and international conventions continues to hinder restoration progress. A greater emphasis on commitments that set measurable and geographically specific targets could ensure progress is effectively monitored and impacts for locally affected land users are transparent (van der Esch and others, 2022).

Box 2 contd.

Figure 1: Land restoration as a connector between the Rio conventions (UNCCD, 2022c).

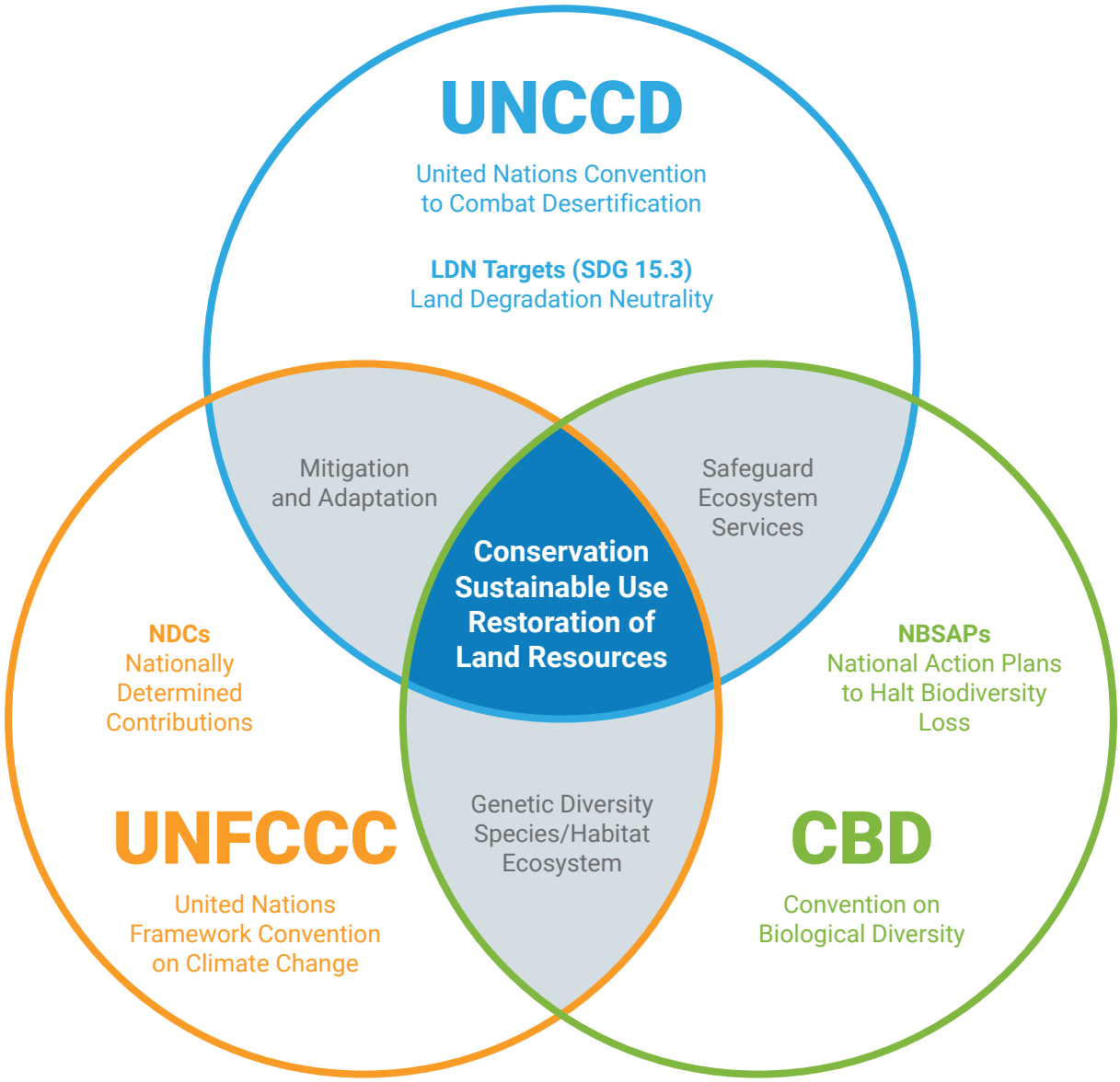
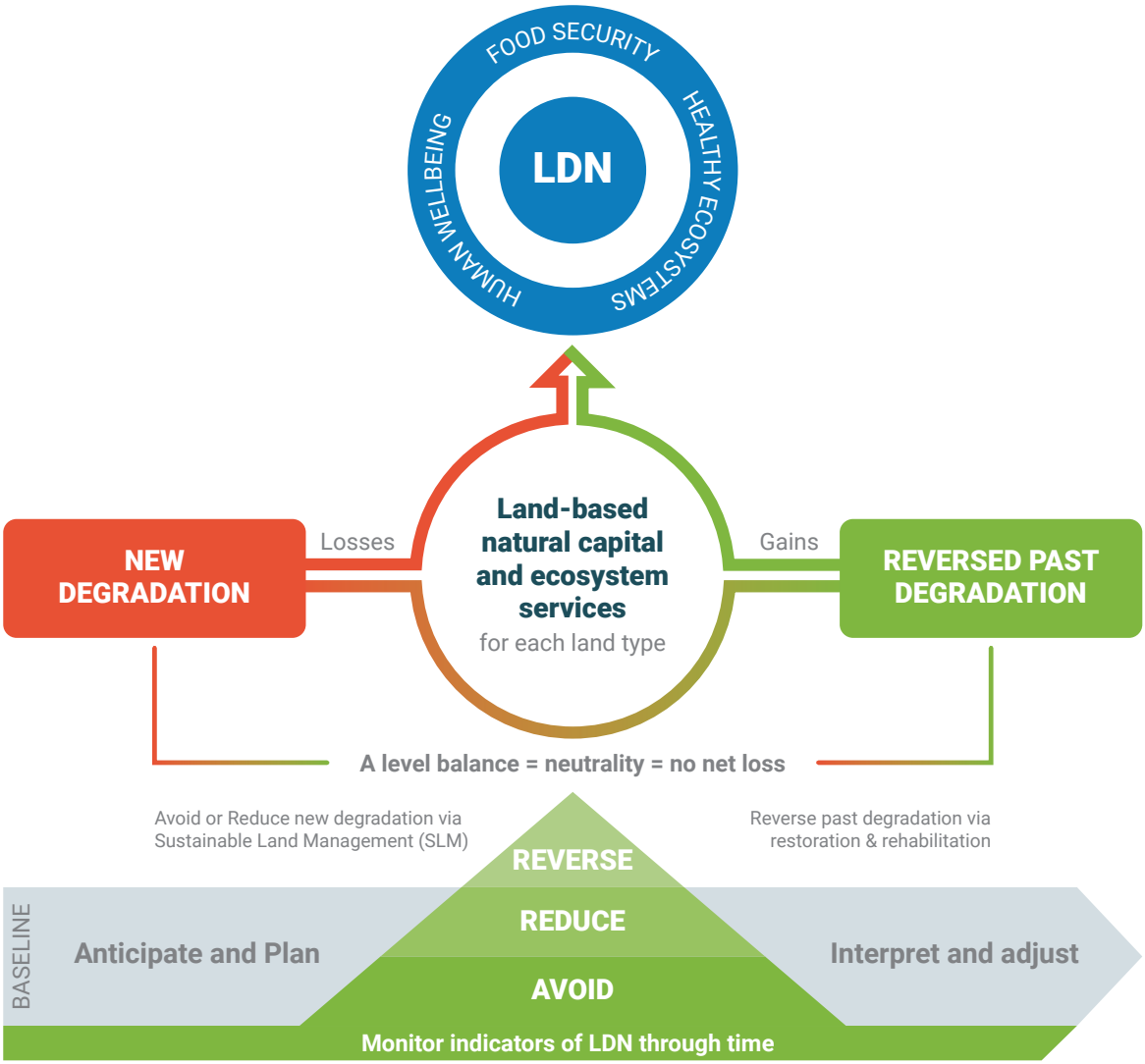
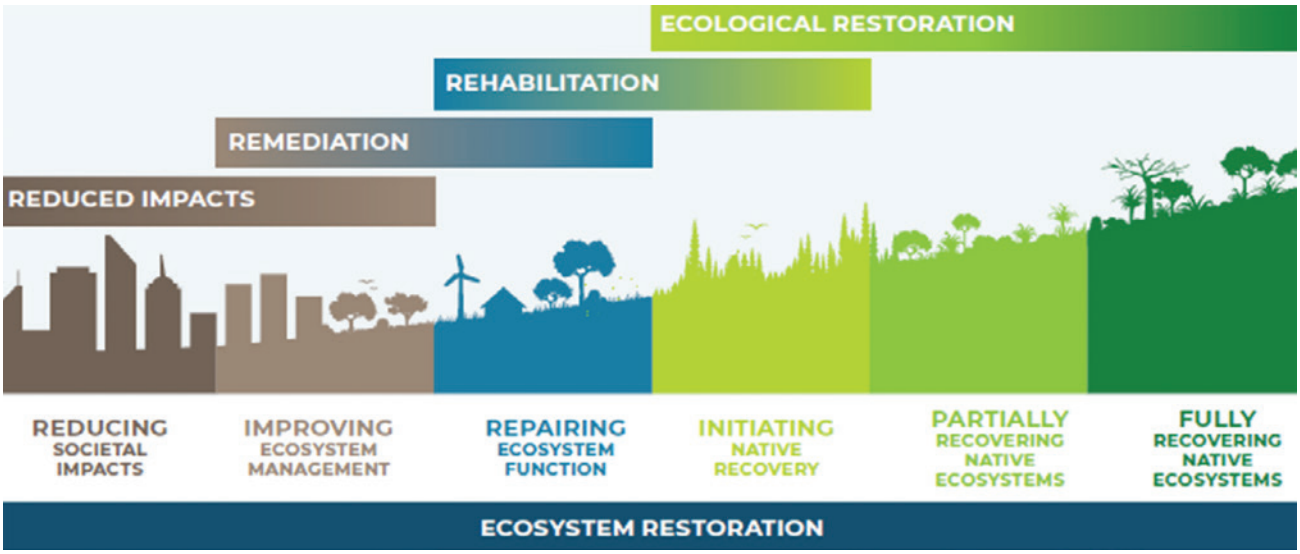


Figure 2: Conceptual framework for achieving Land Degradation Neutrality (Orr and others, 2017).



The term land restoration is often used interchangeably with ecosystem restoration when terrestrial ecosystems are addressed (UNCCD, 2022c, p. 4). Both of these terms are distinct from the term ecological restoration, which is considered to be one part of the continuum of activities for achieving ecosystem restoration (Figure 3; Nelson and others, 2024) and is closely related to rewilding (UNCCD, 2022c, p. xvii). Land restoration includes activities that enhance ecosystem services but do not necessarily return ecosystems to their pre-disturbance state. Ecological restoration, by contrast, focuses more narrowly on re-establishing native or pre-existing ecological structures and functions, including their biotic integrity (Nelson and others, 2024; Orr and others, 2017).

Figure 3: The ecosystem restoration continuum and associated concepts (Nelson and others, 2024).

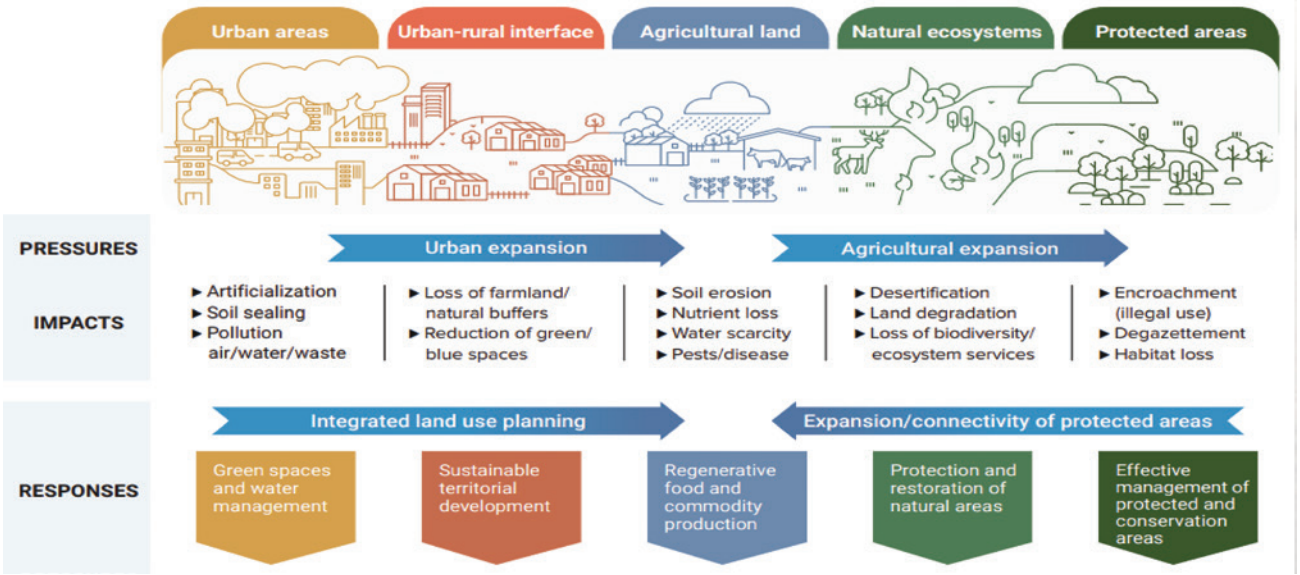


Land restoration can be achieved in several ways, depending on the ecosystem, objectives and existing degradation pressures and impacts (Figure 4; UNCCD, 2022c; UNEP, 2021). These different ways to achieve land restoration include

- changing degraded natural ecosystems into more intact ecosystems (e.g., supported by assisted natural regeneration);
- changing degraded modified ecosystems into more functional ecosystems (e.g., greening urban areas or rehabilitating farmland); and
- changing modified ecosystems into more natural ecosystems (e.g., converting agricultural land to forest (UNEP, 2021).

Applying a landscape lens to restoration activities can enlarge the scale of site-based land restoration efforts with a more local focus (i.e., addressing one particular ecosystem). Landscape-scale restoration can more effectively and efficiently support wildlife metapopulations—that is, groups of spatially separated but interacting populations of the same species—by providing necessary habitat connectivity across landscapes (Perring and others, 2015) and can

Figure 4: Key pressures, impacts and responses of different land uses (UNCCD, 2022c).



help to secure a wide range of ecosystem services (and other "nature's contributions to people", or NCPs, that are informed by perspectives from the social sciences, local practitioners and indigenous peoples[2]; Mohamed and others, 2024). Site-specific or landscape-based land restoration can ensure changes in ecosystem management practices and in the uses of ecosystem services that encourage global socioeconomic well-being (Díaz and others, 2018). Thus, land restoration succeeds best when it incorporates the rights and needs of the people who depend most on the ecosystem (Box 3; UNEP, 2021).

Land restoration policy instruments

Land restoration efforts that support one ecosystem service sometimes compete with land uses focusing on another. For example, the harvest of large quantities of timber from forests can negatively affect forest health and its ability to support biodiversity and reduce flood risk (Rackelmann and others, 2023). Therefore, a wide range of stakeholders with different and competing interests in different ecosystem services can either support or oppose land restoration efforts. To manage and balance these different interests, several policy instruments have been developed. These include the following:

- **Regulations** - Laws and other legally binding documents/tools—such as land use plans—that stipulate or limit activities for a more sustainable treatment of nature and ecosystem services.
- **Tradeable permits** - Baseline-and-credit systems or cap-and-trade systems that regulate resource use or pollution. A popular example of this is the European Union's Emissions Trading System.
- **Environmental taxes** – A fiscal instrument used by governments to reduce negative environmental impacts by making unsustainable practices more expensive.
- **Public financial support** – Government financial incentives to support sustainable land management practices, promoting environmentally friendly practices and enhancing public goods. These incentives include, for example, grants, soft loans[3], preferential tax treatment, state-led payments for ecosystem services (PES), debt for nature swaps or disaster risk finance.
- **Information-based approaches** – These provide information for stakeholders to support environmental objectives. They can include information outlining the true costs and benefits of environmental practices or guiding the implementation of sustainable practices, projects or systems, such as private-sector-led PES.
- **Voluntary approaches** – These build on negotiated agreements between the private sector and governments, including standards of conduct and environmental targets. If the agreements are not met, regulations often become necessary.
- **Compensation** – Government financial support to balance the impacts of other environmental policy instruments on disadvantaged elements of society, such as poor households, to avoid a disproportionate burden on disadvantaged groups and to increase policy acceptance (OECD, 2008).

Frequently, these policy instruments are implemented as a mix to achieve the same environmental objectives. Many of these policy instruments are also used by other policy fields and may also affect change beyond their intended environmental effects. For instance, information-based approaches or financial support instruments are also used by the policy fields focusing on social protection and financial inclusion. Many policy instruments require the engagement of different ministries, especially those that work across sectors. For example, financial instruments may need to be coordinated with the ministry of finance, while land use plans may require engaging the ministry responsible for spatial planning.

[2] The concept of nature's contributions to people (NCPs) builds on the idea of ecosystem services by recognizing multiple perspectives regarding our human-nature relationship. The idea has been described by the IPBES as an umbrella concept that allows for the synthesis of information and interests from different stakeholders concerned with ecosystem services, environmental conservation, ethnoecology and political ecology (Díaz and others (2015); Díaz and others (2018); IPBES (2019)).

[3] This is also know as "concessional funding," which refers to a loan with no interest or a below-market rate of interest.

Box 3: Recognizing local community needs is key to long-term land restoration success: Experiences from Kenya

Integrating socio-environmental considerations in land restoration policies is crucial to avoid their potential negative impacts on local communities and/or the environment. The experience in Kenya, where the creation of new protected natural areas initially excluded indigenous communities, serves as a valuable lesson. The exclusion adversely impacted local livelihoods and indigenous access to resources, and it created the perception among indigenous communities that the new protected natural areas infringed on their human rights. While the existence of these protected areas is often enjoyed locally, nationally and globally, they often place a disproportionate financial burden on local communities, highlighting a significant lack of equity in the sharing of costs and benefits.

To tackle these challenges, a national non-government organization, Nature Kenya, developed a comprehensive strategy that includes establishing and strengthening site support groups and networks across 26 protected areas. These groups serve as educators for people in local communties, and they also monitor birds, identify threats to sites and engage in lobbying and advocacy with the government. Local communities are also now being encouraged to set up income-generating activities that do not harm the environment. For example, one project aims to link conservation and development through the sustainable use of butterflies. People living around Arabuko Sokoke forest in coastal Kenya are encouraged to raise butterfly caterpillars on forest plants. Once the caterpillars turn into pupae, they are sold to butterfly exhibits both locally and internationally. The project not only promotes environmental conservation, but also provides a viable economic benefit to the local communities, showcasing a successful integration of conservation with sustainable development. Other projects address climate change by promoting clean cook stoves and fireless cookers. These not only reduce the dependence on fuel wood by more than 90 per cent of the rural population, they also offer significant health benefits, conserve natural vegetation and reduce greenhouse gas emissions, thus contributing to a healthier environment and providing women with more efficient cooking solutions.

These initiatives reflect how conservation and sustainable practices can address both environmental and social needs, demonstrating that a holistic approach to conservation can benefit the planet and its inhabitants. Moreover, it highlights the importance of including non-government organizations working at the local level in the policy design process to build on their experiences connecting land restoration and socioeconomic objectives.

Source: Nature Kenya, 2024

2.2 Social protection

Social protection is described as a "nationally defined system of policies and programmes that provide equitable access to all people and protects them throughout their lives against poverty and risks to their livelihoods and well-being" (Global Partnership for Universal Social Protection, 2019). Social protection is a human right outlined in the Universal Declaration of Human Rights of (1948) and in the International Covenant on Economic, Social and Cultural Rights (1966; ratified by 171 countries). The United Nations sustainable development goal (SDG) 1.3 calls on countries to implement nationally appropriate social protection systems to reduce and prevent poverty for everyone. Social protection systems have developed considerably over the past century, and most countries have social protection schemes in place today. Yet, this right is realized to different extents around the world. In 2020, the International Labour Office stated that only 46.9 per cent of the global population was effectively covered by at least one social protection benefit (e.g., parental leave benefits, sickness benefits, unemployment protection) (International Labour Office, 2021). Most of the population in Europe and Central Asia (83.9 per cent) are covered by at least one social protection benefit, followed by the Americas (64.3 per cent). Social protection coverage is below the world average in Asia and the Pacific (44.1 per cent of the population), the Arab States (40.0 per cent) and Africa (17.4 per cent; (International Labour Office, 2021).

Social protection policy instruments

Social protection policy instruments reduce poverty (International Labour Office, 2021), and they contribute directly to social, economic and environmental SDGs[4] by improving food security and nutrition, health, economic development, social inclusion, social cohesion and nation building (Schüring and Loewe, 2021).

Different social protection policy instruments exist that address different social protection policy objectives (e.g., poverty alleviation or protection against the different types of shocks that can occur in life, such as illness), target different groups (e.g., children, workers, elderly, unemployed, low-income persons) and rely on different funding mechanisms (e.g., contributory and non-contributory finance schemes[5]).

Figure 5 shows a typology of three broad categories of social protection policy instruments. Each of the three categories addresses a particular policy objective: social assistance, social insurance and active labour market policy instruments. In addition, some social protection policy instruments operate as part of adaptive social protection, an approach designed to ensure social protection is sufficiently flexible and adaptable to respond to various covariate shocks (hazard-induced disasters, pandemics, economic or conflict-related crises). Adaptive social protection instruments are mainly developed within the social assistance category of social protection policy instruments to increase the resilience of vulnerable households to climate-related hazards.

i. Social assistance[6] policy instruments help individuals or households deal with chronic poverty, destitution and vulnerability. This category of non-contributory policy instruments is usually financed by governments and/or through taxation (Bowen and others, 2020). The Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE) is the World Bank's compilation of indicators for analysing the scope and performance of social protection policy instruments and policy programmes around the globe. It lists the following policy instruments among those that fall into the social assistance category:

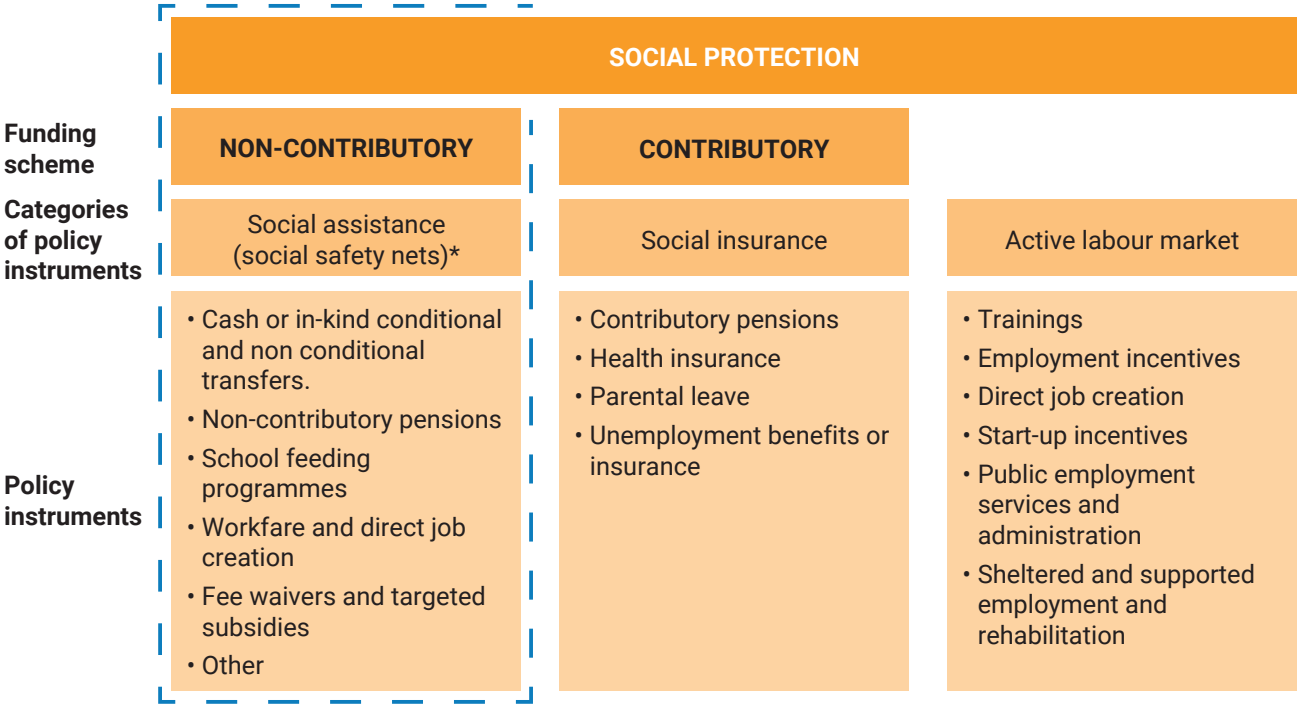
- **Cash or in-kind conditional or non-conditional transfers** are transfers from the state to an individual or household as cash or as in-kind access to goods (e.g., food and education supplies)

[4] These include the elimination of poverty (SDG 1) and hunger (SDG 2), the promotion of good health and well-being (SDG 3), gender equality (SDG 5), decent work and economic growth (SDG 8), reduced inequalities (SDG 10), and peace, justice and strong institutions (SDG 16) as well as climate action (SDG 13) through its role in facilitating the "just transition" towards greener economies and societies (International Labour Office, 2021).

[5] Non-contributory finance schemes "normally require no direct contribution from beneficiaries or their employers as a condition of entitlement to receive relevant benefits" (ILO, 2024b), while contributory schemes normally require contribution from beneficiaries or their employers.

[6] Social assistance is often referred to by the term "social safety net". Social safety net, however, is a term that often carries negative connotations and is sometimes considered to imply "handouts" for those lacking willpower to overcome poverty. This is despite the fact that social protection benefits are rights and have multiple benefits. We therefore only refer to the term social assistance in this report.

Figure 5: Social protection typology (inspired by Oxford Policy Management, 2017).



and social services. These tranfers can either be unconditional or conditional. For the latter, they are usually conditional on certain behaviours (e.g., school attendance by children).

- **Non-contributory pensions** are payments from the state to an individual that replace earned income for poor people (e.g., old age social pensions, disability/war victims non-contributory related benefits, survivorship).

- **School feeding** provides food to children while they are in school or to take home.

- **Public works, workfare and direct job creation** are "social protection interventions that offer remuneration (in cash or in kind) to poor or vulnerable people in exchange for temporary work on labour-intensive community projects which generate or maintain (public) infrastructure and social services" (Beierl, 2022).

- **Fee waivers and targeted subsidies** are usually related to health or education. They include health insurance exemptions, reduced medical fees, education fee waivers, food subsidies, housing subsidies and allowances, utility and electricity subsidies and allowances, agricultural-input subsidies and transportation benefits.

- **Other social assistance policy instruments** include scholarships/education benefits, social care services, transfers for caregivers (i.e., to care for children, youth, family, disabled and older persons), tax exemptions and anything that is left out from above categories.

ii. Social insurance policy instruments aim to ensure adequate living standards in the face of health shocks and life changes (e.g., due to old age, sickness, disability or natural hazard-induced disasters; World Bank, 2012). Social insurance policy instruments comprise contributory schemes that are usually financed by individuals, someone on their behalf (employer) or through taxation. Social insurance policy instruments can include the following:

- **Contributory pensions** are payments from the state to an individual that replace earned income during retirement years. It can include old age pension, survivors' pension or disability pension.

- **Health insurance** provides "financial protection against the health care costs arising from disease or accidental bodily injury. Such insurance usually covers all or part of the costs of treating the disease or injury. Insurance may be obtained on either an individual or a group basis" (Hsiao and others, 1997).

- **Parental leave** is granted to "parents of young children for childcare (usually several months or years)" (ILO, 2024a).

- **Unemployment benefits or insurance** are financial payments provided to individuals who have lost their jobs involuntarily and meet certain eligibility criteria.

iii. Active labour market policy instruments promote decent work, protect existing jobs and stimulate employment. The International Labour Organization (ILO) and the Organisation for Economic Co-ordination and Development (OECD) further classify active labour market policy instruments into six subcategories:

- **Training** can be conducted to increase the skills and competencies of unemployed individuals or to support reorientation of workers to another sector (Ernst and others, 2022).

- **Employment incentives** are subsidies given by the state to employers to encourage employers to preserve (e.g., short-term work schemes) or to create new jobs (e.g., hiring and wage subsidies; Ernst and others, 2022).

- **Job creation by the state** usually brings social benefits for the community by reducing unemployment and protecting vulnerable individuals from negative economic shocks. This is the case with public works mentioned with the social assistance policy instruments (OECD, 2015).

- **Start-up incentives** are programmes that support unemployed people and target groups in starting their own business or becoming self-employed (OECD, 2015).

- **Public employment services and administration** deliver job-search assistance, counselling and intermediation support (Ernst and others, 2022).

- **Sheltered and supported employment and rehabilitation** services provide opportunities for individuals with disabilities to work, either by subsidizing their employment or by preparing and training them for work (OECD, 2015).

The categories of social protection policy instruments described above need adequate legal frameworks, expertise and financing to be effective and efficient (International Labour Office, 2021). While the positive impact of social protection policy instruments has been well documented, social protection efficiency and effectiveness are "largely a political matter", because they depend on the level of investment made by the state (UNESCAP, 2018).

Many of these policy instruments are more effective and efficient when combined. For instance, cash transfers complemented with skills and competencies training and access to microfinance support have the potential to increase the adaptive capacities of households.

Context also matters. For instance, a high degree of informality in the labour market and in policy implementation for some low- and middle-income countries can limit the use of social insurance and active labour market policy instruments (International Labour Office, 2021). Furthermore, climate change increasingly challenges traditional social protection policy instruments that can be overburdened by the increasing frequency and intensity of climate hazards. Climate change challenges can be exacerbated, in turn, by interconnected economic crises, pandemics, population displacement or other shocks (Béné and others, 2018; Bowen and others, 2020; IPCC, 2012).

iv. Adaptive social protection (ASP)[7] is an approach to social protection that is born from the need to strengthen resilience of the most vulnerable households affected by increasing climate hazards. Social protection policy instruments can thus connect social protection systems with disaster risk reduction and climate change adaptation (Davies and others, 2008) to make social protection systems flexible and

[7] The COP decision refers to "social protection and adaptive safety nets." Since the terms "adaptive safety nets" and "adaptive social protection" are often used interchangeably and since the term "safety net" is sometimes viewed pejoratively, this guide refers to the term adaptive social protection.

adaptable to accelerating climate hazards. While initially focusing on climate hazards, ASP policy instruments increasingly consider other exacerbating shocks, such as the COVID-19 pandemic. These policy instruments go further than immediate responses to shocks by enabling participants to adapt in the long term and to increase their resilience. In this context, household resilience is understood as the "capacity to prepare for, cope with and adapt to shocks: protecting their well-being and ensuring that they do not fall into poverty or become trapped in poverty as a result of the impacts" (Bowen and others, 2020, p. 6). In other words, ASP policy instruments reduce exposure and vulnerabilities (i.e., improve preparedness capacity), minimize the impacts of shocks in the short term (i.e., improve coping capacity) and enable a transformation toward a more resilient state in which households "bounce back better" after a shock (i.e., improve adaptative capacity; (Bowen and others, 2020; Davies and others, 2008).

Common examples of ASP policy instruments include cash transfers to households to increase their ability to absorb the negative impacts of climate change. In cases of drought, for example, recipients can use the money to compensate for income losses and, during food-secure months, households can invest in assets like irrigation or education, reducing exposure and vulnerabilities in the long term (Ulrichs and others, 2019).

ASP policy instruments require particularly good coordination among institutions and other stakeholders working on social protection, disaster risk management and climate change adaptation (Béné and others, 2018). Optimally, the instruments are adaptable to accommodate a larger number of households or to enhance the impact or duration of the instrument's response to significant shocks on a large scale (Béné and others, 2018). ASP policy instruments primarily target households at risk from climate-related events, and they need to be activated shortly before or after an event to ensure timely delivery and maximum positive effect (Béné and others, 2018). Finally, while there is evidence of the impact of ASP policy instruments on preparedness and coping capacities, evidence of the effects of these instruments on long-term resilience (i.e., adaptive capacity) is still limited (Ulrichs and others, 2019).

2.3 Financial inclusion

Financial inclusion is defined as "individuals and businesses having access to useful and affordable financial products and services that meet their needs—transactions, payments, savings, credit and insurance—delivered in a responsible and sustainable way" (World Bank, 2022a). According to the Global Findex Database, about 1.4 billion adults worldwide do not have a bank account (World Bank, 2022a). Moreover, many who do not have bank accounts belong to the most vulnerable groups in society, such as rural dwellers or poor and less-educated women. Promoting financial inclusion plays a crucial role in fostering social inclusivity. Financial inclusion often unlocks avenues for progress that were previously inaccessible to marginalized segments of society (UNCCD, 2023).

Financial inclusion is recognized as critical for poverty reduction and for alleviating income inequality (Ratnawati, 2020; Omar and Inaba, 2020). It also empowers vulnerable segments of society by enabling these groups to save, borrow, make payments and obtain insurance, thereby contributing to their economic security and well-being (Wang and Fu, 2022). Additionally, financial inclusion is linked to the promotion of inclusive economic growth and is a key enabler of seven United Nations sustainable development goals (SDGs): SDG1 on eradicating poverty; SDG 2 on ending hunger, achieving food security and promoting sustainable agriculture; SDG 3 on improving health and well-being; SDG 5 on achieving gender equality and economic empowerment of women; SDG 8 on promoting economic growth and jobs; SDG 9 on supporting industry, innovation and infrastructure; and SDG 10 on reducing inequality. Additionally, SDG 17 on strengthening the means of implementation implies a role for greater financial inclusion through greater savings mobilization for investment.

Greater financial inclusion helps poorer households and informal economies increase resilience and capture economic opportunities. According to the World Bank (2022a), approximately 60 countries

have already formulated national financial inclusion strategies in collaboration with the national banking sector, finance ministries and multilateral development organizations.

Since the specific objectives of financial inclusion vary, measuring the degree of financial inclusion within a country or other jurisdiction involves a consideration of multiple metrics. These include measures of access to financial services, usage of financial products, affordability, quality, range of options and level of knowledge about financial services and products (Jahan and others, 2019; Loukoianova and others, 2018). Important national indicators of financial inclusion include data on the number of people with access to a bank, the number of adults with credit from regulated institutions, the number of enterprises with bank access and the number of people using mobile money services. Although inequities can be created by unequal access to digital technology, digital identities, mobile wallets and advancements in mobile network coverage nevertheless offer new financial inclusion opportunities for rural communities to participate in the green transition (Sahay and others, 2020). Additionally, BenDor and others (2015) found that, in the United States, domestic ecological restoration efforts sustained approximately 126,000 employees and contributed about $9.5 billion to annual economic output in 2014.

Financial inclusion policy instruments

Policy instruments to encourage and support financial inclusion include providing access to financial services, such as banking, microfinance, agricultural credit, insurance, savings and access to payment technologies (UNCCD, 2023). Other financial inclusion policy instruments aim to expand financial literacy among disadvantaged individuals, households and micro, small and medium enterprises.

Among the main financial inclusion policy instruments, the following five are intended to facilitate access to financial services and promote economic development:

i. **Financial literacy** involves educating individuals about financial products, services and concepts, thereby empowering them to make informed financial decisions (Grohmann and others, 2018; Fanta and Mutsonziwa, 2021).

ii. **Digital financial services** use digital technologies, such as mobile banking, digital payments and online financial platforms, especially in remote and underserved areas (Siano and others, 2020; Wang and Fu, 2022).

iii. **Microfinance** institutions provide small loans, savings and insurance services to individuals and small businesses, particularly those without access to traditional banking services. This instrument has been especially important in developing economies (Nawaz, 2018).

iv. **Access to banking services** means the establishment of bank branches and ATMs in underserved areas, as well as the use of basic banking services, such as savings and checking accounts (Berhanu Lakew and Azadi, 2020; Mayorova and others, 2023).

v. **Mobile money and agent banking,** such as mobile money platforms and agent banking networks, have been instrumental in extending financial services to populations with no access to banks, particularly in rural and remote areas (Siano and others, 2020; Wang and Fu, 2022).

Governments have a key role in advancing financial inclusion policy instruments by creating enabling environments and executing measures that encompass investments in financial literacy programmes and in promoting use of digital infrastructure. State institutions and regulatory authorities are often involved in implementing financial inclusion policy instruments through activities such as setting up financial inclusion targets, creating supportive regulatory frameworks and incentivizing financial institutions to serve marginalized populations (Ofosu-Mensah Ababio and others, 2023; Gigauri, 2022). National financial inclusion policy instruments often require the collaboration of multiple ministries and stakeholders to expedite and amplify their influence.

2.4 Disaster risk finance

Securing adequate funding for times when disasters occur is a key objective of disaster risk finance. It "addresses the fiscal impacts and economic losses caused by natural hazards (e.g., cyclones, droughts, earthquakes, floods) with the objective to increase the financial resilience" of countries and communities to disasters that can result from these hazards (GFDRR, 2016). Disaster risk finance instruments can be broadly categorized in ex ante (pre-disaster) or ex post (post-disaster) instruments depending on their timing and the preparation needed. Ex ante instruments are pre-arranged and provide more rapid and reliable access to funds when a disaster strikes. Ex post instruments of disaster risk finance, on the other hand, are reactive measures taken after a disaster occurs. While the latter can provide necessary funds in the immediate aftermath of a disaster, they often come with delays and unfavorable terms for the national governments. Hence, having ex ante disaster risk finance instruments in place represents a strategic move away from national governments relying on post-disaster aid and prioritizes preparedness by establishing plans, systems and finances before a disaster strikes.

Risk layering is a fundamental concept in disaster risk financing. It refers to the use of distinct risk financing mechanisms based on the expected severity and frequency of climate-related events. These mechanisms build on and complement one another. Governments employ multiple risk financing instruments in combination to protect against potential losses from hazards of various severity and frequency (MCII, 2023).

National disaster risk financing strategies, which aim to enhance the financial resilience of countries (Cisse, 2021), usually outline financial plans that build on risk-layering strategies and include different financial instruments accessible to governments in case of a disaster. By 2021, about 50 countries had developed national disaster risk finance strategies (InsuResilience Global Partnership, 2023).

While disaster risk finance may not explicitly address the objectives of land restoration, social protection and financial inclusion, the instruments of disaster risk finance often address similar objectives. For instance, droughts pose significant threats to the productivity of land with substantial global damages and costs for people. The risks from these impacts are often covered by disaster risk financing instruments. Against this background, disaster risk finance emerges as a set of instruments that can help to finance land restoration, social protection and financial inclusion.

Disaster risk finance instruments

Disaster risk finance instruments are designed to support national disaster risk management policies. They are generally part of a national disaster risk financing strategy and are created through a legal mandate. Two main groups of disaster risk finance instruments are relevant to support land restoration, social protection and financial inclusion: Disaster risk retention instruments and disaster risk transfer instruments.

i. Disaster risk retention instruments are ex ante instruments established by national governments before a disaster occurs to help manage its impacts. Governments can obtain funds from internal reserves or borrow them externally from development banks or financial institutions. Two types of disaster risk retention instruments are contingency funds and reserve funds (see Table 1):

- **Contingency funds** aim to support early intervention and quick recovery from disasters. Contingent financing is used mostly to respond to low-to-medium frequency and severity hazards. In some cases, because of limited resources, least developed countries and small island developing states obtain a loan from multilateral financial organizations. This is referred to as contingency credit. Among other mechanisms of contingency finance that have been applied globally are external disaster funds and restoration funds. Unspent contingency funds are returned to government budgets at the end of the fiscal year (Cisse, 2021; OECD, 2022).

- **Reserve funds** are primarily built from public financial sources and are another important part of an efficient risk-layering approach that allows governments to retain risk as part of their budget, without external borrowing, to facilitate a rapid response in case of a shock. Unlike contingency

Table 1: Key differences between contingency and reserve funds (based on Cisse, 2021).

	Contingency Fund	Reserve Fund
Disaster type for which the fund is intended	Expected low-severity, high-frequency disasters, such as small floods, moderate storms, etc.	Less frequent, more severe disasters, such as large-scale floods or extreme weather events.
Timing	Immediate response and relief, accessed immediately to cover crucial response and relief efforts.	Reconstruction and rehabilitation efforts, accessed after a disaster declaration.
Funding amount	Small sums, catering to initial needs.	Large, accumulating sums for long-term recovery (e.g., by rebuilding infrastructure).
Management	Included in a government's annual budget and equipped with quick disbursement procedures.	A dedicated fund outside of a government's regular annual budget and directed by a strict governance structure.

funds, reserve funds accumulate over time when they are not needed (Cisse, 2021; OECD,2022). Reserve funds have generally low operational costs and immediate availability during emergencies. Reserve funds can be set up by national, city or local governments and have clear processes and procedures in place to govern how the funds can be used

Both contingency and reserve funds strive to minimize disaster impacts through readily available resources—with clear, trackable spending—in response to disasters. Establishing these funds requires collaboration and agreement among policymakers to decide on their creation, design and legal foundation (World Bank, 2023). For example, the Pooling Fund for Disasters in Indonesia was created by a legal mandate that also outlines the standards and procedures for spending the fund (World Bank, 2020).

Dedicated reserve and contingency funds to support land restoration at national and international levels are less common. However, a number of existing examples are instructive. For instance, several countries have reserve funds with different financial capacities available to quickly restore different ecosystems after disturbances. These include the former FONDEN fund for natural disasters in Mexico and the environment and climate change fund known as FONERWA in Rwanda (Coello and Frey, 2023). In the United States, the Emergency Forest Restoration Program supports owners of nonindustrial private forests with up to 75 per cent of their forest restoration costs (USDA, n.d.).

ii. Disaster risk transfer instruments facilitate "the process of formally or informally shifting the financial consequences of particular risks from one party to another, whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party"(UNDRR, 2009) Disaster risk transfer instruments are used by national governments to support a country's recovery from disasters. They are diverse and include (but are not limited to) catastrophe bonds and insurance.

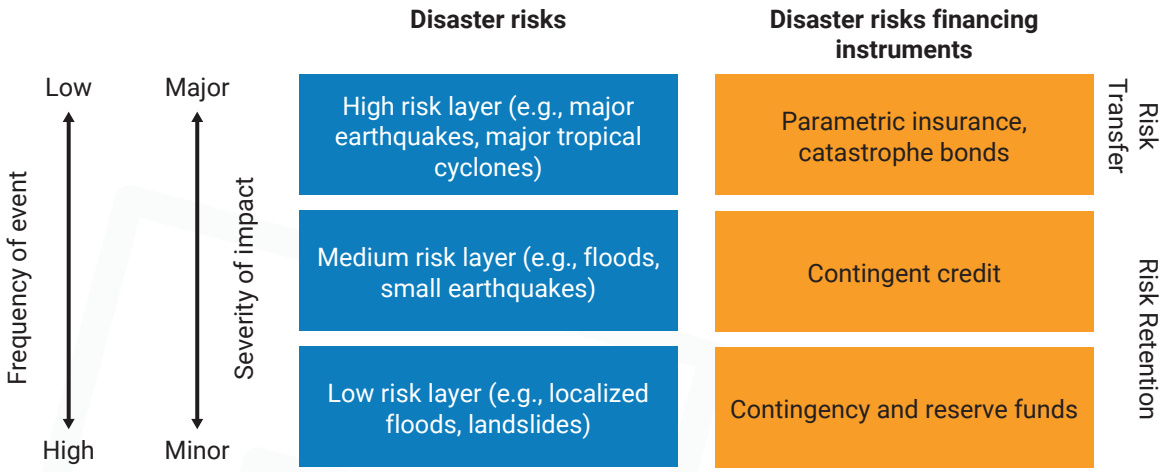
- **Catastrophe bonds**, or CAT bonds, provide countries or companies financial resources to cover losses from natural hazards in return for interest payments. If no catastrophe occurs within a predetermined time period, the investors receive their capital investments back. However, if a disaster strikes (mostly, high-intensity and low-frequency ones), the country or company receives the funds and investors (e.g., hedge funds, pension funds or other institutional investors) partially lose the invested capital (MCII, 2023).

- **Insurance** is a financial risk transfer instrument based on a collective risk-sharing principle in which each insurance policyholder (i.e., an individual, enterprise or country) pays a premium and can receive a payout for specified losses based on the insurance contract terms. This risk transfer instrument can be further distinguished as micro, meso and macro insurance. While microinsurance provides affordable protection to low-income individuals, meso insurance refers to insurance for which policyholders are associations or organizations. Macro insurance (usually parametric; see below) is also known as sovereign-level insurance because national

governments are the policyholders and receive the payout after disasters (MCII, 2023). Indemnity insurance is a traditional type of insurance for which payouts are based on loss assessment. Parametric or index-based insurance, meanwhile, differs from indemnity-based insurance and ensures payouts are automatically triggered when certain predefined parameters or "indexes" (e.g., the duration of a dry period, amount of precipitation, wind speed) are reached or exceeded (MCII, 2023).

Disaster risk transfer instruments, such as insurance, are becoming increasingly prominent for protecting natural resourses. In these instances, nature stands as the beneficiary. Since natural hazards occur at different scales and with different levels of severity, different disaster risk finance instruments are employed for different events. A government's disaster risk finance strategy and its sources of funding often determine whether contingent funds and/or credit reserve funds or risk transfer tools should be applied. To maximize cost-effectiveness, a risk layering approach ensures financial preparedness for all disaster scenarios. This approach prioritizes lower-cost funding sources for frequent hazards, while the most expensive sources are utilized only in response to severe events. Figure 6 details the specific disaster risk financing instruments assigned to various risks.

Figure 6: Risk layering approach used by governments to determine the most cost-efficient disaster risk financing instruments for various disaster risks (based on Insuresilience Global Partnership, 2023).



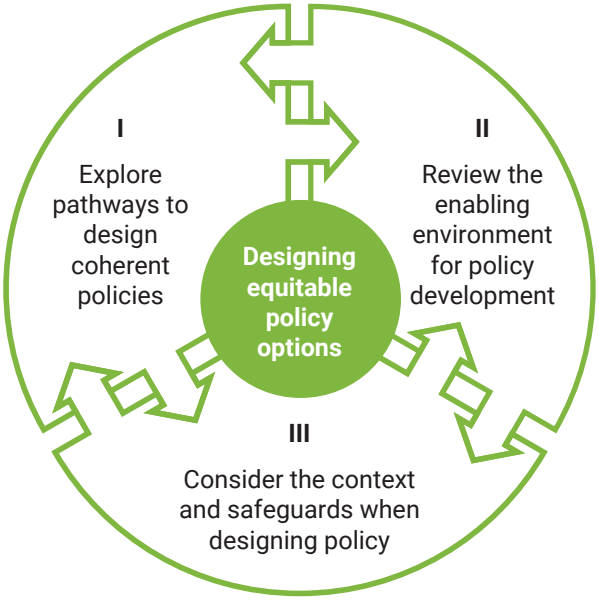
3 How to leverage synergies

This chapter provides guidance on how to leverage synergies between land restoration, social protection, financial inclusion and disaster risk finance by building on the diversity of their policy instruments and their shared aim to improve and protect human well-being. The guide presents three iterative steps for leveraging these synergies and designing coherent policy instruments and programmes that facilitate land restoration outcomes that are more equitable and suitable for their context (Figure 7).

Figure 7: The three iterative steps for designing coherent policies to make land restoration outcomes more equitable by integrating social protection, financial inclusion and disaster risk finance.

Explore pathways to designing coherent policies

- Design or adapt stand-alone policy instruments with co-benefits
- Combine multiple policy instruments into programmes
- Coordinate and align multiple policy instruments and programmes



Review the enabling environment for policy development

- Existing political priorities and timelines of commitments
- The current level of horizontal and vertical policy coherence
- The coordination arrangements between different policy fields
- Available human and financial capacities of policy institutions

Consider the context and safeguards when designing policy

- Including different communities of practice using land restoration
- Determining the landscape-specific target and restoration technology to follow
- Assessing the coverage and prevalence of social protection, financial inclusion and disaster risk finance instruments
- Funding coherent land restoration policies
- Land tenure security for land restoration
- Conducting stakeholder analysis
- Applying a gender perspective
- Engaging youth in land restoration
- Promoting the role of Indigenous people

Step I introduces three pathways for designing coherent policies that leverage synergies between land restoration, social protection, financial inclusion and disaster risk finance. Each country should decide which pathway is best for their context by reviewing the enablers and barriers that characterize the enabling environment for policy development and implementation described in the Step II. Step III introduces safeguards to ensure equitable and ecologically sound land restoration outcomes that should be considered when designing coherent policies. Thus, the three steps all represent inherent parts of the design process for coherent policies to make land restoration outcomes more equitable and attractive to local stakeholders and should be addressed while having the other steps in mind. Case studies that can further inform coherent policy design illustrate the three iterative steps with real-world examples.

3.1 Step I: Explore pathways to design coherent policies

Guiding questions for exploring pathways to design coherent policies

- What pathways exist for designing coherent policies that link land restoration, social protection, financial inclusion and disaster risk finance?
- What are the benefits and challenges of each pathway?

Step I presents three pathways for designing coherent policies among land restoration, social protection, financial inclusion and disaster risk finance. The pathways include i. designing or adapting stand-alone policy instruments with co-benefits; ii. combining multiple policy instruments into one programme; and iii. coordinating and aligning multiple policy instruments and programmes. Each pathway should be explored to understand how policy objectives and instruments can be integrated in different ways, allowing for the selection of the most suitable pathway for a specific context.

Step I draws on the experiences of existing case studies and on expert discussions of the benefits and challenges of each pathway. It also builds on the efforts by the Food and Agriculture Organization of the United Nations (FAO) to strengthen policy coherence between the objectives of social protection and agriculture (FAO, 2016b) and fisheries (FAO, 2022).

Pathway i. Designing or adapting stand-alone policy instruments with co-benefits

The systematic inclusion of multiple policy objectives in the design of particular, stand-alone policy instruments can increase the impact of these instruments and make their outcomes more equitable. To increase the attractiveness and acceptance of these stand-alone policy instruments, opportunities for co-benefits between the policy objectives of land restoration, social protection and financial inclusion, as well as disaster risk finance tools, should be considered from the earliest stages of policy design or revision. Designing or implementing stand-alone policy instruments is often effective for ensuring co-benefits and avoiding inconsistencies between different policy objectives. However, these simple instruments have drawbacks: they may fail, for instance, to address complex conflicts involving multiple stakeholders or to improve coordination with other policy objectives and mechanisms (Table 2).

Designing stand-alone land restoration policy instruments that integrate social protection objectives: Stand-alone land restoration policy instruments can be designed to support social protection objectives by ensuring the land restoration policy instruments also include preparing for, coping with and adapting to shocks and by contributing to more equitable land restoration outcomes. These integrated stand-alone land restoration policy instruments can include the following:

- Knowledge campaigns and workshops on sustainable agricultural practices can target disadvantaged female farmers to promote decent

Table 2: Potential benefits and challenges of strengthening coherence by designing stand-alone policy instrumentswith co-beneficial outcomes (adapted from FAO, 2016b).

Benefits	Challenges
• Possibility to deliver from short-term to long-term outcomes • Relatively low level of coordination needed • Avoids inconsistencies • Enables co-benefits	• Limited possibilities to address complex conflicts with multiple stakeholders involved • Limited contribution to breaking siloed processes

work and/or to help these farmers overcome chronic poverty by improving agricultural yields.

- Regulations can ensure that large-scale land restoration projects (public and private) conduct impact assessments and implement grievance mechanisms to address complaints in a transparent and culturally appropriate way for all stakeholders, including indigenous groups (Nelson and others, 2024). This can help prevent activities that undermine the resilience of individuals and households to shocks.

- Financial support can help establish (semi-) natural habitats in agricultural landscapes shaped by monocultures to ensure the provision of critical ecosystem services and to help local communities deal with vulnerabilities and deteriorating environmental conditions (Mohamed and others, 2024).

- Priority can be given to the restoration of flood plains located upstream of vulnerable communities or to establishing urban forests in disadvantaged neighbourhoods when developing regional land use plans. Urban forests have been shown to significantly support different health dimensions, including mental well-being and the reduction of heatwave impacts (Wolf and others, 2020).

- Participatory land use planning at the local level can be promoted to achieve a more efficient and just management of land. For instance, Tanzania's land policy and legislation facilitates the process of joint village land use planning to support the planning and management of shared resources across village boundaries. This has helped villages in the Kiteto District to reduce land degradation and increase production by protecting access to resources essential for livestock and by protecting identified grazing areas (Liniger and Mekdaschi Studer, 2019). This, in turn, has helped reduce chronic poverty and enhanced capacities to deal with shocks (Box 4).

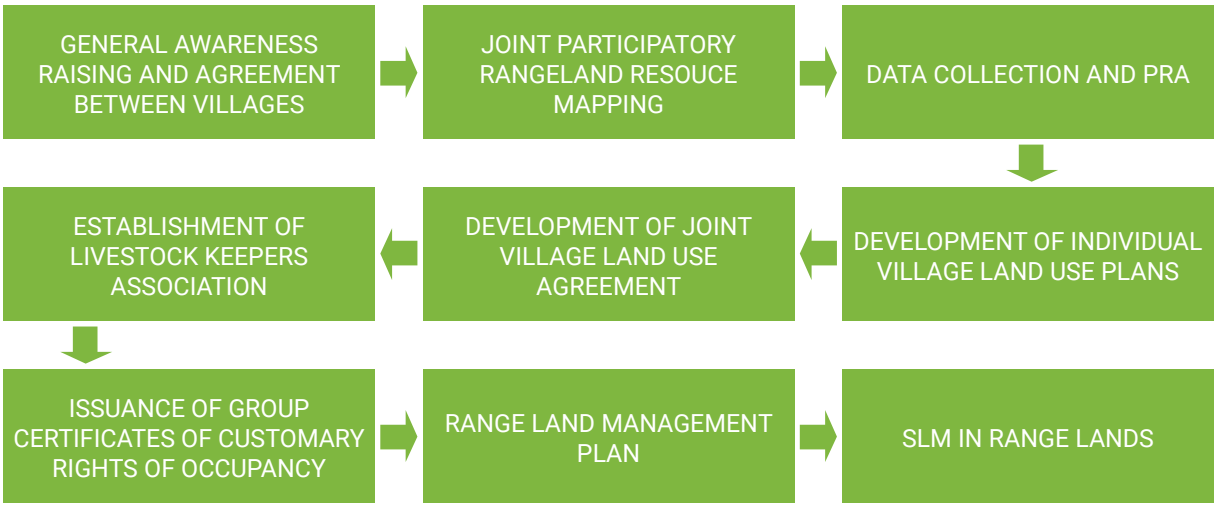
- Access to work and business opportunities can support the economic inclusion of all segments of society, especially youth. This can be either by employing people directly in restoration projects or by creating enabling conditions for new business development. For example, infrastructure for ecotourism, such as paths or information facilities, may be included in land restoration policy instruments to support ecotourism. In Central Asia, land restoration policies promote social protection through their support for planting native fruit/commodity trees within restoration projects. These, in turn, create business opportunities and support local economies (Case Study 1).

Designing stand-alone land restoration policy instruments that integrate financial inclusion objectives: To maximize land restoration's potential to contribute to earnings, to the reduction of chronic poverty and to addressing other economic vulnerabilities, land restoration policy instruments should also reflect financial inclusion objectives to help individuals and businesses gain access to useful and affordable financial products and services. Integrating financial inclusion objectives into land resoration policy instruments can be achieved in a number of ways. Some examples include the following:

Box 4: Insights from a Joint Village Land Use Planning project in the Kiteto District of Tanzania

The Joint Village Land Use Planning project in Tanzania involved three villages, totalling in approximately 59,000 hectares. Most inhabitants are Maasai pastoralists, Nborobo hunter-gatherers or seasonal migrant farmers. Essential to this project's success and development was cross-sectoral coordination between national ministries and local village governments. The Ministry of Livestock and Fisheries, with its ministerial interest in protecting rangelands, led the planning process. The National Land Use Planning Commission provided technical oversight and guidance, and the Ministry of Lands, Housing and Human Settlements Development approved the final plan. To collaborate effectively and efficiently with the local inhabitants, the project used participatory mapping to understand the distribution of different resource uses, such as grazing areas, watering holes, cropping areas, livestock routes and cultural places. A base map was then created for each individual village to use in the land use planning process. Drawing upon the three separate maps, the creation of a joint village land use agreement and the joint village land use plan was approved by the inhabitants and the three village councils.

STEPS IN THE JOINT VILLAGE LAND USE PLANNING PROCESS



Following the approval of a joint village land use agreement and plan, the three village councils established a Joint Grazing Land Committee and a Livestock Keepers Association made up of members from all three villages. These committees continue to the present and are responsible for planning, management, enforcement of applicable by-laws and coordination of the implementation of both the land use agreements and joint land use plan. With the ability to enforce the policies and laws in the agreement, the improved rangeland management that emerged from the project reduces land degradation, while increasing production by protecting access to resources essential for livestock, including identified grazing areas.

Mapping livestock routes contributed to an understanding of mobility patterns across regions and villages, Arusha, Tanzania. Photo: Mohammed Said

(Based on Liniger and Mekdaschi Studer, 2019; Flintan, 2018)

- Efforts to identify legitimate land tenure claims and the issuance of formal land titles for individuals and communities can be supported. Secure land tenure rights favour the adaptation of land restoration practices (Rakotonarivo and others, 2023; Chigbu and others, 2021) and, while not solving all the issues of credit restrictions for poor farmers, formal land titles can help farmers access financial services by enhancing their creditworthiness (Jiang and others, 2020).

- Farmers can be granted access to bank accounts when land restoration is financially supported, for example, in form of payments for ecosystem services. This will require legal clarity concerning who is entitled to receive the payments. In the past, countries qualified for payments in return for emissions reductions through reducing deforestation and degradation under REDD+. However, a lack of legal clarity about who owned the emission reductions raised questions about who was entitled to the payments (Felicani-Robles, 2024).

- Financial literacy can be included in efforts to promote knowledge of sustainable land management practices. For example, information can be provided that addresses how new crops can be marketed, what role microcredits can play, how financial services can be accessed via new technologies and how insurance can help in wider agricultural risk management (Case Study 2).

Designing stand-alone social protection policy instruments that integrate land restoration objectives: Just as stand-alone land restoration policy instruments integrate social protection, stand-alone social protection policy instruments can also integrate land restoration objectives. Social protection policies often impact the environment, and they can either favour land restoration or make it more difficult. Some social protection policy instruments and programmes unintentionally encourage direct drivers of land degradation, such as agriculture, urbanization and infrastructure. They can also encourage indirect drivers of degradation, such as population growth and migration, market and trade demand and governance. For example, Mexico's Opportunidades programme was a social protection programme that transferred cash to households conditional upon their children's school attendance and medical check-ups. This cash, in turn, was often used to consume more beef and milk, which increased deforestation locally to raise more cattle. This highlights the need to accompany poverty alleviation with carefully designed environmental management schemes (Alix-Garcia and others, 2013).

In some cases, the negative impacts of social protection policy instruments on land can be reduced if environmental impact assessments inform the policy instrument design. In Colombia, for example, the country's Green Recovery Development Policy Financing programme conducts environmental impact assessments to evaluate efforts to reduce income inequalities (including gender-related inequalities) and to build resilience (World Bank, 2022b).

Social protection policy instruments can also positively affect the environment if they are designed or adapted to maximize coherence with the objectives of land restoration by ensuring that social protection's impact on the environment is as low as possible and/or that it supports activities contributing to land restoration. Examples of stand-alone social protection policy instruments that are coherent with land restoration objectives include the following:

- **Cash transfers to households can ensure people don't resort to livelihoods that contribute to forest degradation and deforestation.** For example, Indonesia's Keluarga Harapan programme provides cash transfers to households conditional upon health and education obligations, which not only alleviated poverty for poor households but also reduced deforestation practices. This is because deforestation was previously the only way for poor households to obtain consumption goods and to ensure against negative shocks. Now cash transfers provide this opportunity.

- **Distributing productive, in-kind transfers for social protection can simultaneously benefit land restoration.** For instance, the distribution of more efficient cookstoves can reduce the pressure on forests and other landscapes with trees and can reduce the burden on women who are often responsible for collecting firewood. Other in-kind transfers can include harvesting tools for non-timber forest products, such as pine seeds, and beekeeping tools. The Restoration Initiative of Pakistan is an example (Case Study 3).

- **Land restoration activities can be included in public works.** Public works can specifically integrate environmental or climate objectives. These can increase incomes, while contributing to nature-based adaptation, disaster risk reduction or climate change mitigation (Costella and others, 2023). The Labour Intensive Public Works (LIPW) project in Ghana, for example, offers temporary jobs during the agricultural off-season to poor households. The project, which began in 2011, targets specific restoration activities that are conducted on "degraded communal and public land to mitigate climate change and support catchment and watershed protection and biodiversity conservation" (Agric Engineering Directorate, 2024). Other examples of programmes using public works as a policy instrument contributing to land restoration include the Rural Resilience Initiative (R4, formerly called the Horn of Africa Risk Transfer for Adaptation, HARITA) in Ethiopia and other sub-Saharan countries (Case Study 2), the Expanded Public Works Programme (EPWP)

Box 5: Just Transition

Just transition refers to a framework from the ILO that seeks to "maximize the social and economic opportunities of environmental actions—including climate action and protecting biodiversity—while minimizing and carefully managing any challenges related to impacts of these actions on the world of work" (ILO, 2015).

Social protection policy instruments can facilitate a just transition. These instruments can accelerate the transition towards an environmentally sustainable economy while minimizing negative impacts on work and livelihoods and ideally maximizing their benefits. The ILO's Guidelines for a just transition towards environmentally sustainable economies and societies for all describe the need for social protection policy instruments to continue to provide more health care, income security and social services and to prevent economic and environmental vulnerabilities and shocks. These instruments can contribute to productive employment, decent work, social inclusion and the eradication of poverty (ILO, 2015).

Costella and colleagues (2023) describe some of the ways by which social protection policy instruments can help:

- **social assistance** instruments such as cash transfers can maintain income, particularly for individuals lacking formal employment benefits;
- **social insurance** can guarantee basic income security for formally employed workers; and
- **labour market policies,** such as retraining and job placements, can ease the transition for workers from high-emission sectors to low-carbon jobs (International Labour Office and Agence Française de Développement, 2019) or from livelihoods affected by adaptation strategies.

As children and women can be disproportionately affected by sudden- or slow-onset climatic shocks (e.g., through reduced income, loss of livelihood, food insecurity, relocation or migration, risks to health), social protection and land restoration policy instruments can address climate objectives in a gender-responsive way. For instance, cash transfers can be linked to supplementary agricultural support or to other services, such as health care or violence prevention and response (Nesbitt-Ahmed, 2023).

The ILO just transition guidelines encourage governments to use social protection instruments to address challenges that can arise from environmental policies, such as those to address land degradation. In particular, social protection instruments can help workers largely dependent on natural resources or those facing major structural changes by supporting their transition to livelihoods, incomes and jobs that serve environmental goals (ILO, 2015).

in South Africa (Case Study 4) and India's National Rural Employment Guarantee Scheme (MNREGS) (Case Study 5).

- **Active labour market policy instruments can be developed to engage in land restoration.** In Kyrgyzstan, for example, a worker training programme teaches people to propagate regional varieties of fruit trees. The programme has created additional income sources while contributing to the restoration of degraded agricultural land by transforming it into diverse fruit orchards (Case Study 1).

- **Retirement benefits and unemployment protection policy instruments can support workers to stop unsustainable practices or to transition to sustainable practices.** Unemployment protection programmes provide financial assistance to workers engaged in unsustainable practices as they transition to more sustainable activities. These programmes also often offer targeted training sessions focused on environmentally positive themes, such as sustainable land management.

- **Access to day care services, maternity and paternity leave and healthcare can be provided to ensure the inclusivity of women in land** restoration (ILO and others, 2022). For example, the Ethiopian Productive Safety Net Programme provides daycare to enable women with small children to be able to work and to encourage women's involvement in community decision-making structures (The World Bank Group and others, 2013).

Finally, social protection policy instruments that integrate land restoration objectives can ensure individuals largely reliant on natural resources or facing major environmental changes do not become more economically vulnerable (Box 5).

Designing stand-alone financial inclusion policy instruments that integrate land restoration: Similarly, stand-alone financial inclusion policy instruments can also integrate land restoration objectives. Financial inclusion can indirectly and directly influence land restoration outcomes. Even well-intentioned financial inclusion programmes can have unintended consequences that harm the environment and lead to land degradation. This is often the case when programmes do not consider environmental consequences during their design phase. On the other hand, financial inclusion can be a catalyst for land restoration through improved access to savings, credit, insurance and digital instruments to support nature-positive enterprises and sustainable land managment. Many financial inclusion policy instruments at the national level can be designed or adapted to maximize their coherence with the objectives of land restoration to avoid, reduce or reverse land degradation. Examples of these instruments include the following:

- **Loan terms can be linked to environmentally friendly practices that encourage individuals to restore their land:** The IUCN's Community Environment Conservation Fund, for example, provides access to loans while integrating ecosystem restoration objectives into its framework (IUCN, 2018). The initiative targets community members with no access to banks in a number of African countries. Through the introduction of this eco-credit scheme, the initiative aims to achieve both financial inclusion and environmental conservation goals, offering a unique model to address the challenges of economic disparity and ecosystem restoration.

- **Financial products can be developed that provide below-market-rate financing to support green products and services targeting individuals or micro and small enterprises**. Under the umbrella of The Restoration Initiative in São Tomé and Príncipe, the government collaborated with the Central Bank and the Association of Banks to develop a microcredit scheme to enable smallholder farmers to shift towards agroforestry. Under previous regulations, around 80 per cent of smallholders lacked sufficient income to even qualify for a bank account (Case Study 6).

- **Innovative insurance products can be created to incentivize and/or reward restoration practices.** Insurance products that offer premium discounts can incentivize environmental goals (Madajewicz and others, 2013). For example, the HARITA initiative in Africa (precursor to the R4 Rural Resilience Initiative; Case Study 2) provided cash for poor farmers to pay their insurance premiums in exchange for labour contributions to community-identified projects, such as those that reduce agricultural risks (OXFAM America, 2012). By engaging in activities like catchment treatment,

gully reclamation and compost production, farmers not only enhanced their own resilience but also contributed to the sustainable regeneration of degraded lands.

Financial literacy programmes are another financial inclusion policy instrument that can integrate environmental awareness and sustainable land use practices. These can empower target groups to make informed financial decisions while avoiding land degradation. For example, AgriFin´s Digital Farmer (Case Study 7) programme promotes financial inclusion for farmers that integrate climate smart agriculture in the curriculum to help smallholder farmers improve productivity, conserve soil and reduce the impacts of climate change (Shrader and others, 2019).

Technical advancements facilitating financial inclusion, such as mobile wallets, can help integrate land restoration objectives. For example, Alipay is an online and mobile payment platform that provides more than one billion people access to mobile payments. Simultaneously, the platform aims to combat desertification, lower air pollution and protect the environment (UNEP, 2019) through its programme known as "Ant Forest". The Ant Forest programme encourages users to earn "green points" by making low-carbon lifestyle choices and then translating these points into the planting of real trees and other conservation efforts. Since its launch, 100 million trees, covering a total area of 112,000 hectares, have been planted in Northwest China (UNFCCC, 2019).

Using disaster risk finance to support land restoration, social protection and financial inclusion: While the policy objectives of land restoration, social protection and financial inclusion are not typically considered to be among the aims of disaster risk finance, they can directly and indirectly benefit from it. Many examples suggest disaster risk finance tools can help to finance these policy objectives. In particular, social protection and financial inclusion are objectives strongly connected to some of the central goals of disaster risk finance. For instance, enhancing access to disaster risk finance instruments, such as parametric insurance (see below), is part of financial inclusion. Social protection is frequently financed by disaster risk finance tools that are often adapted to the frequency and severity of extreme weather events. For example, the Pacific Insurance and Climate Adaptation Programme (PICAP) developed and launched a microparametric insurance product to respond to different extreme weather events. The programme is linked with Fiji´s social protection system and provides subsidies from the Fijian government to pay the insurance premiums for 2,000 social welfare beneficiaries (UNCDF, 2022). Other global disaster risk finance tools—such as reserve funds (e.g., Kenya), contingent credit (e.g., Uganda) and risk transfer (e.g., Mexico) (Bowen and others, 2020)—fund adaptive social protection programmes in countries around the world.

Many disaster risk finance tools can address—implicitly or, sometimes, explicitly—land restoration policy objectives. The Global Shield against Climate Risks, launched at the United Nations Framework Convention on Climate Change Conference of the Parties (COP 27) in 2022, provides an explicit example. The programme aims to provide risk transfer solutions against climate risks for vulnerable countries with a focus on disaster preparedness and response that includes land restoration, where feasible (Global Shield, 2022). In a recently conducted gap analysis in Ghana, for instance, the programme identified sustainable agriculture practices as among the key funding priorities (Global Shield, 2024).

Disaster risk finance can also indirectly contribute to land restoration after hazards occur. The payout from crop insurance, for example, can prevent farmers from engaging in illegal charcoal production to generate short-term income, affecting the surrounding ecosystem and increasing health and economic risks in the long term. Some insurance schemes can incentivize overproduction and excessive land use. Linking insurance benefits to sustainable land use practices, which is the approach of the R4 Rural Resilience Initiative of the World Food Programme (Case Study 2), can help avoid adverse effects.

What disaster risk finance tool should be applied depends on a government's disaster risk financing strategy and the sources of funding (Bowen and others, 2020; Maher, 2018). Governments also need to consider that a decision not to use disaster risk financing to support social protection or land restoration policy instruments can have unanticipated consequences: without support, conditions for communities and the environment may worsen to an extent that, in turn, will require more disaster risk financing to sufficiently address growing risk.

Pathway ii. Combining multiple policy instruments into policy programmes

While the design of coherent stand-alone policy instruments focuses on the integration of social protection and financial inclusion objectives or disaster risk finance tools into the design of land restoration policy instruments and vice versa, this pathway for policy coherence combines multiple stand-alone policy instruments into a single programme that is generally led by one organization or a joint consortium of organizations. Such a programme should optimally consist of a combination of coherent stand-alone policy instruments that offer co-benefits. These programmes can be designed to be implemented simultaneously and/or sequentially to accelerate positive effects and to reduce inequitable land restoration outcomes.

Combining multiple policy instruments into one policy programme requires coordination among all stakeholders pursuing different policy objectives to effectively facilitate programme design and implementation. These stakeholders will also have to address budgetary challenges concerning the financial responsibility attached to each objective and where the funds for the programme will be sourced (Table 3).

By combining different policy instruments, the potential negative effects that instruments for meeting one policy objective may have on another policy objective can be partially or fully compensated. The compensation becomes crucial for policy instruments that cannot be designed to inherently align with more than one policy objective (Pathway i) and, thus, require trade-offs between them. For example, implementing a logging ban to protect a forest may adversely affect the social protection objective of protecting the livelihoods of forest workers, making it challenging to mitigate this effect by using only stand-alone environmental policy instruments. In such cases, combining these policy instruments with social protection and financial inclusion policy instruments can provide an approach that creates more equitable outcomes.

The Government of Bangladesh followed this approach when it adapted a national social protection assistance scheme as a way to compensate for the impacts of another policy instrument aimed at improving the environment, the Jatka Fisher Conservation Programme (Case Study 8). The conservation programme created seasonal fishing bans and sanctuary areas that directly impacted livelihoods of fishers in the area, so the government used social protection instruments, such as in-kind transfers, to compensate them. By combining these policy instruments, the government was also able to better tackle the limited access to social protection schemes usually faced by many fishers (Bladon and others, 2022).

Combining policy instruments for social protection, financial inclusion and land restoration into one programme can help to enhance the positive effects of these instruments on ecosystem outcomes and human well-being. For example, a policy instrument that trains agroforestry farmers on the benefits of shade trees combined with a policy instrument that provides microcredits in a single programme amplifies the impact of these two instruments on both restoration efforts and income generation. This combination has been applied in São Tomé and Príncipe under The Restoration Initiative (Case Study 6).

Another example of combining multiple policy instruments to enhance policy coherence is the

Table 3: Potential benefits and challenges of strengthening coherence by combining multiple policy instruments (adapted from FAO, 2016b).

Benefits	Challenges
Can compensate for negative impacts of other sectoral policies	Moderate level of coordination needed for cross-sectoral collaboration
Can accelerate positive sectoral policy impacts	Budgetary challenges
Strengthens cross-sectoral cooperation	

Bolsa Floresta Programme of Brazil (Case study 9). By using a mix of diverse policy instruments, such as cash incentives per household, payments for school attendance, investment in capacity building for alternative income-generating activities and social infrastructure development, the programme has so far contributed to a 12 per cent reduction in deforestation compared to the beginning of the programme (Porras and Asquith, 2018). The mix of policy instruments ensures the programme not only contributes to forest restoration but also supports local communities in achieving a more stable and improved standard of living (Porras and Asquith, 2018). By prioritizing education, promoting a clear gender equity agenda and involving residents in the management of their natural resources, the programme also enhances a sense of ownership and responsibility towards the environment, leading to more sustainable, gender-sensitive, community-driven conservation efforts (Viana and Salviati, 2018).

Similary, the Ethiopian Productive Safety Net Programme (PSNP) integrates an adaptive social protection approach into a comprehensive policy programme to respond to climate-related shocks, such as drought, and increase household resilience while supporting land restoration activities. The programme reduces the vulnerability of chronically or periodically food-insecure households to drought by combining social protection instruments, such as cash transfers targeting households without labour capacitiy and job creation targeting households with labour capacity. By focusing on work on soil and water conservation, management of rangelands and the enhancement of community assets such as roads, water infrastructure, schools and clinics, the jobs contribute to land restoration and protect households from shocks, such as drought (Step III). By ensuring a stable income and restoring natural capital, the programme has reduced the vulnerability of participating households to droughts by 57 per cent and doubled the level of resilience by significantly improving the recovery trajectory after a drought (Knippenberg and Hoddinott, 2017). A second phase of the PSNP targeted both local and more widespread natural-induced disasters and economic shocks. In cases of low-level and unexpected transitory food insecurity, the programme provides a contingency budget to support temporary additional jobs/resources through the institutional structures of public works and direct assistance (The World Bank Group and others, 2013). In cases in which the shock has more impact and the contingency budget is not enough, a risk financing mechanism enters into action. In particular, the programme uses an early warning system that triggers a risk financing mechanism with contingency plans to ensure that local needs are aligned with existing resources and to allow for the allocation of funds through established PSNP channels (The World Bank Group and others, 2013).

One environmental policy instrument that is often combined with other policy instruments in support of a broader, coherent policy programme is Payments for Ecosystem Services (PES). The Bolsa Floresta program in Brazil, for example, combines PES with (among other things) conditional cash transfers that encourage families within reserves to adopt sustainable forest practices and to promote education for children. Similarly, the Mangrove Conservation and Restoration Initiative in San Crisanto, Mexico (Case Study 10) represents another example of a community-led programme that incorporates mangrove conservation practices, ecotourism and PES focusing on carbon capture to contribute to community income. An important prerequisite for the success of the San Crisanto work was the issuing of communal land tenure rights (Arias Reyes and Montiel Ortega, 2010).

Pathway iii. Coordinating and aligning multiple policy instruments and programmes

The third pathway to strengthening policy coherence between land restoration, financial inclusion, social protection and disaster risk finance involves coordinating and aligning multiple existing policy instruments and programmes that may have different policy objectives, focus on different target groups and locations and are generally administered by different organizations. This pathway adopts a wider, holistic view of the interests of various stakeholders and of existing initiatives across a landscape. It also addresses established socioeconomic systems that contribute to land degradation. For example, the extraction of timber from forests is only the first part of a wider value chain that includes processing the wood in sawmills or paper mills. As such, policy instruments to reduce logging activities need to be coordinated and aligned with other policy instruments and programmes reflecting the needs

of, for example, paper mill employees to ensure an equitable transformation of the whole value chain and to ensure widespread acceptance of the restoration objective. As such, the cascading impacts of one policy instrument or programme need careful consideration along with an understanding of the diverse needs and capacities of various stakeholders (Table 4). The alignment of, for example, a programme on land restoration and one on social protection can take advantage of the structures of the existing programmes and may be more efficient for achieving policy coherence than combining several policy instruments.

China has created two forest conservation and reforestation programmes that are the largest in the world and that also incorporate social protection objectives. The Slope Land Conservation Programme uses measures, such as cash transfers, for rural households conditional upon their involvement in restoration activities. The National Forest Conservation Programme targets state forest enterprises and their forest workers by reinforcing social protection measures to accompany transitioning to a new landscape management approach. By aligning these two programmes with the the Urban Employment and Reemployment Program (UERPP) another step was taken to ensure that communities affected by logging bans do not suffer economic hardships, find more sustainable livelihoods and contribute to land restoration. Through UERPP, the government provides subsidies on social contributions to incentivize enterprises to hire and retrain workers to manage and conserve newly designated protected areas (Canonge, 2016). Although, it requires high levels of coordination within different government institutions, China's example shows the potential of aligning multiple programmes to achieve effective and efficient policy outcomes. It also illustrates how alignment and coordination across various policy programmes can address the needs of different stakeholders (Case Study 11).

In India, Mahatma Gandhi National Rural Employment Guarantee Schemes (MGNREGS) exemplify the significance of coordinating and aligning multiple sectoral policy instruments and programmes to enhance their coherence and impact. Work activities under the MGNREGS are determined in coordination with the Integrated Watershed Management Programme (IWMP) and the local village councils (or "gram panchayat"; Department of Land Resources, Ministry of Rural Development, Government of India, 2015). Once funding for the activities (e.g., the construction of farm ponds and water harvesting structures) is approved by the IWMP, the MGNREGS is responsible for ensuring their continuation and sustainability (Department of Land Resources, Ministry of Rural Development, Government of India, 2015). This alignment between the MGNREGS and the IWMP demonstrates a comprehensive strategy to couple employment generation with sustainable development, climate change mitigation and resilience building. The alignment of MGNREGS with the IWMP also illustrates how different policy objectives can be integrated. The programme, initially aimed at alleviating poverty, also integrates land restoration objectives while working on activities to restore public assets, such as watersheds (Case Study 5).

The South African Expanded Public Work Programme (EPWP) also shows how integration between social and environmental government departments can be achieved. EPWP is a nationwide government programme to reduce unemployment while promoting conservation and sustainability. The

Table 4: Potential benefits and challenges of strengthening coherence by coordinating and aligning multiple policy instruments and programmes (adapted from FAO, 2016b).

Benefits	Challenges
Addresses established socioeconomic systems that contribute to land degradation	Strong enabling environment for policy development needed
Has a wide scope that reflects multiple locations and stakeholders	Resource intensive
Can enhance coverage of positive policy impacts	Might face strong resistance from established business-as-usual advocates

programme provides work and skills development and is particularly focused on women, youth and people with disabilities (Kelobang and Boon, 2018). In 2018, for example, the environmental sector of the programme paid 67,780 people to work to control invasive species, manage fires and restore wetlands (ILO and others, 2022). Today, different government departments collaborate to ensure different objectives are achieved, all using job creation and skills training in different sectors. Within the environment sector, for example, the programme helps address crises, such as water scarcity and food insecurity. South Africa's Department of Social Development is responsible for the overall EPWP policy, while the Department for Public Work leads the delivery, coordination and monitoring of the different programmes comprising it. The Department of Environmental Affairs identifies the landscapes that the programme will target (Department of Public Works and Infrastructure, South Africa, 2018; Marais and Mlilo, 2018; Case Study 4).

The collaboration between the HARITA and the Productive Safety Nets programme (PSNP) in Ethiopia is another example of synergies that can be created when coordinating and aligning different programmes. By coordinating with PSNP, HARITA was able to increase the number of people with access to agricultural insurance by extending access to insurance to food insecure farmers covered under the PSNP. Those farmers were able to access insurance by working through the PSNP in risk-reducing measures, such as restoring catchments to keep more water in the landscape (Madajewicz and others, 2013; OXFAM America, 2012; R4 Rural Resilience Initiative, 2018; Case Study 2).

3.2 Step II: Reviewing the enabling environment for policy development and implementation

Guiding questions for reviewing the enabling environment for policy development and implementation

- What factors shape the enabling environment for policy development and implementation?
- How do these factors influence the feasibility of following the three pathways for designing coherent policies?
- What opportunities help strengthen the enabling environment for policy development and implementation?

Many land restoration policy instruments can make land restoration more equitable by integrating and aligning it with the objectives and policy instruments of social protection, financial inclusion and disaster risk finance. The best approach for creating policy coherence among these objectives depends on the enabling environment for policy development and implementation. If the enabling environment is restrictive, a simple approach to achieving coherence is best, requiring less coordination and limiting the number of policy instruments relied upon. The enabling environment for policy development is shaped by several factors, including the following:

Existing political priorities and timelines of commitments: National, regional and global high-level priorities, commitments and long-term visions for social protection, financial inclusion and land restoration (or related concepts, such as land degradation neutrality) provide momentum and political support for policy development and implementation (FAO, 2016b; Verburg and others, 2019). Knowledge of commitments and timelines regarding land restoration, social protection and financial inclusion can help to develop and align multiple policy objectives and policy instruments together. For instance, if a country has a strong interest in financial inclusion, this policy objective can be integrated into the design of stand-alone policy instruments aimed at land restoration or in policy programmes that combine policy instruments addressing both financial inclusion and land restoration. Information on national restoration priorities can be found in national strategies for land

degradation neutrality (LDN) or in reporting for other international commitments on land restoration. National priorities regarding the policy objectives of social protection and financial inclusion can be found in national strategy documents and in cross-sectoral development plans, such as national adaptation plans.

Current level of policy coherence and coverage of existing social protection, financial inclusion and disaster risk finance instruments: Analysing how existing priorities and commitments relate to each policy objective can also help determine the current level of policy coherence. This can help to identify entry points to further strengthen coherence between the different policy objectives (i.e., horizontal coherence). Understanding how well-aligned national policy processes are with those at subnational levels (i.e., vertical coherence) is also important. Limited vertical coherence hinders an understanding of the needs at local levels and, in turn, can encumber the ability to design comprehensive, coherent policy instruments. In many countries engaged in land restoration, poor vertical coherence is a barrier to success. Strengthening or developing vertical integration mechanisms can help coordinate bottom-up and top-down actions related to land restoration (Verburg and others, 2019).

Appraising the potential for creating coherent land restoration policies requires understanding what already exists as state and non-state initiatives and policy instruments concerning financial inclusion, social protection and disaster risk finance. Environmental policy instruments can be more easily combined with other policy instruments if structures for supporting policy implementation are already well established. In Ethiopia, for example, the country's climate change resiliency project, HARITA, leveraged the nation's existing productive safety net programme to improve its effectiveness. Ad hoc and temporary programmes, such as short-term, small-scale donor cash transfers, are less effective.

Existing capacities and coordination mechanisms within policy institutions: Coherence between policy objectives requires sufficient and trained government staff who understand the importance of coherence and have time to coordinate policy instruments to achieve it. Existing mechanisms—for interministerial collaboration and cross-sectoral planning, for example—can support the required coordination. Cross-sectoral collaboration mechanisms, such as working groups, may exist within a country's national adaptation plan process or within national LDN target setting programmes. Being aware of and participating in these mechanisms can help to align policy instruments and create coherence between land restoration, social protection, financial inclusion and disaster risk finance. As such, the design of large-scale, well-aligned policy instruments and programmes depends on the capacities of policy institutions. If human capacity is limited, focusing on coherent stand-alone policy instruments or on combined policy programmes with only a few instruments may be more effective.

Human capacity also influences how well the coherence of policy instruments addresses conflict between sectoral interests and within administrative levels. Training government staff on territorial development strategies (Pertoldi and others, 2022), integrated land use planning and integrated landscape management can help reconcile land use objectives and resolve stakeholder conflicts (Box 6; Verburg and others, 2022). Financial resources are needed to support the training. Connecting this training to existing processes, such as the national adaptation plan process or to the LDN target setting programme, can help to leverage financial support to enhance the capacity of government staff. These processes have access to multilateral funds (e.g., the Global Environment Facility (GEF) and the Green Climate Fund (GCF)) and agencies (e.g., the Global Mechanism of the UNCCD) that also offer technical assistance for the development of government capacity.

Existing administrative capacity for introducing financial inclusion and social protection policy instruments for a targeted site or among stakeholders (e.g., farmers) is also important. For example, making social protection benefits conditional on specific behaviours, such as ceasing the exploitation of timber products, requires the administrative capacity to verify whether the condition has been fulfilled and to adjust payments based on the verification process.

Available funding for land restoration policies: The characteristics and implementation of policy instruments and programmes depend on available financial resources. For instance, public works, including land restoration activities, must ensure wages are high enough to convince participants

to join rather than earn a living doing other, less desireable activities (UNESCAP, 2018). Similarly, direct payments that compensate for loss of employment due to a policy instrument that bans logging to restore forests requires a lot of financial resources. Other options include leveraging existing value chains on non-timber forest products to help land restoration efforts become self-sustaining (Nelson and others, 2024). Financial resources to fund coherent land restoration policies come from national government budgets or from external financial resources, including multilateral funds and bilateral funds, along with private investments (UNCCD Global Mechanism, 2022). Collaborations with private entities can offset costs when companies are strategically motivated to invest in restoration efforts. This motivation may be because restoration yields benefits, such as improved water quality, crucial for company operations or because it helps companies comply with regulations concerning their carbon footprint. PES link the demand for ecosystem services with efforts to sustain them, but they are often complicated by high certification costs and concerns about the equitable distribution of income between external partners and implementing communities (Thompson, 2017). These are frequently rooted in existing power relations and in resource and land tenure (Sarmiento Barletti and others, 2023).

Integrating land restoration policy instruments with social protection and financial inclusion objectives can help prevent strict funding mandates for land restoration (e.g., funds for optimizing carbon sequestration) from competing with socioecological interests and excluding local stakeholders. Both private and public funders must be accountable for their impact on landscapes and on the people who live there and depend on it. The EU taxonomy for sustainable activities (European Comission, 2024) provides guidance on best funding approaches. Besides helping to mobilize finance, enhanced coordination between actors interested in land restoration, social protection and financial inclusion can reduce transaction costs. For instance, a joint study by the Economics of Land Degradation (ELD) Initiative, University of Bonn and the Rwandan Ministry of Agriculture and Animal Resources found that transaction costs of land restoration activities in Rwanda (e.g., related to the identification of sites for restoration, planning and organizing restoration processes and monitoring and evaluation of the restoration activities), could be reduced by 56 per cent resulting in estimated savings of $45.6 million per year if efforts under all three Rio conventions were combined, compared to carrying out the activities separately (Mirzabaev and others, 2023).

Existing non-governmental organizations and communities of practices working with land: International and local organizations working with the different land management practices are useful resources. The national offices and representatives of UNEP, FAO, Red Cross/Red Crescent or World Wildlife Fund (WWF) often have ongoing in-field land restoration initiatives and are experienced in supporting policy design processes. These organizations frequently need to be included to access multilateral funds available from international agencies, such as the GEF or the GCF (UNCCD Global Mechanism, 2017). Similarly, many private sector actors may be already active in land restoration and, optimally, can be encouraged to contribute to the objectives of social protection and financial inclusion through policy instruments, such as tax deductions for capacity building work.

Land restoration policy instruments can draw on the technical and socioeconomic experiences of these organizations and multiple communities of practice[8] working on land with different focus areas (e.g., agroecology, adaptation, desertification). For instance, land restoration practices to address desertification, land degradation and drought are framed as sustainable land management (SLM) by the UNCCD, while nature-based solutions (NbS) and, more specifically, ecosystem-based adaptation (EbA) and ecosystem-based disaster risk reduction (Eco-DRR) address current and future (climate) risks by enhancing the condition of ecosystems (Walz and others, 2021). Other concepts useful for land restoration include agroecology (focusing on agricultural land), forest landscape restoration (concentrating on tree-covered landscapes) and rewilding (closely related to ecological restoration; Hartmann and others, 2024). Practices to implement the objectives of these concepts can also contribute to land restoration at different scales. These may range from agricultural practices, such as compost application, the terracing of landscapes and plantations of urban forests. Various resources

[8] A community of practice is "a group of people who share similar challenges, interact regularly, learn from and with each other, and improve their ability to address their challenges" (Cattaneo (2023).

describe these land restoration techniques, including the SLM database of the World Overview of Conservation Approaches and Technologies (WOCAT). WOCAT's SLM database is the primary recommended database of the UNCCD, with close to 1500 entries on SLM practices from more than 130 countries (WOCAT, 2024). Another resource describing techniques for land restoration in urban landscapes include the Urban Nature Atlas (Physi Solutions, 2024).

Box 6: Promoting integrated land use planning and integrated landscape management

Integrated land use planning (ILUP) involves the comprehensive assessment and allocation of land resources to accommodate various uses and demands while ensuring sustainable land management. It promotes coordinated planning across different sectors within a specific geographic area, aiming to identify optimal land use combinations to meet stakeholders' needs and to conserve natural resources. By evaluating trade-offs between land use options, ILUP can help integrate social protection and financial inclusion with land restoration. ILUP is an umbrella term that encompasses approaches such as territorial and spatial planning (UNCCD/Science-Policy Interface, 2022).

Integrated Landscape Management (ILM) is the long-term collaboration among diverse stakeholders to achieve multiple landscape objectives. ILM facilitates participatory processes by promoting five key features: (1) shared management objectives, (2) field practices supporting multiple goals, (3) management of ecological, social and economic interactions for realizing synergies and mitigating trade-offs, (4) community-engaged planning, management and monitoring, and (5) adaptation of market and public policies to address various landscape objectives (UNCCD/Science-Policy Interface, 2022).

Both ILUP and ILM can be used to support the design of inclusive and coherent land restoration policy instruments, strengthening existing land use planning systems and integrating multiple land restoration goals. ILUP and ILM can also play a central role in promoting equitable land restoration outcomes and encouraging collaboration between research and practitioner communities to develop new or adapt existing land use tools (Verburg and others, 2022). Existing land use planning tools for ILUP and ILM are described in the LDN-Toolbox of the GEO Land Degradation Neutrality Flagship (GEO-LDN) initiative (GEO-LDN, 2024). The toolbox helps identify the right tool for each phase of land use planning that addresses land restoration, specific to the local, regional or national contexts. It includes tools such as the participatory Land Use Planning for Land Degradation Neutrality (LUP4LDN) (SCiO, 2024) tool which "supports planners 'doing the right things in the right places in the right way' by helping them focus on where land restoration efforts should take place" (Verburg and others, 2022, pp. 81–82).

3.3 Step III: Considering safeguards in policy design to ensure equitable land restoration outcomes

Guiding questions for considering safeguards for equitable land restoration outcomes in policy design

- What safeguards should be considered in the design of coherent policies to ensure equitable land restoration outcomes?
- What is the role of gender, youth and indigenous groups when designing coherent policy instruments for equitable land restoration outcomes?

The design and development of land restoration policy instruments can be guided by established principles and standards of practice to safeguard equitable land restoration outcomes. The Principles for Ecosystem Restoration to Guide the United Nations Decade, 2021-2030 (see Figure 8; FAO and others, 2021) and the Standards of Practice to Guide Ecosystem Restoration (Nelson and others, 2024) describe how those safeguards can be used for ecosystem restoration at a project level. The principles and standards of practice can also inform the development of relevant policy instruments. For example, an assessment of site conditions as part of the principle on "Local and land/seascape contexts" (Figure 8) is often required to design policy instruments that are tailored to the context. Therefore, this step is intended to complement existing work by emphasizing important activities to ensure equity and ecological soundness of policy instruments and programmes contributing to the objectives of land restoration, social protection, financial inclusion and disaster risk finance.

Conduct a stakeholder analysis: By changing the dynamics in ecosystems, land restoration projects can impact those who live on a landscape and other stakeholders from elsewhere who depend on it for services, such as food production or carbon sequestration. Coherent land restoration policy instruments should incorporate an understanding of who these stakeholders are, who is interested in what types of land restoration, who benefits from land restoration and who is potentially negatively affected. Since the capacities of different stakeholders to shape land restoration efforts and decisions can be affected by their financial resources, age, gender or ethnic background, understanding existing power relations during the policy design is also important.

Determine the landscape to target and a suitable restoration practice: To develop targeted policy instruments, the landscape to be addressed must be identified, and a suitable restoration practice needs to be selected. For example, in landscapes characterized by productive uses, such as agricultural

Figure 8: The 10 principles for guiding ecosystem restoration as proposed by FAO and others (2021). The principles include policy integration (framed), emphasizing the need for coherence between land restoration, social protection and financial inclusion.

land or forests, land restoration can often be achieved by motivating land users to adopt more sustainable practices or to take land out of production. Often, the ecological restoration of landscapes costs more than simply conserving them. In contrast, some land restoration efforts can generate revenue by providing ecosystem services or by increasing the productivity of the land (although this might result in less beneficial ecological outcomes). To prioritize and generate the highest impact for nature and people, it is important to identify where degradation or ongoing pressures on nature are the highest. It is also important to know where individuals or communities are most vulnerable or exposed to environmental degradation.

Choosing an appropriate land restoration practice depends on socioeconomic and ecological conditions (Box 7), stakeholder interests and national priorities. Appraising policy instruments targeting different landscapes and practices should consider their potential to be designed coherently and their short- and long-term impacts. A holistic valuation of the costs and benefits of different land restoration policy instruments and accounting for the costs of inaction and of actions to stop degradation are important. Conducting comparative assessment studies with different scenarios and policies can also help. Examples of these comparative assessments include the Economics of Land Degradation (ELD) Initiative's work on Ghana's Farmer Managed Natural Regeneration (FMNR) (Westerberg and others, 2019) and the production of organic vs. conventional cotton assessment in Mali (Westerberg and others, 2020).

To ensure a targeted and inclusive implementation of land restoration practices, a range of approaches have been developed to, for example, conduct stakeholder analyses, develop strategies to enhance science-practitioner communication and provide guidance in the creation of community-based management associations. The WOCAT SLM database provides more than 500 examples of these approaches (WOCAT, 2024).

Ensure land tenure security: Coherent land restoration policy instruments must consider existing land tenure systems and how to enhance tenure security. Lack of secure tenure often results in land degradation and hinders the adoption of sustainable land management practices by landholders who fear unfair dispossession or intrusion (Rakotonarivo and others, 2023; Chigbu and others, 2021). Conversely, improving tenure security motivates land users to engage in activities with long-term benefits that protect and increase the land's productivity and ecological value. Enhanced tenure security also empowers vulnerable groups, women, youth and indigenous communities (FAO and UNCCD, 2022). Coherent land restoration policy instruments must incorporate a consideration of these tenure characteristics. For example, a PES policy instrument to support restoration activities requires a just tenure system to guarantee that payments are received by those who deliver the services. Five general principles for enhancing land tenure security have been identified by the FAO and UNCCD in a comprehensive technical guide (FAO and UNCCD, 2022). These encourage countries to 1. recognize and respect all legitimate tenure holders and their rights; 2. safeguard legitimate tenure rights against threats and infringements; 3. promote and facilitate the enjoyment of legitimate tenure rights; 4. provide access to justice for addressing infringements of legitimate tenure rights; and 5. prevent tenure disputes, violent conflicts and corruption.

Apply a gender perspective: Integrating a gender perspective into coherent land restoration policy instruments significantly enhances the prospects for achieving long-term sustainability initiatives and the advancement of social equity. Women and gender minorities often have unique and multifaceted relationships with natural resources that are frequently different from those of men. Women often play a primary role in managing, conserving and overseeing household resources, such as water, garden products and fuelwood (UNCCD, 2022b). Moreover, they are disproportionately impacted by climate change, facing a higher risk of becoming climate refugees. Coherent land restoration policy instruments should therefore enable the active involvement of women and gender minorities in the land restoration planning process, positioning them not just as beneficiaries but as key contributors (Siqueira and others, 2021). Removing the financial barriers hindering their participation in restoration projects can help. The burden of unpaid care work is one of these barriers. Providing childcare facilities can allow women to participate in land restoration activities. This is the approach of Ethiopia's Productive Safety Net Program (PSNP; The World Bank Group and others, 2013). Another barrier is access to banks for women and gender minorities. Women make up a large portion of those without

Box 7: Land restoration policies need to ensure ecological soundness

Although most restoration activities aim to improve livelihoods and ecosystem function, some restoration interventions can do more harm than good without a proper analysis and understanding of ecosystem classification and function. For example, while planning restoration activities around tree planting, using tree cover as the main metric of degradation can fail to account for the impact of these activities on other ecosystems (Parr and others, 2024). In grassland and savanna ecosystems, for example, other indicators such as soil erosion, overgrazing and fire are more appropriate measures of degradation (Buisson and others, 2019). In these non-forested ecosystems, mass tree planting itself can lead to degradation by increasing the tree canopy, reducing sunlight and, ultimately, resulting in structural, compositional and functional changes to the ecosystem. These changes can eventually alter ecosystem services, such as water and food availability and cause native biodiversity loss, especially of shade-intolerant species associated with open habitats (Wieczorkowski and Lehmann, 2022).

AFR100 is a pan-African, country-led effort to restore 100 million hectares of land by 2030. The initiative uses a forest landscape restoration (FLR) approach to address land degradation and touts tree planting as an effective restoration strategy. A recent study by Parr and colleagues (2024), however, found that nearly a fifth of the area pledged for restoration has never had natural forest cover. The authors attributed this oversight in the AFR100 initiative to the large financial incentives for tree planting and a lack of ecological awareness among both the public and policymakers (Parr and others, 2024). While tree planting is often an important land restoration strategy, it is not a "one size fits all" technique. Understanding the ecological characteristics of degradation across diverse ecosystems will help prevent unintended maladaptative initiatives and help select appropriate restoration interventions.

bank access around the world due to their restricted ability to obtain and manage assets. Additionally, women's lower education levels and exclusion from formal employment limit their access to the necessary documentation for formal financial services. Supply-side barriers, including legal restrictions in some countries on women owning financial assets, further exacerbate these issues. Thus, combining land restoration policy instruments with gender-inclusive financial policy instruments and mechanisms that acknowledge and tackle these obstacles is crucial for promoting women's participation in land restoration and enhancing their well-being (Rao, 2015).

Engage youth: Youth stand at the front line of environmental challenges, inheriting the consequences of land degradation and climate change (Kemeh and Kabalan, 2021). While land and ecosystems are crucial for the well-being of society, most of the world's youth—85 per cent, or about 1.2 billion individuals—live in regions where their livelihoods are deeply interconnected with natural resources, often involving agriculture and food production. Young people also face food insecurity, poor wages and marginalization, illustrating the paradox of a generation capable of driving innovation in land practices yet restricted by systemic barriers (UNCCD, 2022a). Young people confront significant obstacles to land tenure, including discriminatory practices, dependence on inheritance, exclusion from land governance and financial barriers that limit their ability to lease and manage land. These barriers also obstruct their engagement in sustainable land management and restoration practices. These challenges are compounded by factors such as gender, marital status, education and socioeconomic status (UNCCD and Landesa, 2022). Addressing these adversities and recognizing the role of young people as environmental stewards is crucial to ensuring that nature-positive food production safeguards human and planetary health into the future (UNCCD, 2022a).

Promote the role of indigenous peoples: Indigenous peoples are often culturally, economically and spiritually connected with their ancestral territories, and many have a deep understanding of their environment. Over the last millennia, they have sustainably managed more than 40 per cent of the global land mass. Their collective ancestral knowledge and practices have enabled them to

achieve the restoration of natural environments and socioecological systems both within and adjacent to areas that they inhabit (Nelson and others, 2024). Therefore, Article 31 of the UN Declaration on the Rights of Indigenous Peoples advocates for the rights of Indigenous peoples to maintain, protect and control their culture and traditional ecological knowledge (Robinson and others, 2021).

To facilitate an active role for indigenous peoples in land restoration, their established right for free, prior and informed consent (FPIC) must be respected. FPIC aims to ensure that indigenous peoples are involved throughout the land restoration process—from the initial assessment to monitoring and evaluation—and it provides them the right to withhold/withdraw their consent at any point. This approach acknowledges their self-determined development and collective rights over natural resources, land and territories (FAO, 2016a). Promoting indigenous leadership and self-determination, aligned with land restoration principles, contributes to cultural and ecological restoration on a global scale (Robinson and others, 2021). Nevertheless, indigenous peoples are often excluded from access to financial mechanisms to support their work and the services they provide (Nelson and others, 2024). Land restoration policy instruments should ensure financial inclusion for indigenous peoples and include options to ensure disaster risk finance instruments are available to them throughout the restoration process.

4. Conclusion

Land restoration can address land degradation, climate change and biodiversity loss while also fostering sustainable livelihoods and human well-being. Understanding the connections and synergies among these different policy objectives can motivate and enable land restoration. This guide supports policymakers in leveraging these synergies. It outlines pathways for designing coherent policy instruments that make land restoration attractive in terms of financial inclusion, social protection and the use of disaster risk finance. The guide also encourages cooperation and understanding among various stakeholders working across land restoration, social protection, financial inclusion and disaster risk finance policies who frequently operate in silos.

The three pathways for designing coherent land restoration policy instruments require various levels of integration and coordination with other policy objectives. Decision makers and other stakeholders determine the most suitable pathway, based on the nature of their enabling environment. This involves understanding existing priorities, commitments, the level of horizontal and vertical policy coherence, existing coordination between different policy fields and the available human and financial capacities of policy institutions.

For successful implementation, these policies must consider context specific factors. This includes consideration of ecosystem restoration principles, incorporating various communities of practice, specifying the target landscape and restoration practice and evaluating the coverage and prevalence of social protection, financial inclusion and disaster risk financing instruments. Additionally, efforts to assess available financing mechanisms and identify stakeholders who may benefit or be adversely affected are crucial. Finally, adopting a gender perspective and integrating indigenous knowledge can help achieve equitable policy instrument impacts.

This guide encourages policymakers to take proactive measures to cooperate with all relevant stakeholders. Regardless of a government's capacity to integrate different policy objectives, an entry point always exists for enhancing the impact of land restoration policy instruments.

Case Studies

Case Study 1: Local fruit tree varieties for land restoration and sustainable development in Central Asia

General information

The CGIAR Research Program on Water, Land, and Ecosystems (WLE), alongside its partners, set out to create alliances to provide sustainable agricultural solutions to the problem of ecosystem degradation in Central Asia. Creating fruit tree orchards was proposed as a comprehensive strategy to mitigate multiple regional challenges. The orchard systems were created to improve ecosystem health and establish resilient frameworks for managing water, land and food resources, while supporting farming families with a stable source of income (CGIAR Research Program on Water, Land and Ecosystems, 2015).

Stakeholders involved

Bioversity International and the CGIAR Research Program on Water, Land, and Ecosystems (WLE), follow an integrated approach to natural resource management research. In this project, they have collaborated with other international partners (UNEP and GEF) and government actors as well as local stakeholders from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan to identify different perspectives on challenges and solutions for the management and conservation of diverse fruit orchards (CGIAR Research Program on Water, Land and Ecosystems, 2015; Lapeña and others, 2014).

Policy instruments

The orchard systems were proposed by the research groups because of their potential not only to counteract environmental degradation but also to provide farming families with a stable source of income. By collaborating with scientists to identify areas where orchards could most effectively restore ecosystem services and by working with local partners through capacity building to develop both market and non-market incentives, the initiative has been working to reinforce the long-term sustainability of agricultural systems in Central Asia's arid conditions (CGIAR Research Program on Water, Land and Ecosystems, 2015).

Case Study 1: contd.

Benefits for land restoration, social protection and financial inclusion

The combined efforts of Bioversity International and its partners have transformed both livelihoods and landscapes by boosting farmers' interest and capacity for planting orchards. This included establishing regional and national training centres to train 1,500 farmers about essential soil, water and crop management practices and creating more than 50 fruit tree nurseries for producing more than 1.5 million seedlings annually. The programme also continues to work to improve understanding about how diverse orchards contribute to ecosystem services, such as soil fertility, carbon storage and pollination. Farmers serve as vital sources of knowledge dissemination, teaching agronomic practices, such as correct pruning techniques, applying whitewash to tree trunks to lessen frost damage and the timely use of pesticides (CGIAR Research Program on Water, Land and Ecosystems, 2015).

Remaining Challenges

Despite its successes in Central Asia, this ongoing project faces some challenges. Besides limited financial resources, the challenges include problems related to governance structures. In most Central Asian countries, conservation laws follow a top-down design with protected areas management by the government. This design generally does not allow the active participation of forest dwellers and rural communities, which makes it more difficult to effectively integrate social protection and financial inclusion objectives in restoration projects (Lapeña and others, 2014).

Case Study 2: HARITA/R4 Rural Resilience Initiative, promoting land restoration through innovative social protection and financial inclusion instruments

General presentation

In response to the escalating threat of climate change and its devastating impacts on smallholder farmers in Ethiopia, the Horn of Africa Risk Transfer for Adaptation (HARITA) project aimed to transform social assistance programmes into comprehensive risk management services, including index-based crop insurance and efforts to mitigate drought risks through different land restoration activities (OXFAM America, 2012). Starting with 200 households in 2009, the project expanded to encompass more than 13,000 households across 43 villages by 2011, directly benefiting approximately 75,000 individuals. This success led to the launch of the larger, scaled-up initiative called the R4 Rural Resilience Initiative. The R4 Rural Resilience Initiative now operates as a multinational effort in collaboration with the United Nations World Food Programme (WFP), which also developed a holistic risk management framework that includes risk reduction, risk transfer and risk management tools, such as credit and savings (R4 Rural Resilience Initiative, 2018).

Stakeholders involved

HARITA developed through a collaboration between Oxfam America, the Relief Society of Tigray and Swiss Re. For the risk reduction activities, the programme collaborated with agriculture experts, extension agents and community representatives. The programme's drought insurance scheme was administered by the Rural Savings and Credit Cooperatives, held by the Ethiopian government (R4 Rural Resilience Initiative, 2018)

Case Study 2: contd.

Policy instruments

Central to HARITA´s approach was the implementation of an "insurance-for-work" programme. This initiative allowed cash for poor farmers to pay their insurance premiums through labour contributions to community-identified projects aimed at reducing risks, such as land restoration efforts (OXFAM America, 2012). By engaging in activities, such as catchment treatment, gully reclamation and compost production, farmers not only enhanced their own resilience but also contributed to the sustainable regeneration of degraded lands. This multifaceted approach not only addressed the pressing need for climate resilience but also economically empowered local communities.

Furthermore, the project leveraged existing social protection structures, such as Ethiopia's Productive Safety Net Programme (PSNP). PSNP provides public works to many food-insecure households (i.e., about 80 per cent of participants) with labour capacity, focusing on integrated community-led development, encompassing work on soil and water conservation, management of rangelands and the enhancement of community assets, such as roads, water infrastructure, schools and clinics (Social Protection for Employment Community, 2021). In parallel, PSNP provides unconditional cash transfers to several households without labour capacities (i.e., about 20 per cent of participants) (Social Protection for Employment Community, 2021). To facilitate participation and affordability, PSNP also includes partnerships with microfinance institutions that provide farmers with the option to collateralize credit with insurance, thereby enhancing their financial security while promoting sustainable agricultural practices. Finally, in case of low-level and unexpected transitory food insecurity, a contingency budget within the PSNP provides temporary additional jobs/resources through the institutional structures of public works and direct assistance (The World Bank Group and others, 2013). If the shock has more impact and the contingency budget is not enough, a risk financing mechanism enters into action. In particular, when the Early Warning System triggers a risk financing mechanism response, contingency plans within PSNP are developed to ensure that local needs are aligned with existing resources, allowing for the allocation of funds through established PSNP channels (The World Bank Group and others, 2013).

Benefits for land restoration, social protection and financial inclusion

Importantly, HARITA prioritized gender inclusion and empowerment, ensuring the involvement of female-headed households in decision-making processes and emphasizing activities that increase women's income-generating opportunities. This inclusive approach not only strengthened community resilience but also fostered gender equity and social cohesion (Madajewicz and others, 2013).

The HARITA project demonstrated major advantages regarding the ecological restoration and rehabilitation of land. First, local communities were engaged in efforts to reduce drought risk, including catchment treatment, gully reclamation, spate irrigation, microgardening, composting for soil fertility management and planting of drought resistant beles (cactus pears) that grow on degraded lands (OXFAM America, 2012). These measures supported the regreening process besides the reduction of drought risk. Produced and applied compost enhanced the fertility of soils and enhanced water-holding capacity, while offering an alternative to conventional chemical fertilizers. Further, the application of compost and reduction of water run-off supported the sustainable intensification of agricultural practices leading to higher land productivity and, thus, alleviated pressure from surrounding lands and facilitated natural regeneration. In one of the HARITA project locations (Kola Tembien), the total chemical fertilizer use decreased about 70 per cent while compost application increased by about 500 per cent. In the other locations, farmers increased both chemical fertilizer and compost for their main crops (Madajewicz and others, 2013).

Case Study 2: contd.

Remaining challenges

Although the programme had many positive results and enhanced the resilience of smallholder farmers, some challenges were also revealed. For instance, HARITA's dependence on donor support for its insurance-for-work component raised concerns for its sustainability (Kühne, 2022). Additionally, rigorous impact evaluations showed that, although the programme contributed significantly to farmers' ability to cope with drought, many of them did not receive sufficient information on risk reduction activities.

Case Study 3: Improving livelihoods through the restoration of chilgoza pine in Pakistan as part of The Restoration Initiative (TRI)

General presentation

The Restoration Initiative (TRI) for the chilgoza pine forests of Pakistan began in 2018 and aims to combat deforestation and forest degradation. Its goal is to contribute to the restoration and sustainable management of the chilgoza pine forests throughout the country by capacity building and promoting incentives for sustainable forest management and restoration. These forests are primarily threatened by the extraction of blue pine timber and nuts from chilgoza pine, which are highly valued in both local and international markets. However, the increasing demand and market price for pine nuts, combined with inadequate regulations and enforcement governing the harvesting of cones, have led to overexploitation and ecosystem degradation (IUCN and others, 2020).

Stakeholders involved.

This project is supported by GEF grants and involves collaboration between the FAO and the Pakistan Forest Department (IUCN and others, 2021). Operationally, TRI engages with local communities across all project sites. A key collaboration strategy is the formation of Chilgoza Forest Protection and Conservation Committees (CFPCCs). These committees are composed of community members, private-sector and civil-society representatives, and they are officially recognized by the local forest department to help manage, restore and protect chilgoza forests (IUCN and others, 2021). Complementing these efforts, the IUCN facilitated a Restoration Opportunities Assessment Methodology (ROAM) training session for professionals from all four provinces in 2019 in Chitral, underscoring the IUCN's commitment to capacity building and inclusive conservation efforts (IUCN and others, 2020).

Case Study 3: contd.

Policy instruments

TRI has taken proactive measures to mitigate the impact of the current deforestation threats. Operationally, TRI engages with local communities at all project sites, developing agreed-upon plans for the collection and use of pine cones and establishing guidelines to prevent damage to the trees and surrounding forests. Additionally, the CFPCCs are provided with toolkits for harvesting and tasked with managing grazing exclusions, supporting natural regeneration, managing plantations and promoting agroforestry to restore agricultural land and biodiversity conservation (IUCN and others, 2021). TRI also aims to enhance the community share of revenue and to create alternative job opportunities for women (IUCN and others, 2022) from the post-harvest processing of chilgoza nuts, thereby incentivizing sustainable ecosystem management. Moreover, FAO sustainable financing experts initially trained three Chitral communities on ecosystem valuation and PES, analysing its feasibility as the foundation for a comprehensive PES scheme. Another social protection initiative of the project is to provide fuel-efficient stoves to the community, which has resulted in reduced fuelwood consumption and a decrease in the workload for women and children, while health, hygiene and living standards have improved (IUCN and others, 2022).

Benefits for land restoration, social protection and financial inclusion

TRI has set up 48 sites for assisted natural regeneration, spanning 2,853 hectares. The CFCPCs have supported the growth of approximately 11 million seedlings. To date, the initiative has distributed 919,655 forest and 77,397 fruit plants, affecting 953 hectares of land. In total, 815 stakeholders (700 men and 115 women) have been trained and engaged in capacity-building workshops (IUCN and others, 2023).

Remaining challenges

The TRI Initiative in Pakistan faces several challenges in its mission to restore and conserve the chilgoza forests, such as economic instability, insufficient research and expert advice, poor marketing strategies and unpredictable market conditions (IUCN and others, 2021). Overcoming these hurdles requires a comprehensive approach that includes stakeholder engagement, securing further resources and focusing on the scalability and sustainability of interventions to achieve the initiative's objectives. To expand beyond small-scale operations, the programme needs governmental assistance to enhance infrastructure, benefiting everyone in the value chain, including farmers, manufacturers and processors (IUCN and others, 2021).

Case Study 4: Expanded Public Works Programme (EPWP) in South Africa

General presentation

South Africa's Expanded Public Works Programme (EPWP) is a nationwide programme that coordinates several other programmes for improving social protection and labour opportunities launched in 2004. Governments and state-owned enterprises provide work and skills development to the unemployed—in particular, to youth, women and persons with disabilities—that address four policy themes concerned with environmental, infrastructure, social and non-state objectives (ILO, 2018). Job opportunities in the environment sector involve management of water, parks, fire, wetlands, waste and others (Kelobang and Boon, 2018). Corresponding environmental policy objectives include eliminating invasive species, coastal management, preventing wildfires, waste management and the conservation of wetlands (Marais and Mlilo, 2018).

Case Study 4: contd.

Stakeholders involved

The coordination structure of the programme has evolved over the years, moving to decentralize its implementation. The Department of Social Development is responsible for the development of the overall EPWP; the Department for Public Work leads the delivery, coordination and monitoring of the different programmes composing it; and the Minister of Labour sets the conditions of work applicable to all EPWP participants. Each area of EPWP is then managed by the department with jurisdiction over the corresponding theme: the environment and culture area of the EPWP is led by the Department of Environmental Affairs and Tourism; the infrastructure area is led by the Department of Public Works; the non-state area by the Department of Cooperative Governance and Traditional Affairs and the Department of Public Works; and the social area is led by the Department of Social Development (Peres and Mahmud, 2019).

Policy instruments

This environmental programme, thus, uses social protection instruments, such as job creation from the state and skills training, to conduct activities such as the removal of alien invasive species from waterways (Working for Water), the conservation and protection of coastal environment and estuaries (Working for the Coast), the protection, rehabilitation and sustainable use of wetlands (Working for Wetlands) and the promotion of integrated fire management to help protect lives, livelihoods and ecosystem services (Working on Fire) (Marais and Mlilo, 2018). Some programmes targeting small contractors (i.e., usually landowners able to work with women, youth and persons with disabilities) include the provision of financial services in coordination with the banking sector (Marais and Mlilo, 2018). One important strength of this EPWP programme is that it is able to target specific ecosystems through different specific environmental programmes while using similar social protection policy instruments under the EPWP umbrella (Marais and Mlilo, 2018).

Benefits for land restoration, social protection and financial inclusion

The programme has led to both job creation and land restoration. More concretely, in the financial year 2015/16, it created more than 95,000 jobs, suppressed 90 per cent of wildfires, rehabilitated 25,000 hectares of land and cleaned 2,113 km of accessible coastline, amongst other impacts (Marais and Mlilo, 2018). Looking closer at the Working for Water programme, the Department of Water and Sanitation claims that the programme has cleared “more than one million hectares of invasive alien plants” and provied “jobs and training to approximately 20 000 people from among the most marginalized sectors of society” every year since it began in 1995 (Department of Water and Sanitation, South Africa, 2024).

Remaining challenges

Finding areas that have high levels of poverty and that need land restoration can be challenging. Additionally, as a government-led programme, some bureaucratic processes lead to delays in payments and contract approvals, which, in turn, can be detrimental to the vulnerable target groups (Marais and Mlilo, 2018).

Case Study 5: MNREGS, the creation of wage and assets in rural areas

General Presentation

The Mahatma Gandhi National Rural Employment Guarantee Schemes (MNREGSs), established by the Mahatma Gandhi National Rural Employment Guarantee Act on 25 August 2005, comprise the world's largest public work-based welfare programme. They aim to reduce rural poverty and create durable assets in rural India, such as water and soil conservation infrastructures, "such as check dams, ponds and trenches" and "irrigation channels, plantations, livestock, fisheries infrastructure, water and grain storage structures" (Kaur and others, 2019). Simultaneously, they aim to guarantee the right to work and provide 100 days of wage employment per year (UNEP, 2023c). The Act stipulates that every state government shall implement an MNREGS in accordance with the law's operational guidelines and provisions.

Stakeholders involved.

The MNREGSs unite central and state governments, local gram panchayats (village councils) and rural households in a collective effort to combat rural poverty and support sustainable development in India. Governments provide policy and financial support, while gram panchayats implement projects that can create valuable community assets such as water conservation infrastructure (UNEP, 2023a). These efforts are further amplified by creating linkages between various programmes, enhancing the scheme's overall impact. For example, the convergence of the MNREGSs with India's Integrated Watershed Management Programme help to maximize the scheme's overall impact (Department of Land Resources, Ministry of Rural Development, Government of India, 2015). In addition, a partnership with the United Nations Environment Programme (UNEP) promotes the integration of ecosystem-based disaster risk reduction (Eco-DRR) within MNREGSs in Kerala. This effort includes specialized training for stakeholders on Eco-DRR implementation, developing handbooks and training packages in four local languages. These resources aim to embed Eco-DRR technical guidance into MNREGS operations, enhancing local ecosystem resilience against climate and disaster risks (UNEP, 2023c).

Policy instruments

MNREGSs employ key policy instruments to enhance resilience and support rural livelihoods. They offer cash for work, guaranteeing 100 days of wage employment to each household and promoting financial inclusion by linking job cardholders to banks to enable digital payments. The scheme also focuses on capacity building in integrated natural resource management, geospatial information systems and the development of gram panchayat plans essential for local governance in Indian villages. Additionally, the scheme supports climate change mitigation by generating green jobs and promoting the regeneration of natural resources and further building resilience against climate shocks (Kaur and others, 2019).

Case Study 5: contd.

Benefits for land restoration, social protection and financial inclusion

MNREGS have demonstrated significant benefits, such as an improvement in arable land, enhanced agricultural production and opportunities for agriculture-based industries. Additionally, the schemes have contributed to the introduction of new, drought-resistant crop varieties and fostered engagement with non-agriculture-based enterprises. These initiatives collectively enhance the resilience of rural households and the broader local economy against the adverse impacts of climate change (Kaur and others, 2019).

Remaining challenges

However, MNREGSs face challenges, including governance issues, corruption, payment delays and concerns over the quality and usefulness of built assets (e.g., dams). Addressing these challenges involves adjusting wages to inflation, ensuring timely payments, improving asset quality and leveraging effective monitoring and implementation to maximize the MNREGS impact on India's rural socioeconomic landscape (Singh and others, 2012).

Case Study 6: Connecting forest Landscape restoration and the creation of sustainable businesses in São Tomé and Príncipe

General Presentation

The island nation of São Tomé and Príncipe faces significant environmental and economic challenges due to its rapidly growing population, increased demands for food, energy and space and unsustainable logging practices. These pressures threaten the island's natural forests, people's livelihoods and potential economic growth. In response, the government launched its first large-scale forest landscape restoration (FLR) programme in 2019 as part of The Restoration Initiative (TRI) of the IUCN, the FAO and the UNEP in support of the Bonn Challenge. The São Tomé and Príncipe FLR initiative targets the restoration of 36,000 hectares of forest and supporting the creation of sustainable businesses to reduce reliance on timber harvesting (IUCN and others, 2022).

Stakeholders involved

This programme was executed by the country's Ministry of Agriculture and Rural Development and supported by the FAO as part of international The Restoration Initiative (IUCN and others, 2020). A foundational strategy was establishing an FLR "platform"—an advisory body involving 40 stakeholders from a broad range of national and local administrations, civil society groups, the private sector, the army and police and research bodies — to increase visibility of the project and to facilitate the consolidation and scaling up of FLR work. A partnership with national organic cocoa and coffee cooperatives, such as CECAB, has helped to increase seedling production for reforestation. To promote financial inclusion, the Central Bank of São Tomé and Príncipe launched a strategy to enhance access to services and products and to encourage sustainable business investments. Lastly, in partnership with the UNDP, a National Forest and Landscape Monitoring System was established to track progress.

Policy instruments

The São Tomé and Príncipe FLR initiative provides free kits and seedlings, training programmes on the fundamentals of forest landscape restoration and financial support for FLR activities to farmers (IUCN and others, 2021).

Case Study 6: contd.

Benefits for land restoration, social protection and financial inclusion

Some benefits of the initiative include financing for "green products" at low lending rates and improving the policy and regulatory frameworks to support business start-ups in the sustainable management of natural resources. Additionally, the Association of Banks (ASB) has developed tailored financial instruments to overcome obstacles faced by forest-based businesses and a code of conduct for environmental investments. CECAB, producing 650 tonnes of organic cocoa yearly, collaborated with The Restoration Initiative to restore 6,000 hectares of degraded shadow forests, involving a network of 13 nurseries to produce 18,500 seedlings. These were planted across plots by 1,500 cooperative farmers, who were provided with free kits and seedlings. The initiative also trained farmers on the long-term benefits of maintaining healthy shadow forests for future cocoa production (IUCN and others, 2023).

Remaining Challenges

Despite these comprehensive efforts, the FLR initiative has encountered difficulties in large-scale planning and obtaining high-quality technical data for the project design and implementation. Likewise, the project still encounters difficulties ensuring a sufficient supply of seeds and seedlings for nationwide restoration efforts. Securing financial credit for business investments also presents ongoing challenges (IUCN and others, 2023).

Case Study 7: AgriFin, scaling digital financial services for farmers' financial inclusion while promoting climate smart agriculture.

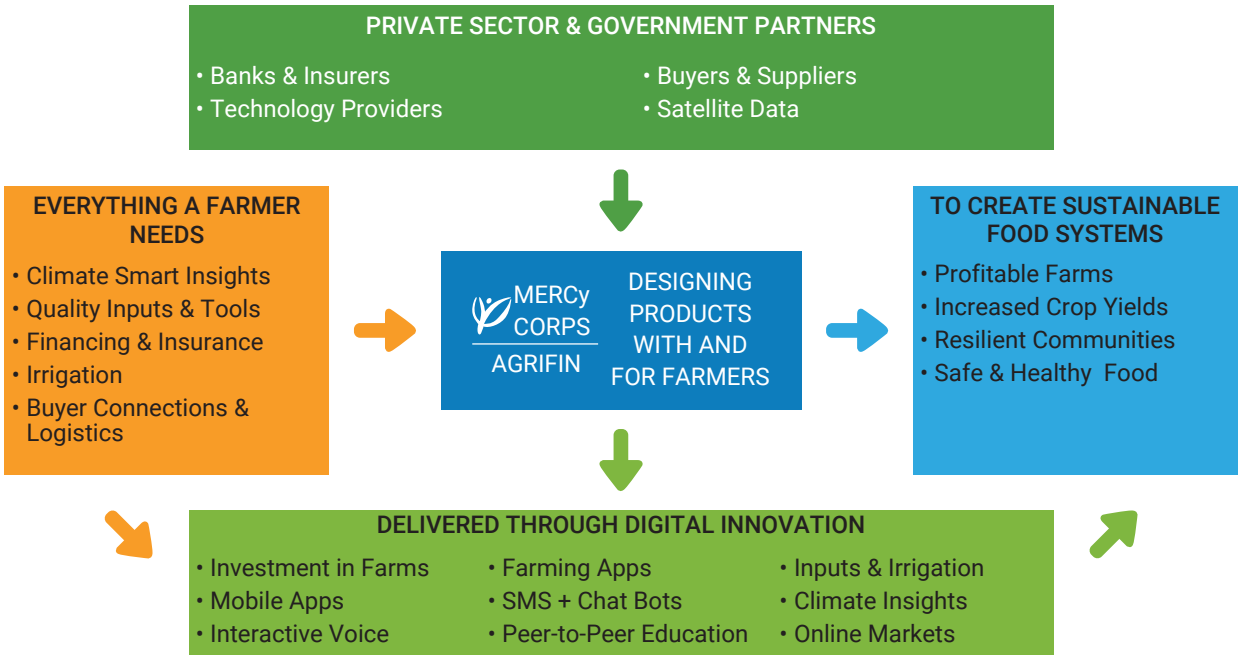
General Presentation

Launched in 2012, the AgriFin initiative, led by Mercy Corps, targets smallholder farmers across Africa with no bank access living on less than $2 per day. The initiative aims to elevate the livelihoods of these farmers through increased productivity and income (Mercy Corps, 2019). Financial inclusion plays a pivotal role in empowering smallholder farmers, and the programme utilizes a range of tools and services, including savings, credit, insurance and digital payment solutions. Since its inception, AgriFin gradually introduced bundled products and services to address customer awareness and constraints on product uptake, while reducing service delivery costs (Shrader and others, 2019). With a specific target of increasing farmer incomes and productivity by 50 per cent and reaching 50 per cent more women, AgriFin leverages digital tools to create sustainable food systems.

Stakeholders involved

Funded by the Mastercard Foundation, the Bill and Melinda Gates Foundation and the Swiss Development Cooperation, AgriFin includes a wide range of actors among its stakeholders. AgriFin collaborates closely with private sector entities, such as banks, mobile network operators, educators, tech startups and government bodies, to drive innovation and enhance agricultural practices. By continuing to innovate and collaborate with diverse local stakeholders, AgriFin's digital farmer programme aim to empower smallholder farmers across Africa, enhancing their income, productivity and resilience in the face of evolving challenges.

Case Study 7: contd.



Policy Instruments

This programme leverages digital platforms to provide smallholder farmers with tools for better engagement, risk-profiling and improved agricultural practices. One of the most successful components of this initiative is DigiFarm II, a mobile platform for farmers in Kenya (Mercy Corps, 2019). The platform supports farmers in adopting regenerative and sustainable agriculture methods facilitated by digital networks (Shrader and others, 2019). These practices promote soil health, biodiversity and long-term agricultural viability. DigiFarm also has an e-learning platform for agricultural training that educates farmers on sustainable climate-smart agriculture practices, including water and land management, post-harvest loss reduction and adaptation and mitigation strategies. By integrating environmental objectives into the programme, AgriFin contributes to the resilience of smallholder farmers in the face of climate change.

Benefits for land restoration and financial inclusion

AgriFin´s approach addresses key barriers to financial inclusion for smallholder farmers by providing access to digital financial services, such as mobile money and savings accounts. By promoting climate-smart agricultural practices through the DigiFarm II e-learning platform, AgriFin empowers farmers to adopt regenerative methods that improve soil health and biodiversity. Techniques, such as cover cropping and conservation agriculture, can minimize soil loss, thereby protecting land fertility and promoting long-term productivity. These practices can help improve farm productivity and profitability and restore degraded land while promoting sustainable land management.

Remaining Challenges

Despite the initiative's successes, digital literacy and access remain a challenge. Not all farmers have access to smartphones or have the skills to use digital platforms effectively, hence addressing this digital divide is crucial for ensuring programme inclusivity.

Case Study 8: Jatka Fisher Conservation Programme in Bangladesh, the extension of social protection for fishers and fish conservation

General Presentation

The Jatka Fisher Conservation Programme was launched by the Bangladesh government in 2003, to halt and reverse the decline of populations of hilsa fish, the national fish of Bangladesh and a sought-after food fish across the Indian subcontinent. The initiative is considered a national social assistance programme because it also compensates fishers for livelihoods lost due to various conservation and restoration policies (Islam and others, 2016).

Stakeholders Involved

Programme coordination is led by the Department of Fisheries under the Ministry of Fisheries and Livestock. Programme implementation is supported by local governments through various fisheries officers at the district and subdistrict levels (Islam and others, 2020). The work of the Department of Fisheries is also supported by the Bangladesh Fisheries Research Institute (BFRI), whose role as co-lead mainly includes research on biological and environmental implications of fishing activities in the marine ecosystems (Islam and others, 2020). Community-based organizations are also key stakeholders responsible for awareness and training programmes, as well as gender mainstreaming through the creation of community savings groups targeted for women (Islam and others, 2020). In addition, the Bangladesh Fisheries Development Corporation (BFDC) provides support by establishing fishing units and by helping in the preservation, processing, distribution and marketing of fish products (Islam and others, 2016).

Policy instruments

Policy instruments supporting the programme include a ban on hilsa fishing during specific months of the year and requirements on using sustainable and non-harmful fishing practices. They also include national social assistance to ensure income compensation to fishers, who lose their livelihoods during the months when the bans are in effect (Bladon and others, 2022).

Benefits for land restoration, social protection and financial inclusion

The programme has had numerous ecological and socioeconomic impacts. The decline of the hilsa fish was halted and reversed, and production increased from 199,000 metric tonnes in 2003 to an estimated 500,000 metric tonnes in 2017 (Islam and others, 2018). Fishers also reported catching larger hilsa fish. During the ban periods, fishers have been able to engage in alternative income-generating activities which have increased household incomes and reduced reliance on fishing (Mohammed and Wahab, 2013). Exports of the hilsa fish also significantly increased, contributing positively to the larger economy of the area (Islam and Mohammed, 2017).

Remaining Challenges

Despite the success, the programme has been plagued by ”inclusion errors (food-secure households were included) and exclusion errors (food-insecure households were not included)” (Mohammed and Wahab, 2013). Difficulties exist in distinguishing genuine hilsa fishers from those who want to fraudulently benefit from the programme (Mohammed and Wahab, 2013). Concerns have been raised regarding programme coordination, particularly the lengthy procedures in implementation as a result of the administrative chain from the national government to the beneficiaries. While this has not necessarily raised costs, it has caused time-consuming delays (Mohammed and Wahab, 2013).

Case Study 9: Bolsa Floresta Programme in Brazil, when social protection contributes to more resilient communities and forest conservation

General Presentation

The Bolsa Floresta Programme (BFP) in Brazil is a combined initiative that merges conditional cash transfers with payments for ecosystem services (PES). It promotes environmental conservation and social development. Since its foundation in 2007, BFP has targeted sustainable development reserves across the Amazon, covering 10.9 million hectares and engaging 583 communities across 16 protected areas (Porras and Asquith, 2018).

Stakeholders involved

Administered by the Amazonas Sustainable Foundation (FAS), the BFP receives funding from various partners, including governmental bodies, non-government organizations and private sector contributors, such as Bradesco Bank. The programme is established under laws and regulations that set the foundation for the state's environmental policies, enabling the integration of forest-based environmental services with the objectives of social justice and equity.

Policy instruments

The programme offers financial benefits to riverine families living in reserves if the families agree to certain conditions. For instance, in return for payments, families agree to adopt practices that reduce deforestation and prevent fires in pristine areas, ensure their children attend to school and maintain their residence within the reserve for at least two years (Viana and Salviati, 2018). Payments under the program target ecosystem services from standing forest, carbon storage and capture, with a plan to introduce additional payments related to water conservation. Thus, the programme involves a mix of policy instruments, such as cash incentives per household, investments in alternative income-generating initiatives (Porras and Asquith, 2018), capacity building and social infrastructure development. Initially, the BFP's framework included three essential elements for income quality: community infrastructure, financial incentives and community empowerment. After 2008, the programme was restructured, based on workshops and consultations, introducing new elements aimed at enhancing sustainable earnings, backing grassroots movements and promoting social investments in areas such as education, transport, health and communication that can be financed by the project rather than through government services (Viana and Salviati, 2018).

Case Study 9: contd.

Benefits for land restoration, social protection and financial inclusion

The programme's multifaceted approach not only contributes to forest preservation—with a 12 per cent reduction in deforestation since the beginning of the programme—but it also supports more than 300,000 people in local communities to achieve a more stable and improved standard of living (Porras and Asquith, 2018). By prioritizing education and promoting a clear gender equity agenda, BFP contributes to healthier, more resilient communities. By involving residents in the management of their natural resources, the programme also enhances a sense of ownership and responsibility towards the environment, leading to more sustainable community-driven conservation efforts (Viana and Salviati, 2018). This approach demonstrates how environmental protection and human development can be effectively aligned.

Remaining challenges

BFP's reliance on external funding sources, however, poses challenges to its long-term sustainability and scalability (Viana and Salviati, 2018). The conditions of its cash transfers and PES might exclude marginalized individuals or those unable to meet the criteria, raising equity concerns. Moreover, the programme's broad scope and remote areas of operation add complexity to its execution and monitoring, underscoring the need for adaptive strategies that balance conservation efforts with socioeconomic realities of the communities.

Case Study 10: Mangrove restoration in Mexico, facilitated by payments for ecosystem services and ecotourism

General Information

The Fundación San Crisanto A.C. comprises a Mayan community of 150 families in the Yucatan Peninsula of Mexico. It is dedicated to restoring and conserving the area's mangrove ecosystem and to preventing flooding in a region that frequently faces heavy rainfall (UNDP, 2012). The San Crisanto community's collaborative approach combines ecosystem conservation practices, PES and ecotourism, and the results have positioned the region as one of the most-well preserved of the Yucatán Peninsula and the northern coast of Mexico.

Stakeholders involved

In 1957, 30 farmers in the region submitted a request to the state for land tenure over an area exceeding 1,450 hectares, aiming to develop coconut plantations. This request led to the creation of the San Crisanto ejido, a communal land, in 1973 (Arias Reyes and Montiel Ortega, 2010). Since its establishment, San Crisanto has expertly navigated challenges, using strategic partnerships with non-governmental organizations, educational and research institutions, alongside funding bodies to promote sustainable development. A San Crisanto sustainable development project was launched in 1995 to mitigate the impacts of Hurricane Gilbert and subsequent storms. That project created a resilience and sustainability foundation for subsequent environmental initiatives. For example, the Environmental Management Unit Manglar San Crisanto was created in 1999 to conduct mangrove and crocodile monitoring, an initiative that won a National Ecological Merit Award in 2000 (UN DESA n.d.).

Case Study 10: contd.

The community's resilience was further strengthened by support from North American Wetlands Conservation Act (NAWCA) funds in 2000, 2002 and 2005 and from the GEF Small Grants Programme in 2002. After Hurricane Isidore struck the region in 2002, the community intensified its resilience through social and environmental safeguards, and a development council established in 2003 catalysed a shift towards comprehensive sustainable practices. This included the initiation of environmental, educational and community development activities in 2005, significantly enhanced by the support from the International Convention on Wetlands (RAMSAR) and the National Forestry Commission in 2010. This support included studies, restoration efforts and biodiversity conservation investments and marked significant advancements in environmental stewardship. Later, support from the Mexican Secretariat of Environment and Natural Resources created temporary employment opportunities.

In 2011, the Fundación San Crisanto A.C. began registering CO^2 capture and carbon credit sales. The collaboration with Climate Action Reserve and a further partnership with ClimateSeed in 2020 facilitated the funding for the certification processes (Climate Seed, n.d.). These efforts culminated the first concrete income from the blue carbon market to the community in 2022.

Policy instruments

In San Crisanto, the use of strategic policy instruments has been central to promoting sustainable development and conservation efforts. These instruments include the launch of a sustainable development project for resilience building, the creation of the Environmental Management Unit Manglar San Crisanto for ecosystem monitoring, the jointly supported initiatives for CO^2 capture and carbon credit sales and the development of community jobs and income through ecotourism activities. These efforts, combined with support from various partnerships and funding bodies, have culminated in tangible environmental and economic benefits for the community, showcasing a holistic approach to ecosystem conservation and sustainable livelihoods.

Benefits for land restoration, social protection and financial inclusion

By 2017, 66 per cent of mangroves lost through hurricane damage were restored and surrounding ecosystems became healthy (Climate Seed, n.d; UN DESA, n.d; UNDP,2012). Additionally, the project captured 145,210 tonnes of carbon over 1020 hectares. Steady income now provided by the programme through profit-sharing arrangements and mangrove tours generated $1.5 million in 2019 (UN DESA, n.d.). This successful case study highlights San Crisanto's leading position in community-led conservation, achieved by securing communal land tenure status, identifying diverse income sources, investing in staff development, leveraging academic partnerships and embracing peer learning, all contributing to its ecological and economic sustainability.

Remaining Challenges

Despite its achievements, the Fundación San Crisanto A.C. faces ongoing challenges, including adapting to the impacts of climate change that threaten restored mangrove ecosystems and community livelihoods. Securing sustainable funding to continue conservation efforts poses another challenge, alongside the need to balance the growth of ecotourism with environmental preservation. Ensuring the engagement of communities and minorities and the equitable distribution of benefits from projects, such as carbon credit sales, remains crucial. Addressing these challenges is essential for maintaining San Crisanto's progress towards sustainable development and conservation.

Case Study 11: The Natural Forest Protection Programme and the Slope Land Conservation Programme in China, when social protection schemes support sustainable agroforestry transition

General information

In 1998, China launched several integrated policies that created two of the largest forest conservation and reforestation programmes in the world. The Natural Forest Protection Programme (NFPP) and the Slope Land Conservation Programme (SLCP) aim to curb deforestation, desertification and land degradation, which causes increased flooding, soil erosion and habitat loss (Delang and Wang, 2013). The goal of the NFPP is to reform the state-owned forestry sector to control deforestation, while reforming its management system and economic model (Delang and Wang, 2013). To achieve these objectives, the central government instituted logging bans in natural forests. This policy instrument is complemented by job placement help, retirement and unemployment benefits and other incentives for state enterprise workers in the forestry industry -who would otherwise lose revenue as a result of the bans (International Labour Office, 2023).

Stakeholders involved

The NFPP and the SLCP are centrally led by the national government with funding from the Ministry of Finance. The State Forestry Administration (SFA) is in charge of enrolment and implementation, while local governments assist with the selection of plots for conservation and reforestation.

Policy instruments

Three social protection policy instruments are central to these environment programmes (International Labour Office, 2023). The first is job placement. Through the Urban Employment and Reemployment Program (UERPP), the government uses subsidies on social contributions to incentivize enterprises to hire and reskill workers to manage and conserve newly designated protected areas. The second relevant social protection policy instrument provides employment retirement benefits to those workers in the forestry sector who have reached retirement age and those who wish to retire early (for a lesser benefit package). The third important instrument is unemployment benefits to the unemployed and those still looking for work to deter them from engaging in logging activities.

While these comprehensive instruments apply to state enterprise workers, they do not provide similar benefits to the estimated 120 million rural residents also affected by the bans. The SLCP addresses this gap. It aims to reform the forestry sector in villages by converting steep-sloping farmland into forests to stave off rampant water and soil erosion and to alleviate farmer poverty (Delang and Wang, 2013). From 1999 to 2002, households affected by the logging bans received in-kind transfers in the form of rice subsidies to compensate for reforested land and in exchange for planting or nursing trees. These subsidies lasted for two, five or eight years. After that, 32 million rural households began to receive cash transfers to perform conservation activities. In this way, the programme seeks to accelerate reforestation while providing livelihood support to vulnerable households who depend on agriculture along slopes and/or on activities associated with logging.

Benefits for land restoration, social protection and financial inclusion

The programmes have contributed to the reforestation of agricultural or barren land. Between 1998 and 2013, the NFPP protected approximately 106.72 million hectares within the project area, absorbing approximately 2.1 billion tonnes of carbon dioxide and releasing 1.87 billion tonnes of oxygen (Delang and Wang, 2013). The SLCP facilitated the reforestation of 26.87 million hectares (Delang and Wang, 2013). Overall, between 1990 and 2020, naturally-occurring forests grew in area from 113 million hectares to 135 million hectares (International Labour Office, 2023).

Case Study 11: contd.

Remaining challenges

Despite its positive impacts, the programmes have had their challenges due to poor programme budgeting and programme coordination bottlenecks. For instance, shortfalls in compensation to some participants have been reported and compensation levels have fallen below pre-SLCP net-income levels for the enrolled plots (Bennett, 2008). This is caused, in part, by high local government costs for delivering the programmes. In addition, the top-down implementation approach has meant that most households (57 per cent) were not consulted during the programme design and implementation in many areas (Bennett, 2008).

References

Agric Engineering Directorate (2024). *Labour Intensive Public Works Components*. Accra, Ghana. Available at http://mlgrd.gov.gh/gpsnp/index.php/project-components/lipw (Accessed 2 July 2024).

Aich, A., D. Dey and A. Roy (2022). Climate change resilient agricultural practices: A learning experience from indigenous communities over India. *PLOS Sustainability and Transformation*, Vol. 1, No. 7, e0000022.

Alix-Garcia, J., and others (2013). The Ecological Footprint of Poverty Alleviation: Evidence from Mexico's Oportunidades Program. *Review of Economics and Statistics*, Vol. 95, No. 2, pp. 417–35.

Arias Reyes, L. M. and S. Montiel Ortega (2010). Campesinos-pescadores de Yucatán: uso de la biodiversidad y apropiación de recursos naturales costeros. *Revista de Geografía Agrícola*, No. 44, pp. 25–40.

Beierl, S. (2022). "Public Works Programmes: Review of their effectiveness and empirical essays on their contribution to climate resilience and social cohesion", PhD dissertation, Universität Passau. Available at https://opus4.kobv.de/opus4-uni-passau/frontdoor/index/index/docId/1049

BenDor, T., and others (2015). Estimating the Size and Impact of the Ecological Restoration Economy. *PLOS ONE*, Vol. 10, No. 6, e0128339.

Béné, C., A. Cornelius and F. Howland (2018). Bridging Humanitarian Responses and Long-Term Development through Transformative Changes—Some Initial Reflections from the World Bank's Adaptive Social Protection Program in the Sahel. *Sustainability*, Vol. 10, No. 6, p. 1697.

Bennett, T. (2008). China's sloping land conversion program: institutional innovation or business as usual? *Ecological Economics*, Vol. 65, pp. 699–711.

Berhanu Lakew, T. and H. Azadi (2020). Financial Inclusion in Ethiopia: Is It on the Right Track? *IJFS*, Vol. 8, No. 2, p. 28.

Bladon, A., T. Greig and Y. Okamura (2022). *Connecting Social Protection and Fisheries Management for Sustainability: A Conceptual Framework* (Washington DC, The World Bank Group). Available at https://documents1.worldbank.org/curated/en/099905005312234157/pdf/P17435304301b30c80b30b09ae4dc6a21ae.pdf.

Bowen, T., and others (2020). *Adaptive Social Protection: Building Resilience to Shocks* (Washington DC, The World Bank).

Bryant, B., and others (2020). Shaping Land Use Change and Ecosystem Restoration in a Water-Stressed Agricultural Landscape to Achieve Multiple Benefits. *Frontiers in Sustainable Food Systems*, Vol. 4. Available at https://doi.org/10.3389/fsufs.2020.00138

Buisson, E., and others (2019). Resilience and restoration of tropical and subtropical grasslands, savannas, and grassy woodlands. *Biological Reviews*, Vol. 94, No. 2, pp. 590–609.

Canonge, J. (2016). *Social protection and climate change: How are rural workers and residents in China faring with conservation efforts?* (Geneva, International Labour Organization). Available at https://www.uncclearn.org/wp-content/uploads/library/53571.pdf.

Cattaneo, C. (2023). "Community of Practices", in *Encyclopedia of Sustainable Management*, S. O. Idowu, R. Schmidpeter, N. Capaldi, L. Zu, M. Del Baldo and R. Abreu (eds.) (New York and London, Springer International).

CGIAR Research Program on Water, Land and Ecosystems (2015). *Fruit trees for sweet futures in Central Asia* (Colombo, Sri Lanka). Available at https://hdl.handle.net/10568/68662.

Cherlet, M., and others (2018). *World Atlas of Desertification. (Luxembourg, Publication Office of the European Union).* Available at https://wad.jrc.ec.europa.eu/sites/default/files/atlas_pdf/JRC_WAD_fullVersion.pdf

Chigbu, U. E., and others (2021). *Strenghthening tenure and resource right for land degradation. UNCCD Global Land Outlook Working Paper.* (Bonn). Available at https://www.unccd.int/sites/default/files/2022-03/UNCCD%20GLO%20WP%20tenure.pdf.

Cisse, J. D. (2021). *Climate and Disaster Risk Financing Instruments: An Overview* (Bonn, United Nations University Institute for Environment and Human Security). Available at https://climate-insurance.org/wp-content/uploads/2021/05/Climate-and-Disaster-Risk-Financing-Instruments.pdf (Accessed 2 May 2024).

Climate Seed (n.d.). *Mangrove Conservation and Restoration in Mexico.* (Paris). Available at https://climateseed.com/mangrove-conservation-and-restoration-in-san-crisanto (Accessed 28 February 2024).

Coello, J. and L. Frey (2023). *Funding Options for Ecosystem Restoration in Central America and Africa.* (Bonn, Germany, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)). Available at https://www.international-climate-initiative.com/fileadmin/iki/Dokumente/Publikationen/Projekte/21_III_118/DEER_Funding_options_for_ecosystem_restoration.pdf.

Costella, C., and others (2023). Can social protection tackle emerging risks from climate change, and how? A framework and a critical review. *Climate Risk Management*, Vol. 40, p. 100501.

CRED and UNISDR (2018). *Economic Losses, Poverty and Disasters 1998-2017.* (Brussels; Geneva). Available at https://www.preventionweb.net/files/61119_credeconomiclosses.pdf?_gl=1*9ro6fr*_ga*ODc0NzcxMjQxLjE2OTAyNjkxNzY.*_ga_D8G5WXP6YM*MTY5OTAwMDEwOC42LjAuMTY5OTAwMDEwOC4wLjAuMA.

Dave, R., and others (2017). *Bonn Challenge Barometer of Progress: Spotlight Report 2017.* (Gland, Switzerland). Available at https://portals.iucn.org/library/sites/library/files/documents/2017-060.pdf.

Davies, M., and others (2008). 'Adaptive Social Protection': Synergies for Poverty Reduction. *IDS Bulletin*, Vol. 39, No. 4, pp. 105–112. Available at https://www.ids.ac.uk/files/dmfile/13Davies39.4web.pdf.

Delang, C. O. and W. Wang (2013). Chinese forest policy reforms after 1998: the case of the Natural Forest Protection Program and the Slope Land Conversion Program. *International Forestry Review*, Vol. 15, No. 3, pp. 290–304.

Department of Land Resources, Ministry of Rural Development, Government of India (2015). *Convergence of various programmes with integrated watershed management programme (IWMP), Operational guidelines. Operational guidelines.* (New Delhi). Available at http://watershed.cg.gov.in/Guidelines/Convergence%20Operational%20Guidelines.pdf.

Department of Public Works and Infrastructure, South Africa (2018). *Environment and culture sector.* (Pretoria, South Africa). Available at http://www.epwp.gov.za/environment&culture.html (Accessed 3/20/2024).

Department of Water and Sanitation, South Africa (2024). *Welcome to the working for water webpage,* (Pretoria, South Africa). Available at https://www.dws.gov.za/wfw/ (Accessed 4 April 2024).

Di Sacco, A., and others (2021). Ten golden rules for reforestation to optimize carbon sequestration, biodiversity recovery and livelihood benefits. *Global Change Biology*, Vol. 27, No. 7, pp. 1328–48.

Díaz, S., and others (2015). The IPBES Conceptual Framework — connecting nature and people. *Current Opinion in Environmental Sustainability*, Vol. 14, pp. 1–16.

Díaz, S., and others (2018). Assessing nature's contributions to people. *Science*, Vol. 359, No. 6373, pp. 270–72.

Ernst, E., R. Merola and J. Reljic (2022). "Labour market policies for inclusiveness. A literature review with a gap analysis", ILO working paper / International Labour Organization, 78 (Geneva, Switzerland, International Labour Organization).

European Comission (2024). *The EU Taxonomy's uptake on the ground. Factsheet.* (Brussels). Available at https://finance.ec.europa.eu/document/download/08dd5091-6df7-45ed-8dc1-2583007594c4_en?filename=240605-sustainable-finance-taxonomy-factsheet_en.pdf.

EveryChild (2012). *Making social work work: Improving social work for vulnerable families and children without parental care around the world.* (London). Available at https://resourcecentre.savethechildren.net/pdf/5511.pdf/.

Fanta, A. and K. Mutsonziwa (2021). Financial Literacy as a Driver of Financial Inclusion in Kenya and Tanzania. *Journal of Risk and Financial Management*, Vol. 14, No. 11, p. 561.

FAO (2016a). *Free Prior and Informed Consent. An indigenous peoples' right and a good practice for local communities. Manual for project praticioners*. (Rome). Available at https://www.fao.org/3/I6190E/i6190e.pdf.

—— (2016b). *Strenghtening coherence between agriculture and social protection to combat poverty and hunger in Africa. Framework for analysis and action.* (Rome). Available at https://www.fao.org/3/i5386e/i5386e.pdf.

—— (2019). *The State of the World's Biodiversity for Food and Agriculture 2019.* (Rome). Available at https://www.fao.org/state-of-biodiversity-for-food-agriculture/en/.

—— (2022). *Strengthening coherence between social protection and fisheries policies. Framework for analysis and action Framework for analysis and ac.* (Rome). Available at https://www.fao.org/3/cc2411en/cc2411en.pdf.

FAO, IUCN CEM and SER. (2021). *Principles for ecosystem restoration to guide the United Nations Decade 2021–2030.* (Rome). Available at https://www.fao.org/3/cb6591en/cb6591en.pdf.

FAO and UNCCD (2022). *Technical Guide on the Integration of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security into the Implementation of the United Nations Convention to Combat Desertification and Land Degradation Neutrality.* (Rome; Bonn). Available at https://doi.org/10.4060/cb9656en.

Felicani-Robles, F. (2024). *Comparative study of carbon rights in the context of jurisdictional REDD+ - Case studies from Africa, Asia and the Pacific, and Latin America and the Caribbean.* (Rome).

Flintan, F. (2018). *Joint village land use planning. WOCAT SLM Database.* (Bern, Switzerland, WOCAT). Available at https://qcat.wocat.net/en/wocat/approaches/view/approaches_3336/ (Accessed 9 February 2024).

Gann, G. D., and others (2019). International principles and standards for the practice of ecological restoration. Second edition. *Restoration Ecolology*, Vol. 27, pp. S1-S46.

GFDRR (2016). *What is Disaster Risk Finance (DRF)?* (Washington DC). Available at https://www.financialprotectionforum.org/what-is-disaster-risk-finance-drf (Accessed 29 February 2024).

GEO-LDN (2024). "LDN toolbox". Available at https://geo-ldn.org/ldn-toolbox/ (Accessed 13 August 2024).

Gigauri, I. (2022). The Promise of Financial Inclusion for Developing Economies, *International Journal of Management Science and Business Administration, Inovatus Services Ltd.,* Vol. 8. No. 6, pp. 7-20.

Global Partnership for Universal Social Protection (2019). *Together to Achieve Universal Social Protection by 2030 (USP2030). Call to Action.* (Geneva, Switzerland). Available at https://usp2030.org/wp-content/uploads/calltoaction_en.pdf.

Global Shield (2022). *Global Shield against Climate Risks: German G7 Presidency and V20 Concept*. (Berlin and Accra, Ghana). Available at https://www.globalshield.org/wp-content/uploads/2022/10/2022-Global-Shield-against-Climate-Risks_Concept-_FINAL.pdf.

—— (2024). *Gap Analysis Report. Contribution to the Global Shield against Climate Risks & Global Risk Modelling Alliance In-Counry Process in Ghana*. (Berlin and Accra, Ghana). Available at https://www.globalshield.org/wp-content/uploads/2024/01/2024-01-16_GS-ICP-Ghana_Gap-Analysis_Final.pdf (Accessed 16 March 2024).

Grohmann, A., T. Klühs and L. Menkhoff (2018). Does financial literacy improve financial inclusion? Cross country evidence. *World Development*, Vol. 111, pp. 84–96.

Hartmann, L., and others (2024). Assessing the contribution of land and water management approaches to sustainable land management and achieving land degradation neutrality. *Frontiers in Sustainable Resource Management*, Vol. 3. Available at https://doi.org/10.3389/fsrma.2024.1423078

High-Level Panel on Water (2018). *Making every drop count - An agenda for water action.* (New York). Available at https://sustainabledevelopment.un.org/content/documents/17825HLPW_Outcome.pdf.

Hosonuma, N., and others (2012). An assessment of deforestation and forest degradation drivers in developing countries. *Environmental Research Letters*, Vol. 7, No. 4, p. 44009.

Hsiao, W., and others (1997). *Financing health care : issues and options for China*. (Washington DC, World Bank). Available at http://documents.worldbank.org/curated/en/793551468746816919/Financing-health-care-issues-and-options-for-China

ILO (2015). *Guidelines for a just transition towards environmentally sustainable economies and societies for all.* (Geneva). Available at https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_432859.pdf. QlQ2uyDWopdvfWHcWBFVP6EL9xl4UyA4cSWlQEw8X3!1393577045?id=16462.

—— (2018). *South Africa - Expanded Public Works Programme.* (Geneva). Available at https://www.social-protection.org/gimi/Media.action;jsessionid=wl-yavQgN-

—— (2024a). *Social Protection Platform, Glossary, Parental leave*. (Geneva). Available at https://www.social-protection.org/gimi/ShowGlossary.action?lettre=p&glosLang= (Accessed 19 April 2024).

—— (2024b). *World Social Protection Data Dashboards - Glossary.* (Geneva). Available at https://www.social-protection.org/gimi/WSPDB.action?id=43 (Accessed 2/28/2024).

ILO, UNEP and IUCN (2022). *Decent Work in Nature-based Solutions 2022.* (Geneva). Available at https://wedocs.unep.org/bitstream/handle/20.500.11822/41401/Decent_Work_in_NbS.pdf?sequence=3&isAllowed=y.

InsuResilience Global Partnership (n.d). Glossary. (Bonn). Available at https://www.insuresilience.org/knowledge/glossary/.

—— (2023). *Risk Layering*. (Bonn). Available at https://www.insuresilience.org/knowledge/instruments/#risk-layering (Accessed 29 February 2024).

International Labour Office (2021). *World Social Protection Report 2020-22: Social protection at the crossroads – in pursuit of a better future.* (Geneva).

—— (2023). *100 years of social protection: The road to universal social protection systems and floors.* (Geneva). Available at https://www.social-protection.org/gimi/Media.action;jsessionid=qbHqS8Nepx6GJ-CCNa7DUEXIUK_0tv70kYJLi615zG1naHFrqnyq!1393577045?id=19203.

International Labour Office and Agence Française de Développement (2019). *Social protection for a just transition: a global strategy for increasing ambition in climate action*. (Geneva; Paris). Available at https://www.social-protection.org/gimi/Media.action;jsessionid=FI6kd8ENTFh6EKm7Jeemdref9DyZyNsNHbqnlzMJRvUwIcKH_D-i!-765179005?id=17140.

IPBES (2018). *The IPBES assessment report on land degradation and restoration.* (Bonn, Zenodo).

—— (2019). *Annex I: Glossary of the Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.* (Bonn, Zenodo). Available at https://zenodo.org/records/5657079.

IPBES secretariat (2019). *land degradation | IPBES secretariat*. (Bonn). Available at https://www.ipbes.net/glossary-tag/land-degradation (Accessed 4 March 2024).

IPCC (2012). *Managing the risks of extreme events and disasters to advance climate change adaptation. Special report of the intergovernmental panel on climate change.* (Cambridge, Cambridge University Press).

—— (2019a). "Annex I: Glossary", in *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems,* P. R. Shukla, and other (eds.),. (Cambridge and New York, Cambridge University Press).

—— (2019b). *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems.* (Cambridge and New York, Cambridge University Press). Available at https://doi.org/10.1017/9781009157988.001.

Islam, M., and others (2018). Social Considerations of Large River Sanctuaries: A Case Study from the Hilsa Shad Fishery in Bangladesh. *Sustainability*, Vol. 10, No. 4, p. 1254.

Islam, M., E. Mohammed and A. Liaquat (2016). Economic incentives for sustainable hilsa fishing in Bangladesh: An analysis of the legal and institutional framework. *Marine Policy*, Vol. 68, pp. 8–22.

Islam, M. and Y. Mohammed (2017). *Ecosystems, poverty alleviation and conditional transfers: Bangladesh Jatka Marine conservation programme.* (London, International Institute for Environment and Development). Available at http://archive.nyu.edu/handle/2451/44200.

Islam, M., M. Nahiduzzaman and A. Wahab (2020). Fisheries co-management in hilsa shad sanctuaries of Bangladesh: Early experiences and implementation challenges. *Marine Policy*, Vol. 117, p. 103955.

IUCN (2018). *The conservation and livelihoods power of a community fund in Uganda*. (Gland, Switzerland). Available at https://www.iucn.org/news/forests/201801/conservation-and-livelihoods-power-community-fund-uganda.

IUCN, FAO and UNEP (2020). *The Restoration Initiative Year in Review 2019.* (Rome). Available at https://doi.org/10.4060/ca9686en.

——(2021). *The Restoration Initiative: 2020 Year in Review.* (Rome). Available at https://doi.org/10.4060/cb6675en.

—— (2022). *The Restoration Initiative: 2021 Year in Review* (Rome). Available at https://doi.org/10.4060/cc2051en.

—— (2023). *The Restoration Initiative: 2022 Year in Review* (Rome). Available at https://www.fao.org/3/cc6085en/cc6085en.pdf.

Jahan, S., and others (2019). *The Financial Inclusion Landscape in the Asia-Pacific Region: A Dozen Key Findings,* IMF Working Paper. (Washington dc).

Jiang, M., and others (2020). Financial inclusion, land title and credit: evidence from China. *CAER*, Vol. 12, No. 2, pp. 257–73.

Kaur, N., and others (2019). *Building resilience to climate change through social protection. Lessons from MGNREGS, India*. Available at https://www.iied.org/sites/default/files/pdfs/migrate/10197IIED.pdf.

Kelobang, K. and C. Boon (2018). *South Africa - Expanded Public Works Programme.* (Geneva, ILO). Available at https://researchrepository.ilo.org/esploro/outputs/book/South-Africa-expanded-public-works-programme/995219356902676.

Kemeh, S. and A. Kabalan (2021). *Youth engagement in land and ecosystem restoration. UNCCD Global Land Outlook Working Paper.* (Bonn). Available at https://www.unccd.int/sites/default/files/2022-03/UNCCD%20GLO%20WP%20youth.pdf.

Knippenberg, E. and J. Hoddinott (2017). *Shocks, social protection, and resilience: Evidence from Ethiopia,* Ethiopia Strategy Support Program (ESSP) Working Paper. (Addis Ababa, Ethiopia). Available at https://dqo52087pnd5x.cloudfront.net/posters/docs/gatesopenres-183090.pdf

Lapeña, I., and others (2014). *Conservation of fruit tree diversity in Central Asia: Policy options and challenges.* (Rome, Bioversity International). Available at https://www.thegef.org/sites/default/files/publications/Conservation_of_fruit_tree_diversity_in_Central_Asia_1734.pdf.

Le, Q. B., E. Nkonya and A. Mirzabaev (2016). "Biomass Productivity-Based Mapping of Global Land Degradation Hotspots", in *Economics of Land Degradation and Improvement – A Global Assessment for Sustainable Development*, E. Nkonya, A. Mirzabaev and J. von Braun (eds.) (Cham, Switzerland, Springer International Publishing), pp. 55–84 .

Liniger, H. P. and R. Mekdaschi Studer (2019). *Sustainable rangeland management in Sub-Saharan Africa – Guidelines to good practice.* (Washington DC; Bern, Switzerland). Available at https://documents1.worldbank.org/curated/en/237401561982571988/pdf/Sustainable-Rangeland-Management-in-Sub-Saharan-Africa-Guidelines-to-Good-Practice.pdf.

Löfqvist, S., and others (2023). How Social Considerations Improve the Equity and Effectiveness of Ecosystem Restoration. *Bioscience*, Vol. 73, No. 2, pp. 134–48.

Loukoianova, E., and others (2018). *Financial Inclusion in Asia-Pacific,* IMF Departnmental Paper Series. (Washington DC). Available at https://www.sipotra.it/wp-content/uploads/2019/03/Financial-Inclusion-in-Asia-Pacific.pdf.

Madajewicz, M., A. H. Tsegay and M. Norton (2013). *Managing Risks to Agricultural Livelihoods: Impact Evaluation of the HARITA Program in Tigray, Ethiopia, 2009–2012.* (Boston). Available at https://s3.amazonaws.com/oxfam-us/www/static/media/files/Oxfam_America_Impact_Evaluation_of_HARITA_2009-2012_English.pdf.

Maher, B. (2018). *Financing Adaptive Social Protection. Financial Tools and Approaches for Adaptive Safety Nets.* (Frankfurt, Germany, Social Protection and Jobs - South South Learning Forum). Available at https://pubdocs.worldbank.org/en/827871520537561050/SSLF18-Financing-ASP-Framing.pdf.

Marais, C. and L. Mlilo (2018). *Ecosystems, poverty alleviation and conditional transfers: South Africa's expanded public works programme.* (Geneva, International Institute for Environment and Development). Available at https://www.jstor.org/stable/pdf/resrep16750.pdf?acceptTC=true&coverpage=false&addfooter=false.

Mayorova, T., and others (2023). Cluster Approach in Assessing The Pre-War Level of Financial Inclusion of Population from Different Regions of Ukraine in the Market of Bank Loan. *ФКДПТП*, Vol. 1, No. 48, pp. 64–76.

MCII (2023). "Climate and Disaster Risk Financing and Insurance: 25 Key terms you need to know. Factsheet". Available at https://climate-insurance.org/wp-content/uploads/2023/07/CDRFI_25KeyTerms_Factsheet_June2023.pdf.

Mercy Corps (2019). "Program Overview". Available at https://www.mercycorpsagrifin.org/program-overview/.

Mohamed, A., and others (2024). Securing Nature's Contributions to People requires at least 20%–25% (semi-) natural habitat in human-modified landscapes. *One Earth*, Vol. 7, No. 1, pp. 59–71.

Mohammed, Y. and A. Wahab (2013). *Direct economic incentives for sustainable fisheries management: the case of Hilsa conservation in Bangladesh.* (London, International Institute for Environment and Development). Available at https://www.iied.org/16527iied?k=16527iied.

Nature Kenya (2024). "Local Empowerment". Available at https://naturekenya.org/our-work/local-community-empowerment/ (Accessed 21 February 2024).

Nawaz, T. (2018). Lifting the Lid on Financial Inclusion: Evidence from Emerging Economies. *IJFS*, Vol. 6, No. 2, p. 59.

Nelson, C. R., and others (2024). *Standards of practice to guide ecosystem restoration – A contribution to the United Nations Decade on Ecosystem Restoration 2021-2030.* (Rome, FAO;Washington DC, SER; Gland, Switzerland, IUCN).

Nesbitt-Ahmed, Z. (2023). *How Gender-responsive, Age-sensitive Social Protection is Related to the Climate Crisis: A summary of the evidence.* (Florence, UNICEF Innocenti – Global Office of Research and Foresight). Available at https://www.unicef-irc.org/publications/pdf/How_GRASSP_is_related_to_the_climate_crisis.pdf.

OECD (2008). *An OECD Framework for Effective and Efficient Environmental Policies: Overview.* (Paris). Available at https://www.oecd.org/greengrowth/tools-evaluation/40501159.pdf.

—— (2015). *Coverage and classification of OECD data for public Expenditure and participants in labour market programmes.* (Paris). Available at https://web-archive.oecd.org/2022-09-16/120573-Coverage-and-classification-of-OECD-data.pdf.

—— (2022). *Public budgetary and financial instrument options*. (Paris). Available at https://www.oecd-ilibrary.org/docserver/a34a697a-en.pdf?expires=1709236116&id=id&accname=guest&checksum=53ABACE0AF5797405EF01E2DE8900650.

Ofosu-Mensah Ababio, J., and others (2023). Financial inclusion: a catalyst for financial system development in emerging and frontier markets. *JFEP*, Vol. 15, No. 6, pp. 530–50.

Omar, M. A. and K. Inaba (2020). Does financial inclusion reduce poverty and income inequality in developing countries? A panel data analysis. *Economic Structures*, Vol. 9, No. 1.

Orr, B. J., and others (2017). *Scientific Conceptual Framework for Land Degradation Neutrality. A Report of the Science-Policy Interface.* (Bonn, UNCCD). Available at https://www.unccd.int/sites/default/files/2018-09/LDN_CF_report_web-english.pdf.

OXFAM America (2012). *Horn of Africa Risk Transfer for Adaptation. HARITA quarterly report: October 2011-December 2011.* (Boston). Available at https://www.preventionweb.net/files/25413_haritaquarterlyreportoctdec2011web.pdf.

Oxford English Dictionary (2024). "Social service". Available at https://www.oed.com/dictionary/social-service_n?tab=meaning_and_use#21930938 (Accessed 4 April 2024).

Oxford Policy Management (2017). *Shock-Responsive Social Protection Systems Research: Literature review (2nd Edition).* (Oxford, UK). Available at https://www.opml.co.uk/files/Publications/a0408-shock-responsive-social-protection-systems/srsp-literature-review.pdf.

Parr, C. L., M. Te Beest and N. Stevens (2024). Conflation of reforestation with restoration is widespread. *Science*, Vol. 383, No. 6684, pp. 698–701.

Peres, A. and Mahmud, F. E. (2019). *South Africa's Expanded Public Works Programme: Innovations and challenges*. Available at https://socialprotection.org/discover/blog/south-africa%E2%80%99s-expanded-public-works-programme-innovations-and-challenges (Accessed 3 June 2024).

Perring, M. P., and others (2015). Advances in restoration ecology: rising to the challenges of the coming decades. *Ecosphere*, Vol. 6, No. 8, pp. 1–25.

Pertoldi, M., and others (2022). *Handbook of territorial and local development strategies.* (Luxembourg, Publications Office of the European Union).

Physi Solutions (2024). "Urban Nature Atlas". Available at https://una.city/ (Accessed 18 August 2024).

Porras, I. and N. Asquith (2018). *Ecosystems, poverty alleviation and conditional transfers: Guidance for practioners.* (London, International Institute for Environment and Development). Available at https://www.iied.org/sites/default/files/pdfs/migrate/16639IIED.pdf.

R4 Rural Resilience Initiative (2018). *Quarterly Report: October - December 2018.* (Rome and Boston). Available at https://docs.wfp.org/api/documents/WFP-0000104412/download/.

Rackelmann, F., Z. Sebesvari and R. Bell (2023). Synergies and trade-offs in the management objectives forest health and flood risk reduction. *Frontiers in Forests and Global Change*, Vol. 6. Available at https://doi.org/10.3389/ffgc.2023.1208032

Rakotonarivo, O. S., and others (2023). Resolving land tenure security is essential to deliver forest restoration. *Communications Earth & Environment*, Vol. 4, No. 1, pp. 1–8.

Rao, S. (2015). *Gender and Financial Inclusion throught the post.* (New York, UN Women). Available at https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2015/Discussion-Paper-Gender-and-Financial-Inclusion-through-the-Post.pdf.

Ratnawati, K. (2020). The Impact of Financial Inclusion on Economic Growth, Poverty, Income Inequality, and Financial Stability in Asia. *JAFEB*, Vol. 7, No. 10, pp. 73–85.

Ritchie, H. and Roser, M. (2019). "Land Use. How is humanity using the Earth's land? And how can we decrease our land use so that more land is left for wildlife?" Available at https://ourworldindata.org/land-use#breakdown-of-global-land-use-today (Accessed 9 February 2024).

Robinson, J. M., and others (2021). Traditional ecological knowledge in restoration ecology: a call to listen deeply, to engage with, and respect Indigenous voices. *Restoration Ecology*, Vol. 29, No. 4, e13381. Available at https://doi.org/10.1111/rec.13381.

Sahay, R., and others (2020). *The promise of fintech. Financial inclusion in the post COVID-19 era.* (Washington DC, International Monetary Fund).

Sarmiento Barletti, J. P., N. Heise Vigil and A. M. Larson (2023). *Safeguards at a glance. Are voluntary standards supporting community land, resource and carbon rights? Series on social safeguards standards #7.* (Bogor, Nairobi). Available at https://www.cifor.org/publications/pdf_files/Flyer/REDD-safeguards-7.pdf.

SCBD (2019). *Voluntary guidelines for the design and effective implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction and supplementary information.* CBD technical series, No. 93 (Montreal, Canada, Secretariat of the Convention on Biological Diversity). Available at https://www.cbd.int/doc/publications/cbd-ts-93-primer-en.pdf.

SCiO (2024). "Land Use Planning for Land Degradation Neutrality". Available at https://www.landusetool.org/ (Accessed 13 August 2024).

Schüring, E. and M. Loewe (2021). *Handbook on Social Protection Systems.* (Cheltenham, UK and Northampton, USA, Edward Elgar). Available at https://www.elgaronline.com/edcollbook-oa/edcoll/9781839109102/9781839109102.xml.

Shrader, L., Makau, E. and Karlyn A. (2019). *DigiFarm: A Digital Platform for Farmers. Case Study.* Available at https://mercycorpsagrifin.org/wp-content/uploads/2019/05/DigiFarm-Platform-Case_Final_.pdf.

Siano, A., and others (2020). Mobile Banking: An Innovative Solution for Increasing Financial Inclusion in Sub-Saharan African Countries: Evidence from Nigeria. *Sustainability*, Vol. 12, No. 23, p. 10130.

Singh, A. K., N. Bhasin and S. Lama (2012). MGNREGA: A Critical Assessment of Issues and Challenges. *The Indian Journal Of Commerce*, Vol. 65, No. 2, pp. 151-164.

Siqueira, L. P. de, and others (2021). Gender inclusion in ecological restoration. *Restoration Ecology*, Vol. 29, No. 7, e13497. Available at https://doi.org/10.1111/rec.13497

Social Protection for Employment Community (2021). *Productive Safety Net Program, Ethiopia. Infographic series.* (Australia, Department of Foreign Affairs and Trade, Global Alliances for Social Protection, GIZ, Social Protection for Employment Community). Available at https://socialprotection.org/system/files/SPEC-Infographics-ETHIOPIA.pdf.

Sutton, P. C., and others (2016). The ecological economics of land degradation: Impacts on ecosystem service values. *Ecological Economics*, Vol. 129, pp. 182–92.

The World Bank Group, Rapid Social Response and GFDRR (2013). *Ethiopia's Productive Safety Net Program (PSNP) Integrating Disaster And Climate Risk Management. Case study.* (Washington DC, The World Bank Group). Available at https://documents1.worldbank.org/curated/en/893931468321850632/pdf/806220WP0P12680Box0379812B00PUBLIC0.pdf.

Thompson, B. S. (2017). Can Financial Technology Innovate Benefit Distribution in Payments for Ecosystem Services and REDD+? *Ecological Economics*, Vol. 139, pp. 150–57.

Ulrichs, M., R. Slater and C. Costella (2019). Building resilience to climate risks through social protection: from individualised models to systemic transformation. *Disasters*, Vol. 43, Suppl 3, S368-S387.

UN DESA (n.d.). "Proyecto de Desarrollo Sustentable de San Crisanto". Available at https://sdgs.un.org/partnerships/proyecto-de-desarrollo-sustentable-de-san-crisanto (Accessed 28 February 2024).

UN General Assembly (2016). *Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction. A/71/644.* (New York). Available at https://www.preventionweb.net/files/50683_oiewgreportenglish.pdf.

UNCCD (1994). *United Nations Convention to combat desertification in those countries experiencing serious drought and/or desertification, particulary in Africa*. Available at https://catalogue.unccd.int/936_UNCCD_Convention_ENG.pdf.

—— (2015). *Decision 3/COP.12. Integration of the Sustainable Development Goals and targets into the implementation of the United Nations Convention to Combat Desertification and the Intergovernmental Working Group report on land degradation neutrality.* (Ankara, Turkey). Available at https://www.unccd.int/sites/default/files/inline-files/dec3-COP.12eng.pdf.

—— (2017). *Global Land Outlook. First Edition.* (Bonn). Available at https://www.unccd.int/sites/default/files/documents/2017-09/GLO_Full_Report_low_res.pdf.

—— (2022a). *Food Systems Summit action guide 6: Engaging youth in nature-positive food production. A pathway for safeguarding human and planetary heatlh.* (Bonn). Available at https://www.unccd.int/sites/default/files/2022-10/AG6_1_0.pdf.

—— (2022b). *The differentiated impacts of desertification, land degradation and drought on women and men.* (Bonn). Available at https://www.unccd.int/sites/default/files/2022-05/SDM_ENGLISH_webfile.pdf.

—— (2022c). *The Global Land Outlook, second edition.* (Bonn). Available at https://www.unccd.int/sites/default/files/2022-04/UNCCD_GLO2_low-res_2.pdf.

—— (2022d). "UNCCD Terminology". Available at https://www.unccd.int/data-knowledge/unccd-terminology?field_glossary_source_target_id%5B473%5D=473 (Accessed 4 April 2024).

—— (2023). *Financial and Digital Inclusion for Last Mile Payments. Trends, sustainable land use and disruptive financial service options*. (Bonn). Available at https://www.unccd.int/sites/default/files/2023-04/230417%20UNCCD%20Financial%20and%20Digital%20Inclusion%20for%20Last%20Mile%20Payments%20Eng.pdf.

—— (2024). "The history of UNCCD". Available at https://www.unccd.int/convention/history-unccd (Accessed 17 April 2024).

UNCCD and Landesa (2022). *Land rights matter for people and the planet. An options paper for raising awareness on responsible land governances for combatting desertification, land degradation, and drought.* (Bonn; Seattle, USA). Available at https://www.unccd.int/sites/default/files/2022-04/UNCCD%20Awareness-raising%20Options%20Paper%20on%20Responsible%20Land%20Governance.pdf.

UNCCD Global Mechanism (2017). *Land Degradation Neutrality Transformative Action, tapping opportunities.* (Bonn). Available at https://www.unccd.int/sites/default/files/documents/2017-10/171006_LDN_TP_web.pdf.

—— (2022). *Accounting Framework to Report on UNCCD Strategic Objective 5 on Financial and non-financial Resources to Support the Implementation of the Convention. Methodological note.* (Bonn). Available at https://www.unccd.int/sites/default/files/2022-02/Methodological_Note_Strategic%20Objective%205_clean%20-%20Final.pdf.

UNCCD/Science-Policy Interface (2022). *The Contribution of Integrated Land Use Planning and Integrated Landscape Management to Implementing Land Degradation Neutrality,* Science-Policy Brief. (Bonn). Available at https://www.unccd.int/sites/default/files/2023-09/UNCCD%20Integrated%20Land%20Policy%20Brief.pdf.

UNDP (2012). *San Crisanto Foundation Mexico. Equator Iniciative Case Study Series.* (New York). Available at https://www.equatorinitiative.org/wp-content/uploads/2017/05/case_1348160793.pdf.

UNDRR (2009). "Risk transfer". Available at https://www.undrr.org/terminology/risk-transfer (Accessed 4 March 2024).

UNEA (2022). *Nature-based solutions for supporting sustainable development. UNEP/EA.5/Res.5.* (Nairobi). Available at https://wedocs.unep.org/bitstream/handle/20.500.11822/39864/NATURE-BASED%20SOLUTIONS%20FOR%20SUPPORTING%20SUSTAINABLE%20DEVELOPMENT.%20English.pdf?sequence=1&isAllowed=y.

UNEP (2019). "Ant Forest - Inspiration and Action. Mini-programme and tree-planting initiative". Available at https://www.unep.org/championsofearth/laureates/2019/ant-forest.

—— (2021). *Ecosystem Restoration for People, Nature and Climate. Becoming #GenerationRestoration.* (Nairobi). Available at https://wedocs.unep.org/bitstream/handle/20.500.11822/36251/ERPNC.pdf.

—— (2023a). *Case study, a model for upscaling community resilience: Applying ecosystem based disaster risk reduction in India*. (Nairobi). Available at https://pedrr.org/wp-content/uploads/2023/06/India-Case-Study_08122023.pdf.

—— (2023b). *State of Finance for Nature: The Big Nature Turnaround – Repurposing $7 trillion to combat nature loss.* (Nairobi). Available at https://www.unep.org/resources/state-finance-nature-2023.

—— (2023c). *Upscaling community resilience: mainstreaming ECO-DRR in the MGNREGS programme in India*. (Nairobi). Available at https://pedrr.org/wp-content/uploads/2023/06/Upscaling-Community-Resilience-in-Kerala.pdf.

UNESCAP (2018). *How to Design Inclusive Social Protection Systems.* (Bangkok). Available at https://www.socialprotection-toolbox.org/files/documents/Social-Protection-module-2.pdf.

UNFCCC (2019). "Alipay Ant Forest - Using Digital Technologies to Scale up Climate Action | China". Available at https://unfccc.int/climate-action/momentum-for-change/planetary-health/alipay-ant-forest.

USDA (n.d.). *Emergency Forest Restoration Program (EFRP).* Available at https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/emergency_forest_restoration_program-fact_sheet.pdf.

van der Esch, S., and others (2022). *The global potential for land restoration: Scenarios for the Global Land Outlook 2. Policy Report.* (The Hague, PBL Netherlands Environmental Assessment Agency). Available at https://www.pbl.nl/uploads/default/downloads/pbl-2022-the-global-potential-for-land-restoration-glo2-4816_0.pdf.

Veolia Water North America and IFPRI (2011). *Sustaining growth via water productivity: 2030/2050 scenarios.* (Washington DC; Chicago). Available at https://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/130251/filename/130462.pdf.

Verburg, P. H., and others (2019). *Creating an Enabling Environment for Land Degradation Neutrality and its Potential Contribution to Enhancing Well-being, Livelihoods and the Environment. A Report of the Science-Policy Interface.* (Bonn, UNCCD). Available at https://www.unccd.int/sites/default/files/2019-08/UNCCD_SPI_2019_Report_1.2.pdf.

Verburg, P. H., and others (2022). *The Contribution of Integrated Land Use Planning and Integrated Landscape Management to Implementing Land Degradation Neutrality: Entry Points and Support Tools. A Report of the Science-Policy Interface.* UNCCD-SPI Technical Series. (Bonn, UNCCD). Available at https://www.unccd.int/sites/default/files/2022-05/SPI%20Objective%201%20Technical%20Report_Advance%20Copy_Final_6May2022.pdf.

Verdone, M. and A. Seidl (2017). Time, space, place, and the Bonn Challenge global forest restoration target. *Restoration Ecology*, Vol. 25, No. 6, pp. 903–11.

Viana, V. and V. Salviati (2018). *Ecosystems, poverty alleviation and conditional transfers: Bolsa Floresta Programme, Brazil.* (London, International Institute for Environment and Development). Available at https://www.iied.org/sites/default/files/pdfs/migrate/G04269.pdf.

Walz, Y., and others (2021). *Coherence and Alignment among Sustainable Land Management, Ecosystem-based Adapatation, Ecosystem-based Disaster Risk Reduction and Nature-based Solutions.* (Bonn, United Nations University Institute for Environment and Human Security). Available at https://collections.unu.edu/view/UNU:8495.

Wang, X. and Y. Fu (2022). Digital financial inclusion and vulnerability to poverty: evidence from Chinese rural households. *CAER*, Vol. 14, No. 1, pp. 64–83.

WEF (2020a). *The Future Of Nature And Business. New Nature Economy Report II.* (Geneva). Available at https://www3.weforum.org/docs/WEF_The_Future_Of_Nature_And_Business_2020.pdf.

—— (2020b). *Why the Crisis Engulfing Nature Matters for Business and the Economy. New Nature Economy series*. (Geneva). Available at https://www3.weforum.org/docs/WEF_New_Nature_Economy_Report_2020.pdf.

Westerberg, V., and others (2019). *Reversing Land Degradation in Drylands: The Case for Farmer Managed Natural Regeneration (FMNR) in the Upper West Region of Ghana. Report for the Economics of Land Degradation Initiative in the framework of the "Reversing Land Degradation in Africa by Scaling-up Evergreen Agriculture" project.* (Bonn, Economics of Land Degradation Initiative). Available at https://www.eld-initiative.org/fileadmin/Regreening_Africa_publications/ELD-Ghana-Report_22_March-web2.pdf.

Westerberg, V., and others (2020). *The Economics of Cotton Production in Mali and the Challenges of Land Degradation. Case study in Koutiala and Bougouni. An Economics of Land Degradation study on Cotton Production in Mali carried out in the framework of the "Reversing Land Degradation in Africa by Scaling up Evergreen Agriculture" project.* (Bonn, Economics of Land Degradation Initiative). Available at https://www.eld-initiative.org/fileadmin/Regreening_Africa_publications/ELD-Mali-Report-web-EN.pdf.

Wieczorkowski, J. D., and C. E. R. Lehmann (2022). Encroachment diminishes herbaceous plant diversity in grassy ecosystems worldwide. *Global Change Biology*, Vol. 28, No. 18, pp. 5532–46.

WOCAT (2024). "WOCAT SLM Database. Global Database on Sustainable Land Management". Available at https://qcat.wocat.net/en/wocat/ (Accessed 22 February 2024).

Wolf, K. L., and others (2020). Urban Trees and Human Health: A Scoping Review. *International journal of environmental research and public health*, Vol. 17, No. 12, p. 4371.

World Bank (2012). *Safety Nets: Public Works.* Available at https://documents1.worldbank.org/curated/en/386071468010225138/pdf/NonAsciiFileName0.pdf.

—— (2020). *Indonesia - Disaster Risk Finance and Insurance Project*. (Washington DC). Available at http://documents.worldbank.org/curated/en/316601611543685552/Indonesia-Disaster-Risk-Finance-and-Insurance-Project.

—— (2022a). *Financial Inclusion. Financial inclusion is a key enabler to reducing poverty and boosting prosperity.* (Washington DC). Available at https://www.worldbank.org/en/topic/financialinclusion/overview.

—— (2022b). *International bank for reconstruction and development program document for a proposed loan in the amount of us$750 million to republic of colombia for the equitable and green recovery development policy financing.* (Washington DC). Available at https://documents1.worldbank.org/curated/en/302551648600963407/pdf/Colombia-Equitable-and-Green-Recovery-Development-Policy-Financing.pdf.

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