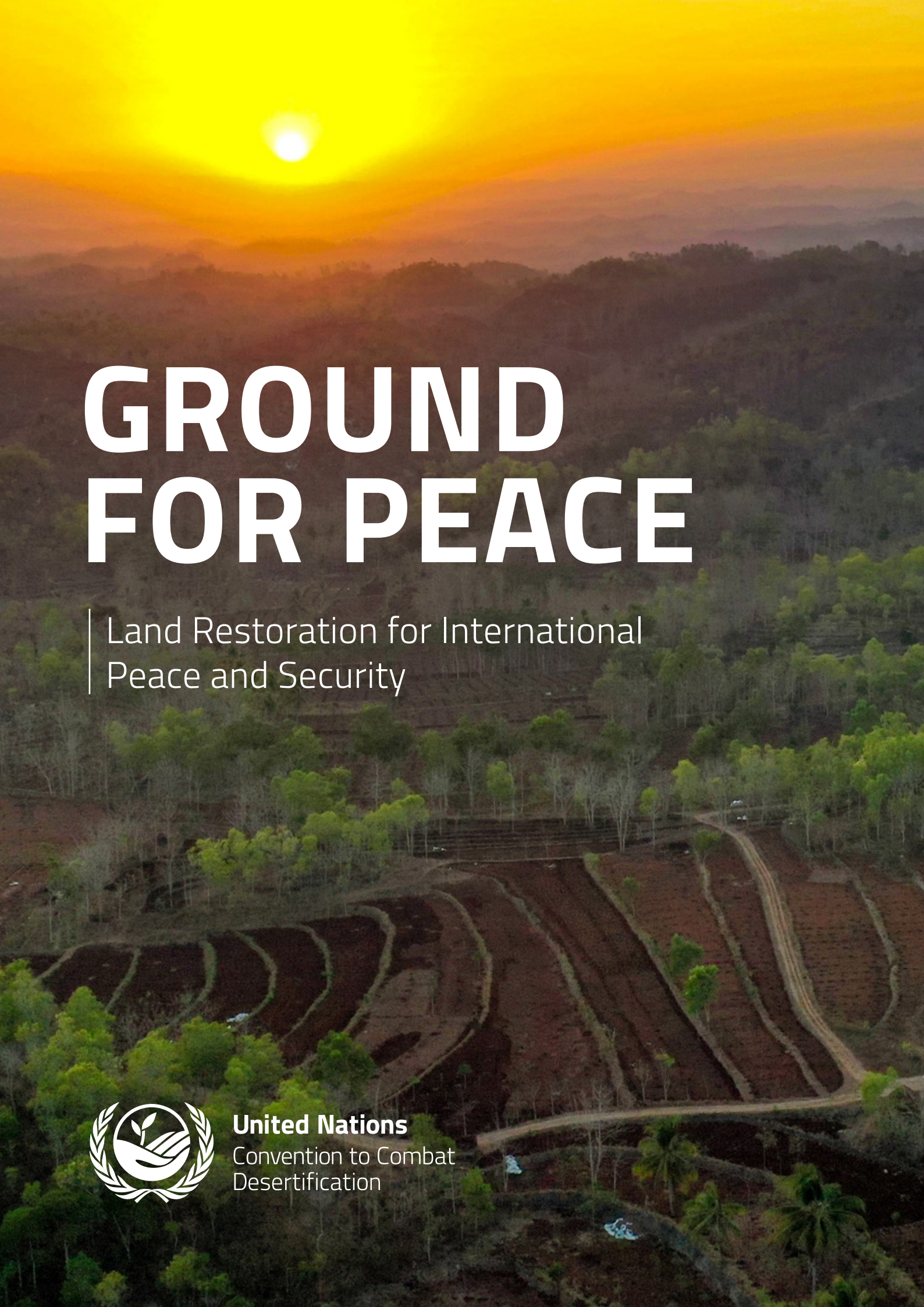

GROUND FOR PEACE

Land Restoration for International Peace and Security

United Nations
Convention to Combat Desertification

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GROUND FOR PEACE

Land Restoration for International Peace and Security

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Contents

Foreword

Land provides the indispensable foundation for everything that sustains life on Earth: food, water, fibre and more. But, our land is degrading at an alarming rate as a result of human activity and further fueled by climate change. Already, up to 40% of the Earth's land is degraded, with dire consequences for our climate, biodiversity and livelihoods and exacerbating food and water insecurity. Three out of four people worldwide are projected to face drought by 2050—with no single region immune to this growing threat.

At the same time, the increasing frequency of disasters such as floods, landslides and droughts imperil the security of people and communities by fueling conflicts over scarce resources and dismantling the fundamentals of their socio-economic growth, well-being and social cohesion over the long-term.

Ibrahim Thiaw,
UNCCD Executive Secretary

Let us say it loud and clear: world peace, prosperity and human security may be under even greater threat unless we take a more serious look at the issues of land and water. As the 2004 Nobel Peace Prize Laureate and Kenyan environmentalist Wangari Maathai said, "In a few decades, the relationship between the environment, resources and conflict may seem almost as obvious as the connection we see today between human rights, democracy and peace." Indeed, the importance of fertile land for international peace and security requires the immediate attention of the global community. And this is the aim of the Peace Forest Initiative of the United Nations Convention to Combat Desertification (UNCCD): to foster cross-border cooperation through sustainable land and natural resources management and land restoration for peace.

In today's global context, the interlinkages between environmental degradation, land management, and international peace and security are becoming increasingly apparent. This calls for preventive, proactive and collective action from all stakeholders at all levels, and an even closer cooperation between environmental, humanitarian and peacebuilding communities.

This report provides a comprehensive analysis of the interlinkages between land, peace, and security, drawing insights from global research, case studies, and expert perspectives. It sets out the political case for investing in land and ecosystem restoration as a powerful contribution to international peace and security, calling for immediate action at all levels.

Policymakers, practitioners and experts working in the field of environmental restoration and peacebuilding are encouraged to use and incorporate its findings and recommendations into their strategies for addressing land-related conflicts as a route towards sustainable peace.

Acronyms

ASEAN	Association of Southeast Asian Nations
COP	Conference of the Parties
CSO	Civil society organization
DLDD	Desertification, land degradation and drought
DRC	Democratic Republic of Congo
DRR	Disaster risk reduction
FAO	Food and Agriculture Organization
FCAS	Fragile and conflict-affected states
GCF	Global Climate Fund
GEF	Global Environment Facility
IDP	Internally displaced person
IGAD	Intergovernmental Authority on Development
IOM	International Organization for Migration
IRC	International Committee of the Red Cross
LDC	Least developed countries
LDN	Land degradation neutrality
MEL	Monitoring, evaluation and learning
NATO	North Atlantic Treaty Organization
NbS	Nature-based solutions
NGO	Non-governmental organization
OSCE	Organization for Security and Co-operation in Europe
PBF	UN Peacebuilding Fund
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SDGs	Sustainable Development Goals
SDS	Sand and dust storms
SIDS	Small island developing states
SLM	Sustainable land management
SLUS	Sustainable land use system practice
UNCCD	UN Convention to Combat Desertification
UNDP	UN Development Programme
UNEP	UN Environment Programme
UNFCCC	UN Framework Convention on Climate Change
UNICEF	UN Children's Fund
UN HABITAT	UN Human Settlements Programme
USAID	US Agency for International Development
VCM	Voluntary carbon market
WWF	World Wide Fund for Nature

Glossary

Area-based conservation: Area-based conservation refers to the process of establishing protected areas in critical resource areas, such as mountain water towers or riparian zones. These areas may be protected from certain uses, and owned or managed by state authorities, private landowners or community groups. As such, they play a key role in land and water management, helping to address and mitigate desertification and drought (IUCN 2015).

Conflict: Conflict – in the sense of dispute or disagreement – is a natural phenomenon, and an inherent part of human and social relations. Conflict is often non-violent in nature (Ajroud et al. 2017). A conflict can arise from a situation in which at least two parties have incompatible goals, interests, values or priorities (Hammill et al. 2009; Ajroud et al. 2017). Conflict can become destructive when communication and trust break down, interactions are marked by anger, grievances and injustices go unaddressed, and people are harmed. However, conflict can also be constructive and can be resolved peacefully when the root causes are adequately addressed and violence is mitigated; this can lead to improved relations and the establishment of mutual trust (Galtung 1965).

Conflict sensitivity: The concept of conflict sensitivity starts from the recognition that development, humanitarian, peacebuilding, and climate and environmental interventions cannot be separated from the peace and conflict contexts in which they are implemented. In addition to their stated objectives, such interventions may positively or negatively impact stakeholders, conflict drivers and capacities for peace in unintended and indirect ways. Therefore, conflict sensitivity involves understanding the contexts in which interventions are implemented, analysing the relationships between the interventions and their wider contexts, and adapting the delivery of interventions accordingly (UNSDG 2022).

Cross-border collaboration: Defined here as joint land-based resource management and ecosystem restoration activities that are agreed to and implemented by two or more countries.

Desertification: Land degradation in arid, semi-arid and dry sub-humid areas caused by human activities and other factors, such as physical, biological, political, social, cultural, economic and climatic variations (Ambalam 2012).

Do no harm: The "do no harm" approach refers to the integration of conflict sensitivity in aid interventions. The approach is widely used by governments and multilateral organizations. It implies taking steps to minimise any potential harm, while maximising positive outcomes for the affected communities (CDA 2010).

Ecosystem restoration: "The process of halting and reversing degradation, resulting in improved ecosystem services and recovered biodiversity. Ecosystem restoration encompasses a wide continuum of practices, depending on local conditions and societal choice" (UNEP 2021, p.7).

Environmental peacebuilding: Environmental peacebuilding integrates natural resource management into conflict prevention, mitigation, resolution and recovery to strengthen the resilience of communities affected by conflict (EnPax 2024).

Fragility: Fragility is "the combination of exposure to risk and insufficient coping capacity of the state, system and/or communities to manage, absorb or mitigate those risks. Fragility can lead to negative outcomes including violence, the breakdown of institutions, displacement, humanitarian crises or other emergencies" (OECD 2016, p. 21).

Insecurity: Insecurity refers to all forms of political instability, (organised) crime, urban violence, terrorism and violent conflict. Multiple forms of instability can occur simultaneously and interact with each other (Rüttinger et al. 2023).

International peace and security: International peace and security is here understood in terms of cooperation at the transboundary and regional levels, including as a way to prevent conflicts. International peace and security encompass efforts towards conflict resolution and peacebuilding, especially in conflict-affected contexts, as well as sustaining peace and development in post-conflict contexts.

Land: "The terrestrial bio-productive system that comprises soil, vegetation, other biota, and the ecological and hydrological processes that operate within the system" (UNCCD 2022a, p. 4).

Land degradation: "Reduction or loss, in arid, semi-arid and dry sub-humid areas, of the biological or economic productivity and complexity of rainfed cropland, irrigated cropland, or range, pasture, forest and woodlands resulting from land uses or from a process or combination of processes, including processes arising from human activities and habitation patterns, such as: soil erosion caused by wind and/or water; deterioration of the physical, chemical and biological or economic properties of soil; and long-term loss of natural vegetation" (UNCCD 2022a, pp. 4–5).

Land degradation neutrality: Land degradation neutrality "is a state whereby the amount and quality of land resources necessary to support ecosystem functions and services and enhance food security remain stable or increase within specified temporal and spatial scales and ecosystems" (UNCCD 2016, p. 9).

Landscape: A landscape refers to a socio-ecological system composed of a mixture of human-modified and natural ecosystems embodying different forms of land cover and use, ranging from farmlands to urban areas to pristine vegetation (Scherr et al. 2013).

Landscape restoration and rehabilitation: Landscape restoration and rehabilitation is the process of assisting the recovery of ecosystems that have been degraded, damaged or destroyed. It includes improving biodiversity and supporting indigenous species to maintain ecosystem functionality. Since many ecosystems are part of larger landscapes that need to be managed productively – such as wetlands within broader rangelands – and have been significantly modified by that management, the term landscape restoration increasingly refers to the restoration of ecosystem functions to a level that can sustain human activity (IUCN 2015).

Sustainable land management: Sustainable land management is defined as "a knowledge-based procedure that aims at integrating the management of land, water, biodiversity, and other environmental resources to meet human needs while sustaining ecosystem services and livelihoods" (World Bank 2006, p. xiv). This primarily means managing land in a way that enhances and preserves biodiversity, the productivity of land, and the resilience of livelihoods and ecosystems. Depending on the ecosystem type, such activities may include conservation agriculture, agroforestry, organic farming, increasing vegetation and grass cover, controlling alien species, promoting indigenous plants, improving water harvesting, protecting riparian forests, and traditional slope terracing, among many others (Critchley et al. 2021).

Violent conflict: Violent conflict refers to civil war, ethnic war and interstate war at high and low intensities, as well as violence that falls short of war, such as militarised disputes, terrorism, riots or strikes (Szayna et al. 2017).

Executive Summary

For more than three billion people, land is core to their survival, wellbeing, and dignity. However, many are seeing this vital resource disappear before their eyes as between 20–40% of total global land area, as well as 60% of all ecosystem services, are degraded or degrading. As a consequence, competition and disputes over access to and use of land and land-based resources is increasing and becoming a prominent feature in many conflicts. Over the last 60 years, at least 40% of all intrastate conflicts had a link to natural resources, including land. At the same time, conflicts increase the fragility of the institutions, essential services, infrastructure and governance that are critical for strengthening people's resilience to a changing climate and environment.

These worrying trends have made land and forest degradation in conflict areas an emerging concern for the global community. The growing attention to the interlinkages between climate change, conflict prevention and sustaining peace among researchers and in policy circles, including in the UN Security Council, has contributed to this. There are several ongoing initiatives with a focus on reversing these trends, including the UN Decade on Ecosystem Restoration, which aims to mainstream restoration activities to prevent, halt and reverse degradation across different types of ecosystems between 2021 and 2030.

However, while land and ecosystem restoration have been recognised as key to addressing the climate crisis, less attention has been paid to their promising — yet untapped — potential contribution to international peace and cooperation.

> This report aims at filling this gap by setting the political case for land and ecosystem restoration as a powerful route towards international peace and security.

It is set within the context of the Peace Forest Initiative, a UN Convention to Combat Desertification-led initiative launched in 2019 to promote peace through transboundary cooperation on sustainable land management in fragile, conflict-affected and post-conflict regions.

Links between land, ecosystem degradation, and international peace and security

Land and land-based resources can be both drivers and victims of conflict. Conflicts can directly impact land and ecosystems through physical damage from fighting, landmines or fires, or indirectly by accelerating land, ecosystem and resource degradation through the destruction of crops, pastures, and watering systems. They can also increase demand for and put a strain on land-based natural resources, and trigger widespread displacements of populations that have severe consequences on land. Conflict can push people to choose maladaptive coping practices at the expense of land and ecosystem health, particularly in fragile and conflict-affected communities with low resilience.

At the same time, the degradation of land, land-based resources and ecosystems can increase fragility and trigger cascading impacts along the lines of socially constructed vulnerabilities, thus driving conflict and

insecurity. This report identifies five key ways in which this can happen.

1. Land and ecosystem degradation expose resource-dependent communities to **loss of livelihoods, jobs, and economic opportunities,** and can drive an increase in criminal activity.

2. Land and ecosystem degradation drive loss of productive land and increase risk of crop failure, resulting in increasing food prices and exacerbating **food insecurity and water scarcity.**

3. Land and ecosystem degradation can increase **migration and displacement,** creating tensions and conflicts between communities.

4. Land and ecosystem degradation in fragile contexts can increase **socioeconomic disparities,** as well as marginalisation and discrimination of minority and vulnerable groups.

5. **Weakened land and natural resources governance structures** can escalate conflict, including across borders.

Leveraging land and ecosystem restoration for international peace

There is significant evidence that cooperation over the management of shared natural resources can pave the way for broader political agreements, and even prevent conflicts. Embedding environmental considerations within traditional peace processes, for example, has proven useful to achieve more sustainable outcomes and promote stability. Similarly, environmental peacebuilding can bolster post-conflict recovery by encouraging sustainable resource management. Since natural resources are crucial for economic recovery after war, environmental issues should be handled effectively to ensure sustainable peace.

To date, most of the existing literature exploring the linkages between land, peace and security has looked at shared natural resource management, or on the agriculture and land tenure dimensions of land-related interventions, rather than their restoration aspects. Moreover, the focus has tended to be on how these interventions can be conflict-sensitive, rather than explicitly looking at how they can generate peace outcomes. There has also been limited focus on the cross-border dimension, with land issues being largely understood and addressed within state boundaries, and especially with a focus on local and community level dynamics.

In other words, the following question remains unanswered: How can land and ecosystem restoration initiatives contribute to peace and cooperation outcomes in fragile, conflict and post-conflict transboundary areas?

Building on emerging evidence from transboundary land-based restoration interventions and programmes, this report identifies five key enablers for land restoration initiatives to help promote cooperation between countries, ultimately contributing to building peace and better relations in transboundary post-conflict and fragile contexts.

1. **Focus on technical and scientific collaboration** to create a neutral ground to address shared land and ecosystem degradation challenges in cross-border areas.

2. **Inclusive dialogue** must be prioritised in transboundary ecosystem restoration and sustainable land management efforts. Robust stakeholder analysis and mapping are essential tools to this end.

3. **Transboundary governance mechanisms.** Joint approaches to land and ecosystem restoration can serve as confidence-building mechanisms.

4. **Conflict-sensitive approaches to land restoration** interventions helps identify proactive ways to build trust and cooperation. A foresight approach is essential to ensure that land and ecosystem interventions do not have unintended negative impacts.

5. **Capacity building** is needed to leverage land and ecosystem restoration interventions for cooperation and peace, and can in itself be a tool for promoting cooperation and peace by building a common understanding and improving dialogue between parties.

The extent to which land and ecosystem restoration interventions are able to deliver on cooperation and peace outcomes varies depending on the context. Prevailing social, economic, and political conditions are key determinants. Especially in fragile and conflict-affected or post-conflict settings, the stage of the conflict cycle also significantly affects the type of activities that are feasible and effective.

Moreover, to address conflict drivers such as land rights, water access and management, and exclusion from decision-making, a broad portfolio of land-based restoration interventions is needed. Under the umbrella of a sustainable land management

landscape approach, interventions directed at livelihood security, ecosystem and land restoration, protected areas, and climate security can support peace and cooperation outcomes, as well as key synergies with climate and biodiversity goals. As a crosscutting element, investment in land can contribute to the achievement of multiple SDGs, including targets around climate action, biodiversity, water and food.

Financing land and ecosystem restoration

To fully harness the potential of land restoration for cooperation and peace outcomes, adequate finance must be made available and accessible. Although a variety of funding streams are relevant for peace-positive land restoration initiatives, the overall level of finance for land and ecosystem restoration is inadequate, especially in fragile and conflict-affected contexts. In addition, while funds may include environmental and social safeguards that indirectly benefit peace and security or reduce risks, conflict prevention and peacebuilding are generally not mainstreamed as co-benefits or decision criteria.

Resources specifically for transboundary land restoration projects are also limited, with differing regulations across jurisdictions adding complexity to transboundary projects compared to national ones. Similarly, there is a gap in finance reaching the local level where it is most needed for contextualised, locally appropriate solutions. Many financing agencies require states or large implementing partners to absorb funds to meet donor and monitoring, evaluation, and learning requirements. However, in some cases, there is a disconnect between national and local realities, particularly in settings with high government turnover. This can mean that funds absorbed at the national level may not reach those who need them most, for example in remote rural areas.

Finally, there have been few attempts at meaningfully engaging the private sector. Involving the private sector could facilitate the shift from short-term relief to income generation and economic development, while fostering innovative solutions to longstanding issues that might be difficult for the public sector alone to resolve.

Burkina Faso, photo by YODA Adaman on Unsplash

Looking ahead

This report identifies three key areas for action for donors, implementing agencies, governments, civil society and researchers working at the intersection between land and ecosystem restoration, environmental protection, climate action, peace and security and development.

Delivering to scale: land, peace and security for all

- Pursue land and ecosystem restoration through multi-sectoral and inclusive activities.
- Recognise the value of 'technical diplomacy' in land-peace-security work.
- Build the capacity of institutions and people to create an enabling environment for land-related peace and sustainability.
- Promote talent and innovation.
- Harness technology.
- Think regionally, while acting locally, prioritising contexts with clear entry points for regional collaboration.

Catalysing action on land, peace and security

- Elevate the agenda of land, peace and security and embed it more within key security and peace bodies.
- Operationalise action on land, peace and security.
- Recognise the importance of international agreements for sustainable development and the protection of the environment
- Use the momentum around the UN Decade of Ecosystem Restoration and the World Decade of Afforestation and Reforestation to ensure peace and cooperation outcomes are achieved.
- Build on ongoing initiatives and programmes at different levels, including those carried out by regional organizations.
- Leverage the land-peace narrative to garner public and political support for land and ecosystem restoration.

Seizing opportunities for more and better financing

- Ensure long-term financial sustainability and flexibility in land restoration initiatives by diversifying funding sources and incorporating mechanisms that allow for adaptive management.
- Improve coordination with other financial instruments to identify synergies, avoid duplication of efforts, and scale up successful initiatives.
- Direct more funding to the local level by reducing the complexity of applying for small grants and investing in capacity building of local groups.
- Consider establishing an innovation fund which provides grants to inspire organizations to work on transboundary and regional land restoration-peace efforts.
- Encourage private finance by demonstrating to private companies and investors the investment returns that protecting and restoring land and ecosystems can offer.
- Include follow-up mechanisms and adequate funding and capacities to understand the effectiveness and long-term impacts of transboundary projects.

1. Why focus on land, peace and security?

Experts and policymakers are increasingly recognising the important contribution that the restoration of degraded land and ecosystems can make to addressing the causes and impacts of climate change. However, much less attention has been paid to understanding the ways in which such activities may influence the dynamics of violent conflict, and the promising – yet largely untapped – contribution of land and ecosystem restoration to international peace and cooperation.

This chapter:

- **Sets the rationale** for this report, making the case for devoting more attention to understanding the linkages between land, peace and security.

1.1. Introduction

Land is crucial to people's livelihoods, health and wellbeing, and culture and identity, but is increasingly under threat. For more than three billion people, land is core to their survival, wellbeing and dignity – it is the principal asset especially of the rural poor (UNCCD 2022b). But, with between 20–40% of the global land area, as well as 60% of all ecosystem services already degraded or degrading, many – up to 1.5 billion people[1] – are seeing this vital resource disappear before their eyes (UNCCD 2022b; 2023a). Women are hit especially hard in contexts where gender norms limit their access to economic activities, and land and resource rights. The same is true for Indigenous Peoples, who are often prevented from controlling their own territories by existing patterns of exclusion. Land degradation also threatens to reverse the achievement of sustainable development and poverty reduction goals. By 2050, crop yields are projected to decrease by 10% globally, with some regions suffering up to a 50% reduction – a real threat to their economies and the food security of their people (UNCCD 2021).

As land resources are degraded and become scarcer, competition and disputes over access and use increase and become a prominent feature in many conflicts. Productive and resource-rich lands, including restored lands, can become contested if effective governance is lacking, potentially leading to land grabs (USAID 2013). Over the last 60 years, at least 40% of all intrastate conflicts have been linked to natural resources, including land (UN Habitat 2018). Factors contributing to conflict drivers and dynamics, especially in already fragile settings, include unclear land ownership due to conflicting customary and statutory laws, power imbalances between different interests, and exclusion based on gender, age, ethnicity or religion. Many of these disputes transcend borders, and are linked to a lack of adequate coordination between governments over the shared management of land and related resources, or when resources are intentionally diverted or mismanaged to harm other actors.

1 According to some estimates, such as: Van Schaik et al. 2014.

At the same time, conflict and fragility drive vulnerability to environmental degradation and the impacts of climate change. Seventy percent of the countries most vulnerable to climate change and environmental degradation are also among the most fragile (Detges et al. 2020).[2] More than half of these countries are sites of armed conflict (ICRC 2020). This is partly a hazard of their geography, but mostly it is due to the fact that conflicts sharply increase the fragility of the institutions, essential services, infrastructure and governance that are critical for strengthening people's resilience to a changing climate and environment (ICRC 2020). Yet, fragile and conflict-affected countries also receive the least support, receiving just over 14% of all funding allocated by vertical climate funds for land and forest-relevant projects to date (Heinrich Böll Stiftung and ODI 2023).[3]

These worrying trends have made land and forest degradation in conflict areas an emerging concern for the global community. Since 2015, more than 100 countries have set voluntary national targets to address land degradation, biodiversity conservation, sustainable management of resilient ecosystems, equitable and sustainable development, and climate change adaptation, mitigation and risk reduction (UNCCD 2015; IUCN 2015). Growing awareness of the links between climate change, conflict prevention and sustaining peace among researchers and policymakers, including in the UN Security Council, has increased attention on natural resources and the environment more broadly. However, relatively little consideration has been paid to the specific role that land and ecosystem restoration initiatives can play in addressing climate and security challenges. Moreover, while such initiatives are typically implemented at the national level, greater emphasis on joint regional and transboundary cooperation could yield additional benefits.

Currently, there is momentum around land and ecosystem restoration globally, with the UN Decade on Ecosystem Restoration serving as a flagship initiative,[4] seeking to mainstream restoration activities to prevent, halt and reverse degradation across different types of terrestrial and aquatic ecosystems between 2021 and 2030 (UNEP 2021). At the first International Conference on Afforestation and Reforestation, held in Brazzaville, Republic of the Congo, in 2024, member states pledged their support for the finalisation and implementation of a global afforestation and reforestation strategy (CIAR 2024), and expressed their commitment to backing the endorsement of the World Decade of Afforestation and Reforestation by the UN General Assembly at the Summit of the Future. In 2019, the UN Convention to Combat Desertification (UNCCD) launched the Peace Forest Initiative (PFI), a flagship programme to promote peace through transboundary cooperation on sustainable land management (SLM) in fragile, conflict-affected and post-conflict regions (Box 1). Overall, the peace and cooperation-inducing potential of land and ecosystem restoration initiatives is increasingly being recognised.

However, the impact and effectiveness of current methods and practices remain under-researched, and best practices and lessons learnt from them are not fully understood and leveraged. In recent years, there has been increased attention on conflict sensitivity in environment and development interventions. This has included instituting conflict analysis processes, integrating conflict-related measures into project design and implementation, and adapting monitoring, evaluation and learning (MEL) protocols. Yet, significantly less attention has been dedicated to understanding how land and ecosystem restoration initiatives can go beyond conflict sensitivity, and actively contribute to peace and cooperation outcomes between communities, societies and states.[5] The transboundary dimension has been especially overlooked, with significantly less resources and effort spent on cross-border and regional projects and initiatives.

This report aims to fill this gap by setting the political case for land and ecosystem restoration as a powerful entry point for international peace and security. Drawing on the extensive literature on the linkages between land and conflict, and complementing this with first-hand evidence and experience from different regions and contexts worldwide, the report provides an overview of the nexus between land, peace and security, and highlights ways in which

2 Based on: Fund for Peace Fragile States Index 2019; ND-GAIN vulnerability country rankings 2017. Lists adjusted to match respective entries, 175 countries in total, 44 countries per quartile (ND-GAIN bottom quartile).

3 Vertical climate funds are development financing mechanisms specifically dedicated to climate action, with mixed funding sources. Multilateral climate funds include the Global Environment Facility, the Adaptation Fund, the Climate Investment Funds and the Green Climate Fund, among others (Chapter 4).

4 Following an invitation from the Conference of the Parties to the Convention on Biological Diversity, on 1 March 2019, the UN General Assembly – together with over 70 countries led by El Salvador – adopted Resolution 73/284 proclaiming 2021–2030 as the Decade on Ecosystem Restoration. The UNEP and FAO are leading on its implementation in collaboration with the secretariats of the Rio Conventions and other partners.

5 This report understands peace in its "positive" definition, not merely as the absence of war or violence (i.e. "negative peace"), but as a more enduring state achieved through sustained investment in economic development, institutions and societal attitudes that promote peace (Galtung 1967).

nature conservation and ecosystem restoration actions can deliver peace and security co-benefits. In particular, the report focuses on transboundary and regional dimensions to illustrate how land and ecosystem restoration can help bridge divides not only between groups and communities within state boundaries but also beyond, thereby contributing to international peace and stability. Ultimately, the report supports the work of the UNCCD's Global Mechanism under the PFI.

Specifically, the report aims to address the following questions:

- What are the linkages between land degradation, and conflict and insecurity that matter most between countries and societies in trans-boundary geographies?
- What are key enablers for land restoration and forest conservation initiatives to help promote cooperation across borders and have peace-positive outcomes, especially in fragile and conflict-affected states (FCAS)?
- What is the current financing picture for cross-border land and ecosystem restoration initiatives, and what are the significant gaps with respect to enhancing peace and security priorities?
- What are the critical next steps to further promote the land-peace-security nexus agenda and place it centre stage in the global security arena?

Box 1

The Peace Forest Initiative

The PFI was launched during the 14th session of the Conference of the Parties (COP) of the UNCCD held in New Delhi, India, in 2019. Signed by the UNCCD and the Korea Forest Service, the PFI aims to build confidence and promote peace through transboundary cooperation on SLM in FCAS. The central premise of the PFI is that environmental integrity, peace and human wellbeing are inherently linked (UNCCD 2024).

The PFI functions as a practical platform to facilitate collaboration on sustainable land and forest management in diverse environments. It aims to achieve the following impacts:

- Reduce tensions, enhance trust, and increase peace and security through exchange and cooperation in the field of sustainable land and forest management and restoration
- Sustainable management and restoration of degraded land and forests
- Improve food security and nutrition, and the delivery of vital ecosystem services through the restoration of degraded land and the sustainable management of natural resources, including forests

To this end, the PFI includes a set of joint programmes and projects to implement common land degradation neutrality (LDN) targets. These target SLM, community-based forest and rangeland management, agroforestry, reforestation, forest landscape restoration, and ecotourism. The PFI partners with relevant actors at all levels, including governments, civil society organizations (CSO), local communities, donors, technical experts and international actors. Project sites for implementation are jointly defined by the participating countries; they should be transboundary and preferably at landscape scale. Projects are implemented by relevant UN agencies, and local, national and regional partners, with the UN Secretariat providing support.

Box 2

Methodology for the study

The research methodology used to understand how land and ecosystem restoration initiatives can contribute to peace and cooperation in fragile, conflict and post-conflict transboundary areas was comprised of:

- A **literature review** of over 250 peer-reviewed academic and grey literature publications on key theories and concepts, including environmental peacebuilding, resource scarcity, land management and restoration, land tenure systems, climate security, forest conservation, and resilience theory covering the period 2014–2024.
- **Semi-structured interviews** with key experts on topics related to the linkages between land, peace and security. Averaging 45 minutes and conducted online, each interview focused on: (i) the linkages between land degradation and conflict, (ii) how ecosystem restoration can promote international cooperation and peace, and (iii) suggestions for priority programming areas on land, peace and security.
- A **selection of case studies** to analyse in greater depth the impact of land and ecosystem restoration efforts on peacebuilding outcomes. These were selected from initiatives conducted by a broad range of organizations, with both a more technical background in and focus on environmental and natural resource-related activities, as well as on peacebuilding and conflict resolution, with a focus on transboundary FCAS.
- **Three workshops** with a select community of global land, peace and security experts to gather their diverse insights and perspectives on the topic.

The study underwent an extensive **review process with academics and practitioners** to ensure its findings reflected the current state of the art on the debate and evidence on the linkages between land, peace and security, and identified relevant entry points to move the agenda forward.

Lori Province, Armenia, photo by Aram on Unsplash

2. Establishing the links between land, ecosystem degradation, and international peace and security

Land, land-based resource and ecosystem degradation can be key drivers of competition, disputes and conflict. At the same time, they are vulnerable to degradation by war and conflict. Understanding the linkages between land, land-based resources and ecosystems, and conflict is an important first step to identify entry points to address them.

This chapter reviews existing evidence on the interactions between land, ecosystem degradation, and international peace and security, including:

- How conflict and insecurity degrade land, resources and ecosystems
- How land, land-based resource and ecosystem degradation cause conflict and insecurity
- How climate change acts as a risk multiplier for land, peace and security
- An overview of the current global policy agenda on land, peace and security

2.1. How conflict and insecurity degrade land, resources and ecosystems

Land can be a victim of, as well as a source and driver of conflict.[6] Conflicts can directly impact land and land-based resources through physical damage from fighting, landmines or fires, or indirectly through the destruction of crops, pastures and watering systems (UN Habitat 2022). Conflict can also change land rights and consequently how land is used, which in turn impacts land and resource sustainability. In addition, it can alter people's everyday practices and natural resource use, pushing people to resort to environmentally unsustainable survival measures that exacerbate degradation (Mitri et al. 2014).

Communities living in fragile contexts have lower resilience to cope with the impacts of climate change, land and ecosystem degradation, as well as conflict. Consequently, they are more likely to choose maladaptive livelihood practices. These practices can include the expansion of agricultural, grazing and food production activities that lead to the destruction of natural vegetation, habitat and protected areas, as well as to deforestation and the alteration of landscapes. Their operational modes typically involve the need for extremely short-term decision-making in order to fulfil basic needs; highly extractive resource use in short periods of time; and reliance on small, fractured social networks to the detriment of other community networks.[7] In Yemen, for example, conflict has severely impaired agricultural production, degraded farmland, and reduced access to water, agricultural inputs and markets, thereby exacerbating food insecurity (Darbyshire 2020). In the Karamoja region of East Africa, conflicts have accelerated land degradation by restricting the

6 This report considers the broad spectrum of conflict, but narrows its focus to regional and transboundary conflicts – whether non-violent or violent (over 1,000 deaths in battle per year) – involving individuals, groups, communities and states across national boundaries in which land is a source or driver of the conflict.

7 Interview with expert on conflict-affected land and property rights at Canadian university, 9.04.2024. The concept of maladaptation is further discussed in Noble et al. 2014.

movements of pastoralists, forcing their livestock to unsustainably graze the limited pastures available (FAO et al. 2023).

Conflicts can also trigger the widespread displacement of populations, which can have severe consequences on land and land-based resources. Temporary camps for internally displaced persons (IDPs) and refugees contribute to the degradation of land due to the alteration of landscapes, the construction of informal settlements and the unsustainable everyday practices of displaced people inside and around the camps. International Committee of the Red Cross data reveals that the average distance between a key biodiversity area and an IDP or refugee camp is only 6.9 kilometres, which increases the risk of negative impacts on these globally significant sites for biodiversity (IRRC 2023). In turn, IDP or refugee-receiving areas that suffer from land scarcity can experience resource competition between the resident and incoming communities, which often drives people to disregard local rules on resource use and overexploitation (UNDP 2022). For example, areas in southeastern Bangladesh that have received close to one million Rohingya refugees fleeing from Myanmar (UNHCR 2024) have suffered from significant levels of deforestation – in just two years, between 2016 and 2018, the forest area halved from about 8,500 hectares to less than 4,500 hectares, leading to land degradation through reduced soil fertility and increased risk of erosion (Ahmed et al. 2019).

Box 3

Conflict-induced displacement and deforestation in Syria

The violent repression of the peaceful protests and pro-democracy rallies against the Bashar al-Assad regime in Syria in March 2011 led to the eruption of a violent civil war, which has displaced 7.2 million people within the country (OCHA 2024). Consequently, significant deforestation occurred in areas that hosted large numbers of IDPs, especially in western Syria. Between 2010 and 2019, almost 64,000 hectares or 19.3% of the area's forest cover was lost. The proximity of roads and refugee camps was one of the key factors driving deforestation, along with forest fires, and numerous bombings and other explosive events. The war-induced economic strain experienced by the Syrian people has also exacerbated unsustainable logging, especially by IDPs who have lost access to other sources of energy (Daiyoub et al. 2023).

Conflict can strain land-based natural resources by increasing demand for or directly targeting them. In FCAS, demand for certain resources can increase, such as for timber to build temporary shelters or for charcoal as an alternative cooking and heating fuel. This can create or exacerbate tensions and competition for resources between communities due to the potential for unequal distribution of and control over scarce resources (Ide et al. 2021). In particular, armed conflicts and wars can drive the destruction of land-based resources due to the laying of landmines on farmland, damage to dams and irrigation systems, and the targeting of wildlife (UNEP 2009a; UN Habitat 2022; Rüttinger et al. 2022). In the Colombian Amazon, for example, guerrilla activities, and the responses to them, have been linked to illegal land grabs, the laying of land mines, and deforestation between 2001 and 2015 (Bautista-Cespedes et al. 2021). Accessing finance to sustain conflict efforts is another driver of the overexploitation of and trafficking in land-related resources, for example, through the exploitation of cocoa to finance the conflict in Cote d'Ivoire, timber in Liberia, charcoal in Somalia, diamonds in Botswana, and gold in Sudan and the Democratic Republic of Congo (DRC) (African Union and UNEP 2019). Even land and property rights can be trafficked in wartime to support different conflict sides (Unruh 2022).

Land provides vital ecosystem services – including food, water, livelihoods, shelter and habitats for biodiversity – which can be jeopardised by conflict. Between 1950 and 2000, over 90% of all major armed conflicts occurred in countries with biodiversity hotspots, with 80% occurring directly in biodiversity hotspot areas, contributing to the degradation and decline of biodiversity in those countries (Hanson et al. 2009). For example, the long-standing conflicts in the DRC and Philippines have led to a sharp decline in biodiversity (Hilario-Husain et al. 2024).

Box 4

Loss of ecosystem services and biodiversity to decades of war in Iraq

The once fertile valleys of the Tigris and Euphrates rivers, and the Shatt al-Arab delta, which also serves as a natural border between Iraq and Iran, once provided numerous ecosystem services to their inhabitants. The marshlands created ideal conditions for horticulture, food production on irrigated croplands, pastoralism, the herding of buffalos and fishing. They also ensured stable incomes and livelihoods from the selling of agricultural and woven reed products. Moreover, the marshlands served as a habitat to a wide range of plants, wildlife and fish, and hosted migratory birds, including many endangered species, during the winter period.

However, the three decades of war in Iraq from 1980 to 2011 – as well as Saddam Hussein's decision to drain the marshlands for agriculture and punish the Marsh Arabs for rebelling against him – led to the rapid degradation and disappearance of the marshlands. Low water flows in the Tigris and Euphrates rivers – due to increased extraction upstream, and the construction of dams in Syria and Türkiye – exacerbated this trend. The resulting desertification, salt-water intrusion from the Persian Gulf, salinisation of groundwater sources and loss of biodiversity forced people to move away from their lands. Women suffered disproportionately from this, as they had to abandon their traditional activities that were closely linked to the services provided by the marshlands (Al-Mudaffar Fawzi et al. 2017).

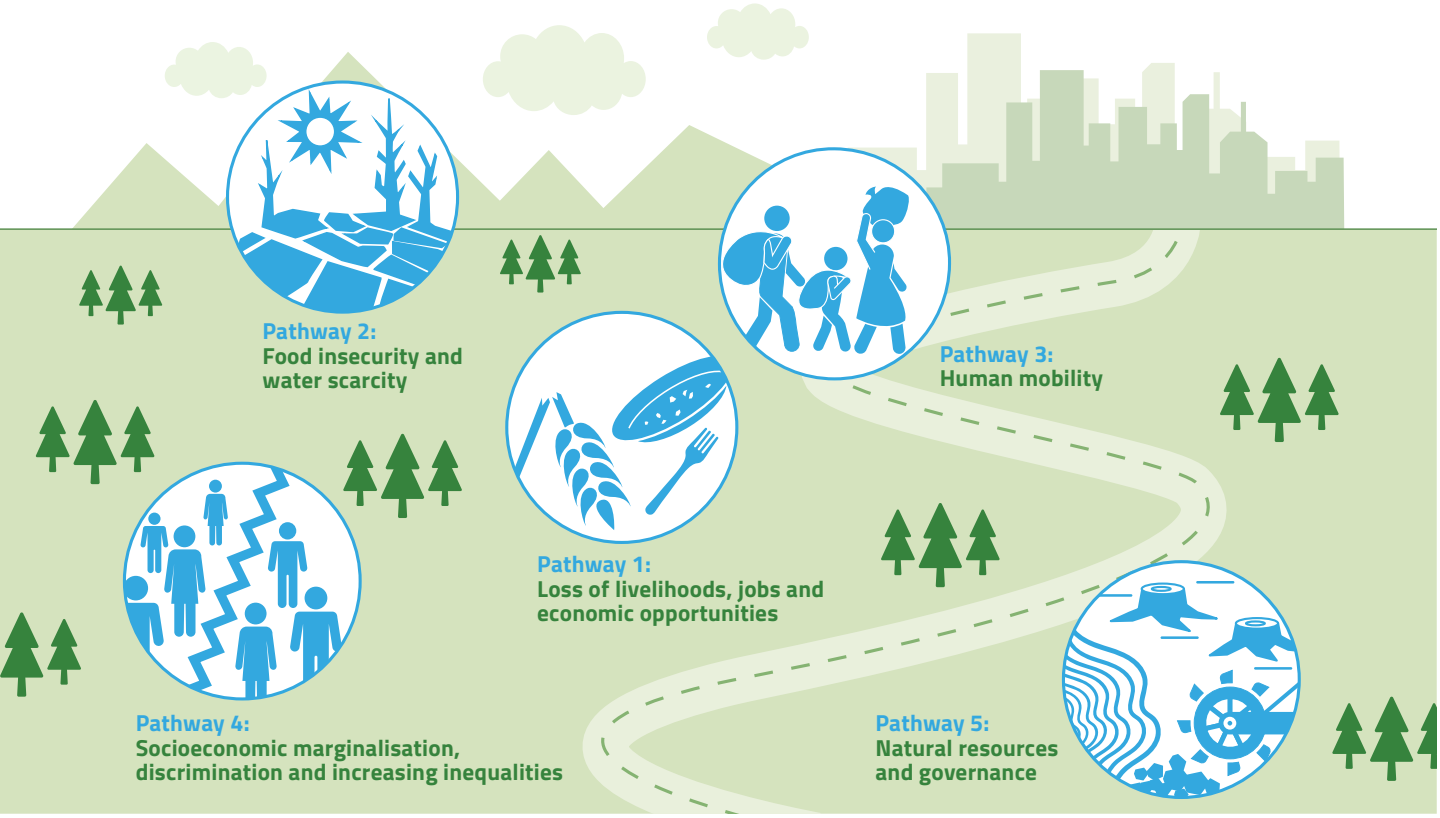
Mesopotamia, Iraq, photo by Hasan on Unsplash

Finally, conflicts severely weaken land and natural resource-related governance systems, especially in fragile contexts. Especially during armed conflicts and wars, state institutions often lose effective control over their territories, which in turn prevents the regulation, governance and protection of land and ecosystems. Active fighting, violence and insecurity can limit access to certain areas, thus impeding the implementation of environmental protection, biodiversity conservation, and land and ecosystem restoration activities. Restricted access to these areas also makes it difficult to monitor and evaluate the direct impact of conflict on land and ecosystems, and prevents the formulation of tailor-made policies to provide conflict-sensitive responses, and improve land and natural resource governance (Hilario-Husain et al. 2024).

2.2. How land, land-based resource and ecosystem degradation cause conflict and insecurity

The degradation of land, land-based resources and ecosystems can lead to conflict and insecurity. Over the last 60 years, at least 40% of all intrastate conflicts have been linked to natural resources, including land (UNEP 2009b; UN Habitat 2018). Land, land-based resources and ecosystems are implicated in all stages of the conflict cycle, from contributing to the outbreak and perpetuation of violence to undermining prospects for peace (UNIFPA 2012). However, they are rarely the only factors driving tensions (IUCN 2021). Rather, they interact with societal fault lines – such as ethnic, religious and political divisions – in the presence of socioeconomic and political discrimination, marginalisation, and the existence of grievances and injustices (African Union and UNEP 2019). Specifically, there are five key pathways through which the degradation of land, land-based resources and ecosystems can increase fragility and trigger cascading impacts along the lines of socially constructed vulnerabilities, thus driving conflict.[8]

Figure 1: Key pathways linking land, land-based resource and ecosystem degradation to conflict and insecurity.



8 The concept of pathways is here used as a simplified way to present the available evidence on land-conflict linkages. Pathways are in no way deterministic. On the contrary, many dynamics can cross-over from one pathway to another or overlap. Pathways also do not imply that land degradation and biodiversity loss automatically lead to conflict or disasters, but instead demonstrate potential interactions between land and conflict.

Pathway 1: Loss of livelihoods, jobs and economic opportunities

Land, land-based resource and ecosystem degradation expose resource-dependent communities to the loss of livelihoods, jobs, income and economic opportunities. The degradation of land, land-based resources and ecosystems can result in the decrease of soil productivity and crop yields, as well as the loss of arable and grazing land, livestock, and other resource-dependent livelihoods, and jobs in the agrarian sector. This can lead to competition over access to dwindling resources, and exacerbate patterns of poverty and inequalities (UNCCD et al. 2019). Women tend to be disproportionately affected by the resulting economic hardships in contexts where gender norms determine and limit economic activities, social relations, and access to land and resource rights that limit women's empowerment and economic opportunities (UNEP et al. 2013; UNEP et al. 2020).

Land, land-based resource and ecosystem degradation can drive criminal activity. Such degradation can motivate crimes committed within or between communities, such as robbery and theft, as livelihoods become increasingly compromised, social norms collapse, desperation increases and very short-term decision-making takes hold as part of maladaptive coping mechanisms. Such degradation can also increase criminal and illicit activities, such as smuggling and human trafficking. In the absence of alternative livelihood opportunities, income-generating activities, job creation, and education and training programmes, communities can be exposed to extremist ideologies, gang and warlord opportunities, and nefarious political actors. In such cases, idle men and young people are especially vulnerable to conflict and violence (Nellemann et al. 2016).

Box 5

Loss of livelihoods and the spread of extremism in the West African Sahel region

In parts of the West African Sahel region, the impacts of climate change have reduced water availability. This has affected vegetation, and left the land exposed to erosion by droughts, floods and wind (UNCCD et al. 2019). In turn, soil erosion and loss of soil fertility have been further aggravated by poor irrigation and land management practices, overgrazing, and changes in land use. This has significantly altered the livelihood options of communities dependent on agriculture and pastoralism, increasing competition for resources and triggering more frequent conflicts between farmers and pastoralists (Mbow et al. 2015).

Meanwhile, as a result of poor governance and corruption, the region has seen the spread of extremist groups, such as Boko Haram in northern Nigeria and other jihadist groups elsewhere. While these are primarily ideological in nature, the impacts of climate change on livelihoods have also increased people's exposure to extremism. These groups have in fact exploited people's vulnerability and the lack of alternative climate-resilient livelihood options to recruit especially young men (Brown and Vivekananda 2019). In the Borno state of Nigeria, for example, 41% of community leaders reported knowing community members who had joined Boko Haram as a result of difficulties in farming, fishing or herding (Punton et al. 2022). Boko Haram's activities in the region have also contributed to land degradation, for example, through the burning of farmland and villages, creating a cycle of environmental destruction and violence (Brown et al. 2019).

Pathway 2: Food insecurity and water scarcity

Land, land-based resource and ecosystem degradation reduce the availability of farmland, increase the risk of crop failure and lower agricultural productivity, thereby raising social tensions. Every year, 12 million hectares of productive land become barren due to desertification and drought alone, representing a lost opportunity to produce up to 20 million tons of grain (UNCCD 2014). Such a rapid loss of productive land exacerbates food insecurity and water scarcity, while also increasing food prices, and rates of malnutrition and hunger. These dynamics, in turn, can lead to growing social tensions (Van Schaik and Dinissen 2014; Barbut and Alexander 2016) (Box 6), as well as increase the risk of and exposure to higher levels and different forms of violence for vulnerable groups. For instance, in areas suffering from water shortages due to drought and land degradation, such as the Sahel and East Africa, women responsible for fetching water must walk longer distances to reach water points, increasing their exposure to sexual and gender-based violence (Soliman et al. 2022).

Box 6

Food riots and the Arab Spring

On 17 December 2010, Mohammed Bouazizi, a young street vendor in Sidi Bouzid, Tunisia, set himself on fire to protest against police harassment and corruption. However, the abuse of authorities was only the tipping point that had made the young man set himself on fire. His act triggered nation-wide protests against increasing food prices, high unemployment, inflation and tax increases. The Tunisian people demanded jobs, better living conditions and greater freedoms under a more democratic governance. The slogan of the protests was: "Bread, water, and no more of Ben Ali" (Abouaoun 2019).

Later in 2011, ignited by the aspirations of Tunisians, similar food riots and protests erupted across the Middle East. While the revolutions played out in different ways in each country, a common denominator in most cases was a sharp increase in food prices and food insecurity (Soffiantini 2020). Today, almost 14 years later, countries such as Tunisia, Egypt and Syria have undergone significant political change. Yet, food shortages and rising food prices persist, pushing more people into poverty and hunger, and permanently threatening political and social stability.

Pathway 3: Human mobility

Land, land-based resource and ecosystem degradation can increase migration and displacement. When people lose their livelihoods as a consequence of the degradation of land and land-based resources, a typical response is for people to move away from their territories, either within the same country or abroad (UNCCD 2017a). Internal displacement is on the rise due to conflict, generalised violence and sudden-onset disasters, but also increasingly due to climate change-induced water scarcity, droughts and food insecurity (Sida et al. 2024). Indeed, it is estimated that climate change could lead to over 200 million people moving within their own borders by 2050 (Clement et al. 2021). Especially in contexts where access to natural resources, livelihoods and basic services are already limited, increased and unregulated human mobility can accentuate inequalities and trigger tensions between community groups that can lead to conflict (Verme 2023). Humanitarian responses, and aid in IDP and refugee camp settings can also have unintended consequences when the basic humanitarian and development needs of hosting and neighbouring communities are not met. A disproportionate focus on and aid to IDPs and refugees can create sentiments of injustice and resentment towards the hosted groups that can lead to tensions and conflicts (Khaled 2021).

Box 7

Climate change, land degradation, gang violence and migration in the Central American Dry Corridor

The Central American Dry Corridor is a geographical area that covers nearly half of Guatemala, Honduras, El Salvador and Nicaragua, where 11.5 million people live in rural municipalities and more than half work in agriculture (FAO 2022). The region shares a memory of civil wars in El Salvador, Guatemala and Nicaragua driven by unequal land distribution; a war over land tenure issues between El Salvador and Honduras in 1969; and a series of repressive agricultural reforms that created highly inequitable post-conflict societies and numerous governance failures (Brockett 2019). The inequalities from this era remain unaddressed, which has produced vulnerabilities and societal tensions that are further exacerbated by the impacts of climate change on land and land-related resources (Bouroncle et al. 2017).

The region is one of the world's most climate-vulnerable areas, with periodically variable droughts and heavy rains leading to land degradation, and the loss of agricultural activity and livelihoods. Rising levels of food insecurity and poverty, as a consequence of these intersecting dynamics, are pushing hundreds of thousands of people to leave the region, embarking on perilous journeys south to Costa Rica, or north to Mexico, Canada and the United States (Bermeo and Speck 2022). The cycle of poor socioeconomic conditions triggered and aggravated by climate change also provides a fertile ground for criminal groups, the trafficking of narcotic drugs and gang violence. The security situation and increased violence further drives migration, which is often exploited by criminal gangs through human trafficking (Huber et al. 2023).

Pathway 4: Socioeconomic marginalisation, discrimination and increasing inequalities

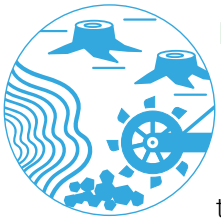
Land, land-based resource and ecosystem degradation in fragile contexts can increase socioeconomic disparities and inequalities, as well as the marginalisation and discrimination of minority and vulnerable groups (IDRA et al. 2023). Land and ecosystem degradation disproportionately affect poor, rural communities who rely on natural resources (Ahmadnia et al. 2022), as well as Indigenous Peoples who have strong cultural, spiritual and traditional ties and attachments to their lands (Box 8). Women and young people also risk being further excluded from access to land and land-based resources due to prevailing social and gender norms, and customary, religious or traditional rules that result in their exclusion from decision-making, governance and leadership roles (Aguilar 2022).

Box 8

Land tenure rights of Indigenous Peoples and social tensions in Latin America

Inequality patterns in Latin America are closely linked to challenges related to land rights and land ownership for the most vulnerable groups (Bose et al. 2017). Latin America is home to 42 million Indigenous Peoples, with Bolivia, Guatemala, Peru and Brazil having the largest Indigenous populations (Oxfam 2016). Despite recent successes and legal reforms initiated by countries as a result of broad social movements, Indigenous Peoples still have limited access to and property rights over agricultural land and forests. In the Brazilian Amazon, for example, disparities arising from Indigenous Peoples' limited access to land tenure – coupled with the constant threats posed by deforestation, agricultural expansion, monocultural agri-industry, ranching, and extractive industries – put community livelihoods, access to food and even physical security at serious risk.

Moreover, the disparity between men and women in the ownership of land is vast. Women own only 10–30% of land in rural areas of Latin America (Borras et al. 2014). Women, Indigenous leaders, and human rights and environmental protection activists often defend their lands at the cost of their lives (Bose et al. 2017).



Pathway 5: Natural resources and governance

Weakened land and natural resource governance structures can escalate conflict. In FCAS, where governance structures and the rule of law are weakened, the state may not be able to respond adequately to issues arising from land and ecosystem degradation, and natural resource management. This can lead to lawlessness, an increase in illegal and criminal activities – such as the illegal exploitation and illicit trading of resources – and land grabs. In turn, this can increase insecurity, societal tensions and the risk of conflict (European Union and United Nations 2012; Brisman et al. 2015). This can also trigger competition for scarce natural resources, which pushes some groups beyond borders in search of improved livelihood conditions, as has often been seen in Sahelian countries, for example (UNEP 2011).[9] In some cases, native or traditional structures play a vital role in filling gaps in state responsibilities when it comes to natural resource management. However, these can also be put under pressure by land and environmental degradation, for instance, when this leads to high levels of displacement and migration that fundamentally change community structures or when traditional mechanisms are no longer able to deal with the increasing number and severity of disputes (European Union and United Nations 2012; Rüttinger et al. 2021).

Box 9

Land issues as a source of conflict in Sudan

During two decades of civil war and ethnic conflict in Darfur (2003–2020), people were displaced multiple times, often settling down on the property or farmland of someone who was previously displaced from the same land. During the short period of stabilisation between 2020 and 2023, due to a lack of institutional capacity and missing land ownership records, in many cases, landowners could not prove that their lands had been unlawfully occupied, which created further tensions, disputes and ultimately represented an obstacle to the return of IDPs.

Following the outbreak of armed conflict in April 2023, farming activities across most of Sudan were halted, as farmers were unable to access their land or conduct preparatory activities for the planting season safely. This led to the loss of livelihoods, and heightened food insecurity, hunger and malnutrition. In addition, it caused prices for staple foods and basic commodities to increase sharply, exacerbating inequalities in the distribution of resources among fragile communities due to the collapse of supply chains and internal markets. Moreover, the conflict resulted in mass displacement to neighbouring countries, such as into the eastern states of Chad. These areas already have their own intricate and fragile ethnic dynamics, and the influx of refugees from Darfur poses an additional strain on already scarce and overused resources, which could trigger conflicts not only between refugees and local tribes but also between different tribes in Chad.

9 This should be distinguished from traditional pastoral livelihoods, which have historically been practiced in ecological systems that are too poor to support crop agriculture, with routes that often traverse modern state borders.

2.3. How climate change acts as a risk multiplier for land, peace and security

There is growing awareness of the linkages between climate change, and conflict and insecurity (Detges et al. 2020). Climate change is exacerbating floods, droughts, heatwaves, desertification, and sand and dust storms (SDS), in turn accelerating land and ecosystem degradation, and the loss of forest cover, biodiversity and ecosystem services (Barbut et al. 2016). As such, climate change has significant impacts on resource availability, food and water security, livelihoods and economic opportunities, as well as mobility patterns (USAID 2020). These impacts can lead to tensions and conflict, in some cases even violent, which further undermine stability, peace and security. There is no universally valid cause and effect relationship between climate change and conflict; rather, the ways in which climate change impacts interact with other drivers of conflict is highly context dependent (Detges and Foong 2023).

Climate change acts as an accelerator of crises and conflicts, especially in fragile socioeconomic contexts, and disproportionately impacts people who are already marginalised. Resource grievances induced by climate change may escalate into conflict in circumstances already characterised by fragility and prior conflict history, societal polarisation and inequality, and high resource dependence in the absence of alternative livelihoods (Detges et al. 2020). Security questions related to water, for instance, may be accentuated in areas already suffering from water scarcity as well as in arid areas where farming relies on regular rainfall (Mobjörk et al. 2016). Moreover, certain factors – such as gender, age, ethnicity and socioeconomic status – also play an important role, often determining how climate change impacts threaten security in a given context (Detges and Foong 2023). For example, who migrates and who stays behind when climate change affects livelihoods is clearly influenced by these factors.

The increasing manifestation of climate-related security risks in many contexts worldwide, and especially in FCAS, has prompted institutional responses across the policy landscape. Today, policymakers are less likely to consider climate change an isolated problem, acknowledging the need for horizontal and vertical collaboration to address the interdependent challenges climate change poses (Climate Diplomacy 2022). Key climate change topics, such as adaptation and mitigation, are increasingly discussed alongside security objectives, with interventions more likely to consider climate change impacts within stabilisation, peacebuilding and development efforts (Ide et al. 2021). More programming has also emerged in this space, with bilateral and multilateral donors increasingly promoting integrated climate, peace and security interventions on the ground. In addition, implementing agencies – such as UN agencies, international non-governmental organizations (NGO) and CSOs – are gaining experience in their design and implementation (Detges et al. 2020).

2.4. Overview of the current global policy agenda on land, peace and security

Relevant strides have been made in integrating land restoration efforts with conflict sensitivity and cooperation in international conventions and multilateral efforts at the global policy level. For example, parties to the Convention on Biological Diversity regularly share knowledge and best practices in transboundary cooperation through, for example, the Peace and Biodiversity Dialogue Initiative, which promotes collaboration in protected areas globally (IISD 2022). The UN Decade on Ecosystem Restoration and the International Land Coalition emphasise inclusivity as a path towards peace, especially through the integration of Indigenous Peoples' local knowledge and land rights, recognising Indigenous Peoples as champions of land restoration (UNEP and FAO 2023). Recently, there have been efforts to mainstream peace in the UNFCCC, with the launch of the first ever Declaration on Relief, Recovery and Peace at COP28, which called for bolder collective action to build climate resilience in highly vulnerable countries and communities, particularly those threatened or affected by fragility or conflict (UNFCCC 2023). There are also guidelines to accompany national commitments, policies and implementation processes in this direction. For example, the Voluntary Guidelines on Tenure of Land, Fisheries and Forests aims to facilitate the establishment of responsible tenure over these resources to support the eradication of hunger and poverty, and achieve sustainable livelihoods, social stability, environmental protection, and sustainable social and economic development (FAO 2012).

At the regional level, organizations such as the Intergovernmental Authority on Development (IGAD) and Association of Southeast Asian Nations (ASEAN) have highlighted the importance of integrating land restoration and conflict prevention into their work. IGAD's Integrated Rangeland Management Project, for example, focuses on SLM to prevent conflict and enhance cross-border cooperation among communities (IGAD 2022). Similarly, ASEAN's Political-Security Community Blueprint incorporates land restoration efforts, aligning them with conflict prevention and regional cooperation strategies (ASEAN 2024). These efforts emphasise the critical role of cooperation in achieving SLM and addressing conflicts (UN Department of Political Affairs 2023). Despite these advancements, land is a topic that most governments still tend to perceive either as a sovereign issue to be kept outside of external cooperation, or as a localised issue to be addressed at the provincial, municipal or even community level. This poses a significant obstacle to wider action from multilateral and regional entities.[10]

The land, peace and security nexus has received less attention in the security and peace sector, especially compared to climate change, despite land being a significant source and driver of conflict. Most multilateral security organizations – including the UN Security Council, the African Union's Peace and Security Council, NATO, and the Organization for Security and Co-operation in Europe (OSCE) – have broadly recognised climate change as a potential conflict driver, and often reference land and related resources as key mechanisms through which climate change impacts manifest.[11] However, land has struggled to gain attention as a standalone issue, partly due to the compartmentalisation of the SDGs and Rio Conventions, which isolate land from climate change, biodiversity, and peace and security issues. There have been attempts to bridge these gaps. For example, the United Nations and African Union have integrated land into conflict prevention and peacebuilding strategies (Box 10). Similarly, the European Commission acknowledged the need to include environmental degradation in its crisis management and defence strategies as part of its 2023 joint communication on the climate and security nexus (European Commission 2023). Moreover, NATO recognised the role of land in triggering instability and insecurity in its 2023 Climate Change and Security Impact Assessment (NATO 2023), while the OSCE has incorporated the close connection between the environment – including climate change – and security into its conflict prevention work (OSCE 2024). Nevertheless, these efforts are yet to become systematic, scaled up or coordinated across organizations.

Box 10

Multilateral security organizations and land: The United Nations and African Union

The United Nations

The UN Secretary General's 2010 report on peacebuilding in the immediate aftermath of conflict recognised that land and natural resources are key drivers of conflict and play an accentuated role in relapse into violence (A/64/866-S/2010/386). This has led to a number of reports, policies, resolutions, and practical guidance for mediators and practitioners that consider land an integral part of conflict prevention and peacebuilding within the UN system. In 2019, the UN Secretary General issued the Guidance Note on Land and Conflict, which proposed a series of principles and a framework for action to guide more systematic UN engagement related to land and conflict (United Nations 2019).

These efforts have been reflected in some UN country programmes, such as in Afghanistan, Timor-Leste and Sudan (United Nations 2012). The UN Mission in Liberia (2003–2018) was the first UN peacekeeping mission to incorporate effective natural resource management into its mandate, committing to assist the transitional government in restoring effective administration of natural resources (UN Security Council 2003). Moreover, as early as 2008, the UN Environment Programme (UNEP) started pioneering work on the linkages between natural resources and security in the framework of its Environmental Cooperation for Peacebuilding programme. The programme aimed to

10 Consultations with the Community of Experts on land, peace and security held between March and July 2024.
11 Author's own mapping of UN Security Council resolutions, statements and reports between 1990 and 2024.

provide expertise and methods to advance opportunities for peace afforded by effective stewardship of natural resources (UNEP 2016).

The UN Security Council has also issued a number of thematic resolutions discussing land degradation, drought and desertification as a result of climate change, recognising their adverse impacts on ecological changes, natural disasters and stability in specific FCAS, including the Lake Chad Basin, Somalia, Mali and Darfur. As a result, climate change-related provisions have been integrated into the respective peacekeeping mission mandates. For example, the mandate of the peacekeeping mission in South Sudan identified land as a source of instability and the prevailing humanitarian situation (S/RES/2729 2024), which opened the door for the establishment of a climate, peace and security advisor to the mission.

The African Union

The African Union's Peace and Security Council is one of the key pillars of the African Peace and Security Architecture, which aims to achieve a peaceful and secure Africa, in line with the fourth aspiration of the African Union's Agenda 2063 (African Union 2015a).[12] To operationalise Agenda 2063's flagship initiative, Silencing the Guns by 2020 (African Union 2015b), the African Union created the Lusaka Master Roadmap 2016, which addresses the loss of arable land, desertification, pollution, coastal erosion, loss of vegetation, and the impacts of climate change and food insecurity (African Union 2016). Another step towards integrating the land, peace and security nexus into the African Union's work was taken by the African Union's Panel of the Wise, which in 2019 released the thematic report Improving the Mediation and Resolution of Natural Resource-Related Conflicts Across Africa in response to the Sharm el-Sheikh declaration of 2016. The report contained lessons learnt from past mediation initiatives and a series of recommendations to the African Union, regional economic communities, AU member states and local governments on how to build capacity and improve practices (African Union and UNEP 2019).

A more substantial change in the African Union's policy direction on this issue followed the establishment of the African Land Policy Centre – a joint programme between the African Union Commission, African Development Bank and UN Economic Commission for Africa – which focuses on natural resource management and conflict, among other things. In 2017, the centre published a study on land, ethnicity and conflict in Africa, which contained a number of policy recommendations to address the land-conflict nexus targeting governments and regional organizations (UNECA 2020). In 2022, the centre developed the Guidelines on Prevention and Addressing Land-Based Conflicts in Africa, which defined a methodology and mechanism for land-related conflict prevention and management (UNECA 2022). However, these guidelines are yet to be fully operationalised by the African Union and regional economic communities.

12 Agenda 2063 is the Africa Union's strategic framework for inclusive growth and sustainable development. It was adopted by the 24th AU Assembly of Heads of State and Government in 2015. The agenda is anchored on the AU vision of an Africa that is integrated, prosperous and peaceful; driven by its own people; and a dynamic force in the global arena (AU 2015a).

Kajiado, Kenya, photo by Lazarus Marson on Unsplash

3. Leveraging land and ecosystem restoration for international peace

By addressing underlying sources of grievance and contestation, and strengthening mechanisms for cooperative resource management and use between and within communities across borders, land and ecosystem restoration interventions can contribute to international peace and security.

This chapter:

- **Examines existing literature** on the linkages between land and ecosystem restoration, and transboundary cooperation and dialogue, which are understood here as pre-conditions for conflict prevention, conflict resolution and peacebuilding
- **Highlights effective approaches and mechanisms** for integrating land and ecosystem restoration with cooperation and peace outcomes

3.1. What do we already know?

Existing literature has widely explored the question of **how land and natural resources can be leveraged to strengthen cooperation, including at the transboundary level**. There is significant evidence that cooperation over the management of shared natural resources can pave the way for broader political agreements (Ide 2018) and even prevent conflicts (Conca 2015). The literature also shows that environment-focused interventions can generate co-benefits for peace where sources of conflict and instability are linked to environmental issues. Integrating environmental considerations into traditional peace processes, for example, has proven effective in achieving more sustainable outcomes and promoting stability (Conca and Dabelko 2002). Similarly, environmental peacebuilding can mitigate conflict and bolster post-conflict recovery by ensuring equitable and sustainable resource management among conflict parties. Since utilisation of natural resources is very often crucial for economic recovery following war, whether at the household or national level, environmental issues – including the effective and legitimate governance of land, water, forests and valuable minerals – are often essential to ensure sustainable livelihoods, recovery and peace (Young and Goldman 2015; Bruch et al. 2016).

More recently, there has also been a focus on exploring how climate action can foster cooperation and peacebuilding. As climate change advances and degrades human security overall, there is increasing evidence that carefully designed and conflict-sensitive programming that considers local land use dynamics can help limit deforestation, strengthen resilience and bolster durable peace (USAID 2022). Especially in crisis-affected contexts, addressing both the short- and long-term impacts of climate change has been shown to open up spaces for bottom-up peacebuilding and locally owned initiatives, which are in turn vital for conflict transformation (Mosello and Rüttinger 2020). There is also evidence that localised climate adaptation can be successfully used as an entry point to better integrate women, young people and other marginalised groups in local governance and decision-making (UNEP et al. 2020). This can lead to additional benefits such as enhancing social cohesion and creating livelihood opportunities for conflict-affected populations (Morales-Muñoz

et al. 2022). Further, experience has shown that this type of work can be especially successful in FCAS, where local-level engagement on climate change and peacebuilding can create opportunities to address local sources of violence and strengthen local governance, despite persistent volatility at the national level (Gaston et al. 2023).

From a cross-border perspective, the literature on transboundary water management offers compelling evidence that **shared water resources, if managed collaboratively, can defuse tensions and enhance regional stability**. As water is essential to life, parties tend to agree on its use rather than fight over it – even when the terms of access, quantity and quality are not necessarily favourable to them. Transboundary resource-sharing agreements have played an important role in lowering the risk of hostilities by clearly defining terms of use that all parties can understand and adhere to, even when one party ultimately benefits more than the others. This is especially the case when they include enforcement or conflict resolution mechanisms, as well as provisions for information exchange (Dinar et al. 2015). Similarly, there is evidence that transboundary protected areas, known as peace parks,[13] have encouraged collaboration between states that may be at odds on other issues by fostering joint management of natural resources (Ali 2007) – although criticisms of this approach have also been raised (Duffy 2006) (Section 3.2.2).

However, to date, most of the existing literature exploring the linkages between land, peace and security has looked at shared natural resource management or the agricultural and land tenure dimensions of land-related interventions (UNEP 2013), **rather than their restoration aspects** (Freudenberger and Miller 2023). Moreover, the focus has tended to be on how these interventions can be conflict sensitive, rather than explicitly on how they can generate peace outcomes (Morales-Muñoz et al. 2021). Limited attention has also been devoted to cross-border dimensions, with land issues still largely understood and addressed within state boundaries, especially local and community-level dynamics (IUCN 2020).

In other words, the following question remains unanswered: **How can land and ecosystem restoration initiatives contribute to peace and cooperation outcomes in fragile, conflict and post-conflict transboundary areas?**

Shymbulak Top, Kazakhstan, photo by Alexander Liebstückel on Unsplash

13 A "Park for Peace" is a special designation that may be applied to any of three types of transboundary conservation areas that aim to promote, celebrate and commemorate peace and cooperation (IUCN 2015).

3.2. How can land and ecosystem restoration support peace and cooperation?

As evidence for the mechanisms linking land and conflict mounts, there is increased impetus to ensure that the design and implementation of land- and resource-related interventions embed conflict sensitivity. Failure to carefully understand the context, power dynamics and relationships between actors in land and ecosystem restoration interventions can exacerbate existing tensions and disputes, undermining the long-term effectiveness of interventions. REDD+ (Reducing Emissions from Deforestation and Forest Degradation) initiatives that exclude local communities from decision-making and fail to address historical land tenure conflicts, for example, have been shown to increase frustration and tensions between community members by heightening their expectations without delivering tangible benefits (Alusiola et al. 2021; UN-REDD Programme 2018). Anecdotal evidence suggests that applying conflict sensitivity can prevent restoration benefits, especially when they start generating economic gains, from creating tensions by changing the power dynamics within and between communities.

However, if the goal is to promote peacebuilding, conflict sensitivity alone is not enough. It has become increasingly evident that land and ecosystem restoration can promote peace-positive and cooperative outcomes when underlying issues of conflict are related to land. How to do so is a relatively unexplored topic in the literature, but emerging evidence from programming and interventions on the ground is progressively helping to fill the gap, as explored in the following sections.

3.2.1. When does land and ecosystem restoration promote peace and cooperation?

The extent to which land and ecosystem restoration interventions are able to deliver on cooperation and peace outcomes varies significantly depending on the context. Prevailing social, economic and political conditions, as well as other influential factors, are key determinants. Especially in FCAS and post-conflict settings, the stage of the conflict cycle significantly affects the type of activities that are feasible and effective.[14] Evidence from existing programming indicates some overall patterns followed by land and ecosystem interventions at different stages of the conflict cycle, but suggests that activities generally shift from cultivating short-term benefits when conflict is imminent to wanting to establish sustainable long-term change during post-conflict recovery. Engagement during all stages of the conflict cycle can be productive, but goals need to be tailored to the context. Moreover, since activities not only impact conflict dynamics but also react to and are impacted by them, there is a need to constantly assess the context and re-adapt programming to the changing circumstances on the ground.

In the early stages of the conflict cycle, land and ecosystem interventions largely focus on prevention, addressing the land and environmental drivers of tensions and potential conflict. This can include investing in the restoration of degraded land to address land scarcity, fostering the adoption of common resource management practices that are viewed as inclusive and equitable, and enhancing agricultural productivity to address food insecurity and economic drivers of conflict. In northwestern Cameroon, for example, grassroots restoration improved relationships between pastoralists and smallholder farmers, who had been in conflict over degrading land and land-based resources, building trust and de-escalating tensions (Flaherty 2024). In Niger, the Farmer Managed Natural Regeneration approach contributed to restoring millions of hectares of degraded land by providing farmers with the techniques to replant trees and shrubs, thereby preventing the escalation of conflict around land use and sharing (UNDESA 2024; World Vision 2024).

14 For this study, three main stages of the conflict cycle are considered, based on Lund's curve of conflict: the early stage, focusing on prevention; the mid-conflict stage, focusing on mediation efforts; and the late stage, focusing on peacebuilding and post-conflict reconstruction.

Box 11

The Great Green Wall initiative

Launched in 2007 by the African Union, the Great Green Wall is a pan-African initiative involving over 20 African states in restoring and sustainably managing land in the Sahel-Saharan region. Planning to extend over 7,000 kilometres of land, the initiative aims to combat land degradation and poverty through integrated ecosystem management, including vegetation regeneration, sustainable dryland management and water conservation (UNCCD 2024). The initiative encompasses climate adaptation and mitigation activities, such as tree planting, agroforestry, soil and water conservation, and climate-smart agriculture. These efforts are intended not only to restore ecosystems but also to address conflict, and promote cooperation and economic development by supporting livelihoods and addressing resource scarcity dynamics that figure among the root causes of instability in the region.

The Great Green Wall initiative builds cooperation and trust among Sahelian states by involving diverse stakeholders, including governments, international organizations, civil society and the private sector. Transboundary projects – for example, supporting agroforestry in the Niger-Nigeria cross-border area or reforestation initiatives along the Senegal-Mauritania border – have been able to improve soil fertility and crop yields, and generate additional income, thereby reducing resource-based conflicts. Similarly, joint restoration efforts in Burkina Faso and Mali have contributed to strengthening food security and community ties by planting drought-resistant crops and building erosion control structures. Overall, these initiatives have been heralded as promising ways to mitigate climate-related security pressures, while fostering regional cooperation and trust (UNCCD 2024).

Ethiopia, Tigray region, Rayazebo District, photo by Andrea Borgarello / World Bank

During ongoing conflict, land and ecosystem restoration activities can provide key entry points to initiate dialogue between opposing parties. Ongoing conflicts often require immediate response, primarily orientated towards humanitarian relief and militarised interventions to ensure a reduction in violence and support affected communities. Meanwhile, land and ecosystem restoration and conservation interventions may appear less of a priority, and their implementation on the ground may be challenging due to insecurity. Nevertheless, such interventions remain possible and can even shift the dynamics of a conflict towards mediation efforts. In Darfur, for example, mini peace agreements emerged between different sides in the conflict over the use of certain resources during the war (Takana et al. 2012). In the Philippines' Bangsamoro region, the inclusion of natural resources in peace negotiations between the government and Moro Islamic Liberation Front contributed to peacebuilding through the restoration of sustainable and alternative livelihoods (Morales-Muñoz 2022).

Box 12

Natural resource management for conflict resolution in Nigeria

In Nigeria's Middle Belt, environmental degradation and competition over resources have fuelled conflicts between farmers and herders (ICG 2021). The effects of climate change and extreme weather events exacerbate local vulnerabilities, heightening tensions over resource sharing. To address these dynamics, in 2022, the Centre for Humanitarian Dialogue helped broker the landmark Natural Resource Peace Agreement between two communities from the Tiv and Igede ethnic groups in Nigeria's Benue state. The agreement covered the sharing of water, farmland, forests and other resources, as well as the free movement of people in the two local government areas of Konshisha and Oju, open access to markets, and issues over boundaries from colonial-era maps that had been the cause of friction in the past. Addressing the environmental and natural resource drivers of conflict in the agreement was key to opening up dialogue on other conflict dynamics, contributing to securing local peace agreements that engaged both local and federal authorities, as well as women, young people, traditional authorities, religious leaders and development associations (HD 2023).

At the post-conflict reconstruction stage, land and ecosystem interventions can open the door to a wider range of activities, contributing to overall economic and social development. Agroforestry, wetland restoration, tree planting and support for alternative livelihoods are all examples of interventions that can provide entry points for post-conflict reconstruction, while at the same time strengthening social cohesion and promoting good neighbourly relations between communities by encouraging them to work together. The same holds true for efforts towards land policy reform and the restoration of land as an incentive used in peace negotiations.[15] In Colombia's Caqueta region, for example, since the signing of the peace accords, the development of agroforestry has contributed to land restoration and preservation, as well as conflict prevention and management (Morales-Muñoz et al. 2021). Ecosystem restoration and livelihood support can provide benefits for specific target groups, such as women. In Sudan, women constituted 70% of the farmers that received improved seeds and training on climate-resilient livelihoods from a UNEP-led project. As women gained financial independence, they also obtained a stronger sense of purpose and influence within their communities, allowing them to actively engage in public spaces and discussions concerning natural resource governance and peacebuilding (Morales-Muñoz and Rüttinger forthcoming). In certain post-conflict contexts, activities related to land and ecosystem restoration can also provide entry points for the improvement of livelihoods for affected farmers and the reintegration of former combatants if implemented in an inclusive way (Box 13).

15 Interview with expert on conflict-affected land and property rights at Canadian university, 9.04.2024.

Box 13

Post-agreement Colombia: Cocoa agroforestry and reforestation for sustainable land use systems

Although the 2016 peace agreement made some substantial and important provisions for land management and environmental protection, deforestation and land disputes still pose significant challenges in Colombia, especially in areas previously controlled by guerrilla groups. This is the case in Caquetá, located in Colombia's southern Amazonas region, one of the departments most affected by the conflict and very high rates of deforestation (Landholm et al. 2019). Today, Caquetá accounts for around 19% of total deforestation in Colombia, despite comprising only 7.8% of Colombia's land area (Del Rio et al. 2022). The deforestation is linked to the expansion of pastureland and the agricultural frontier, land grabbing, extensive cattle farming, illicit crops, illegal mining and logging, unplanned transportation infrastructure, and the presence of criminal structures (Sandoval et al. 2024).

To counter deforestation and conflict dynamics in the region, between 2018 and 2023, the International Center for Tropical Agriculture, in partnership with Colombia's Ministry of the Environment and Sustainable Development, introduced a project to promote cocoa agroforestry as a sustainable land use system (SLUS). SLUS in cocoa agroforestry and reforestation initiatives can contribute to reducing land-based greenhouse gas emissions, conserving forests, restoring degraded landscapes, and improving rural livelihoods and trust among communities (Morales-Muñoz et al. 2023). The project trained more than 2,000 producers and other actors in the cocoa value chain, 33% of whom were women. Similarly, a project led by former guerrilla fighters, who formed a rural cooperative (Cooperativa Multiactiva Comunitaria del Común), has contributed to reforestation efforts in the region, planting 125,000 trees with an additional 250,000 trees planned for the final phase (Pelliccia 2023).

These projects explicitly integrated a focus on peacebuilding from the outset, incorporating peace-related goals into their theories of change, and developing tools and indicators to measure the peacebuilding co-benefits of agroforestry activities (Morales-Muñoz et al. 2023). Concrete activities were designed and implemented with an inclusive approach in mind, for example, creating spaces for zero-deforestation dialogues that brought together all relevant stakeholders in the cocoa value chain, including companies and victims of the conflict. Significantly, the projects also adopted a capacity-building component to ensure that activities could be continued. Overall, by fostering environmentally sustainable agricultural practices, these initiatives were found to help foster social cohesion among cocoa producers and thus provide a valuable contribution to post-agreement peacebuilding efforts (Löhr et al. 2021).

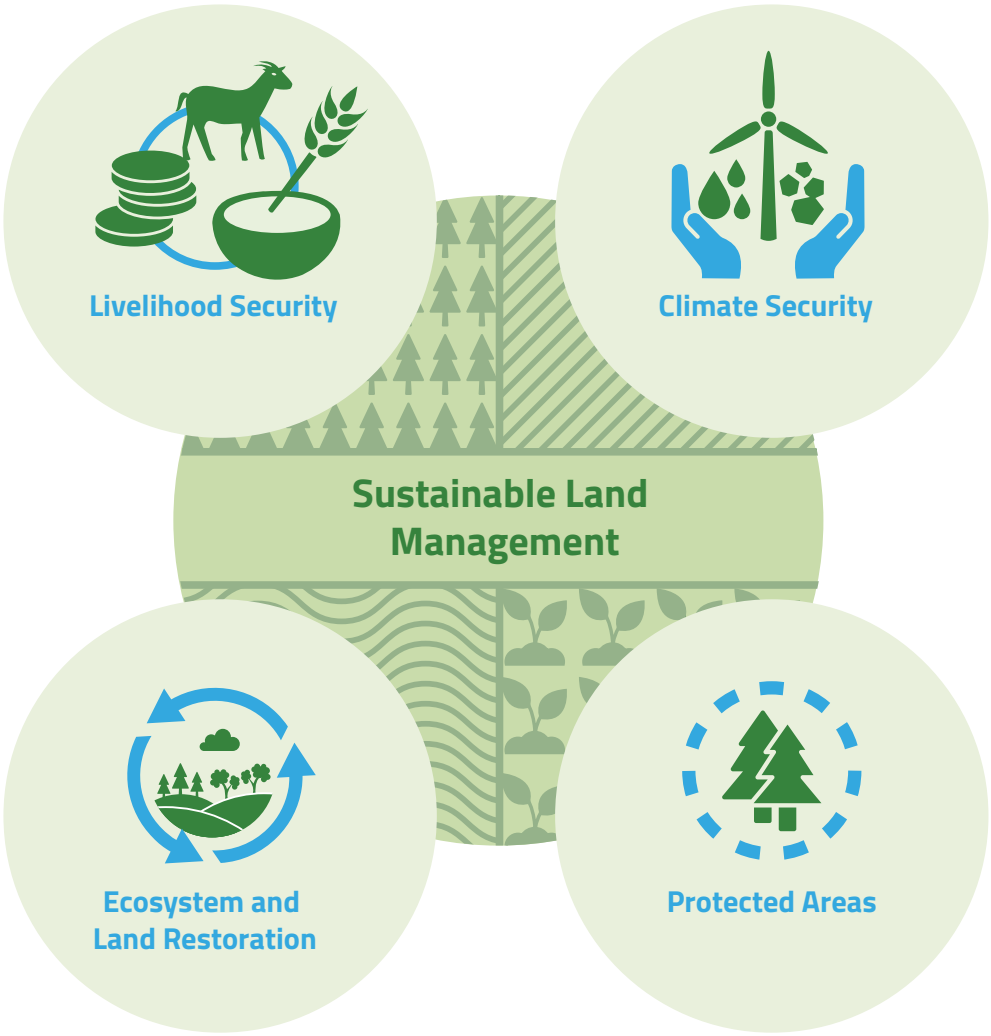
Overall, privileging processes over outputs is key to ensuring that land and ecosystem restoration activities contribute to peace and stability. In other words, peace co-benefits may come largely through how the activities are designed and implemented – taking into account who is involved, where activities take place, which benefits are generated, existing power dynamics – and less through an outcome of "more natural resources" or "more conservation". This also highlights the inherent value of integrating conflict sensitivity from inception through monitoring and evaluation, so that it is clear what the activities or programmes aim to influence.

3.2.2. **What types of intervention?**

Land is a valuable asset that many people and groups depend upon not only for their livelihoods, health and wellbeing, but also for their culture and identity. As such, SLM can be a starting point for a wider portfolio of interventions that also address conflict drivers, such as land rights, water access and management, marginalisation, and exclusion from decision-making. This opens up different avenues for cooperation, while also enhancing the co-benefits of the interventions, for example, in terms of political participation, livelihood improvement, job creation, and climate change adaptation and mitigation. Such interventions can also find a place in peace negotiations, serving as incentives for various sides to engage in negotiations and agree on the benefits of a peace accord. Importantly, focus should be on not only activities that can address conflict risk, but also those that can harness existing opportunities to strengthen resilience or highlight what is working in ways that will inform peacebuilding and restoration efforts.

Indeed, there is increasing evidence that land and ecosystem restoration initiatives that incorporate a wide portfolio of activities are more likely to contribute to cooperation and peace outcomes. This is particularly true when such initiatives align with multi-sectoral efforts that address the complex nature of conflict from various scales and angles, and engage different groups and institutions (Morales-Muñoz et al. 2022; CDA 2016). Given the complex dynamics of conflict, single-sector interventions alone are rarely as impactful or sustainable for peacebuilding as those that are part of multi-faceted efforts. Investing in or ensuring that others reinforce these diverse initiatives – targeting various scales, and engaging different groups and institutions – can significantly enhance peacebuilding outcomes. Figure 2 presents some of the components that can be included in a land-based restoration portfolio, drawing on existing experiences of land and ecosystem restoration.

Figure 2: Examples of components under a sustainable land management approach.



Sustainable land management

Several interventions, largely supported by the UNCCD, have adopted **a landscape approach that integrates various land uses, bringing together multiple interests to ensure SLM for sustainable development** (UNCCD 2017a). SLM with a landscape approach integrates various land uses to balance environmental, social and economic interests. These initiatives address land tenure, governance and conflict management issues. They also ensure inclusive and cooperative land restoration by embedding tools to navigate complex political landscapes. Stakeholders typically include local communities, governments and international organizations working together to create collaborative governance structures and foster conflict resolution mechanisms. This holistic approach promotes sustainable development, and strengthens social inclusion and international cooperation (Box 14).

Box 14

Sustainable land management and conflict resolution in Colombia

In Colombia, conflicts over land use and ownership are threatening numerous ecosystems, and thereby hindering peacebuilding efforts. To address these challenges, World Wildlife Fund (WWF) Colombia is implementing a project in the Chiribiquete, Picachos, Macarena and Alto Fragua–Indi Wasi National Natural Parks. The project has adopted a comprehensive approach, combining monitoring deforestation trends in the protected areas, strengthening plans for sustainable land use, improving the capacities for conflict resolution of local communities, environmental authorities and grassroots organizations, and supporting sustainable financial mechanisms. The project has facilitated land-use related dialogue and technical roundtables between farmers' cooperatives and the protected area authorities at the local level, and built on the information generated through these processes to inform decision-making over more sustainable land uses in the protected areas' buffer zones. Thus, the project has been able to foster sustainable economic activities and production systems related to, for example, cocoa, coffee and sugarcane. Overall, in its first phase, the project has successfully contributed to improving the management of the protected areas, thereby reducing land use conflicts and supporting the implementation of the peace agreement. Since 2024, these results are being scaled up to the national, regional and international levels (IKI 2021).

Ecosystem and land restoration

Desertification, often viewed as a crisis, is also an opportunity to restore ecosystems across landscapes. The LDN concept reframes degraded land, which is currently of no economic use, as a potential asset if restored to productivity. This approach not only holds economic promise, but also – where that land is a source of contestation – serves as a potential platform for conflict resolution, offering a shared stake in the land's rejuvenation. Part of this approach prioritises ecosystem restoration connected to agricultural lands, as productive farmlands are key for providing jobs and ensuring food security for a growing global population (UNCCD 2023). Following this logic, restoration initiatives should be connected to agricultural interventions that aim to improve food systems, including water resource management, with an eye towards promoting the participation, inclusion and empowerment of affected user groups and institutions.

Box 15

Peace dividends of the Grand Bois National Park restoration project in Haiti

Deforestation is increasing in Haiti, with tree cover falling from 32% in 2000 to around 22% in 2023 (Global Forest Watch 2023). Deforestation is largely driven by slash-and-burn farming (Global Forest Watch 2023; Tarter et al. 2016), as well as the use of wood as the main energy source in Haiti, representing 80–90% of the country's primary energy supply (IEA 2015). Charcoal, in particular, is the second-largest agricultural value chain in the country, with sales worth an estimated USD 392 million per year nationally – six times more valuable than the exports of all other agricultural products combined (Tarter et al. 2018). However, charcoal production is poorly regulated in Haiti. Amidst the current political and insecurity crises that are gripping the country following the 2021 assassination of President Jovenel Moise, armed gangs are increasingly and illegally exploiting forest resources. In recent years, as forest cover in Haiti has declined, their reach has extended into the neighbouring Dominican Republic. Gangs reportedly exploit forests there, felling trees and burning the wood for charcoal, which they smuggle into Haiti to sell. In 2013, the illicit exploitation of and trade in charcoal from the Dominican Republic to Haiti by Haitian gangs reached 2,800 sacks per week. This poses a cross-border security challenge, with criminality and violence – as well as deforestation – escalating in the Dominican Republic (UNEP 2013).

To address these dynamics, the Haiti National Trust, an international NGO dedicated to protecting Haiti's biodiversity, launched a project that combined the reforestation of 50 hectares of the Grand Bois National Park with support for new employment opportunities and alternative livelihoods for local communities. This included promoting agroforestry, and the cultivation of coffee, cashew, avocado and citrus. These activities have reportedly helped reduce illegal deforestation, charcoal burning and unregulated agriculture within protected areas (Hance 2022). The project demonstrated that involving local communities in reforestation activities and the management of forest resources can help mitigate conditions such as unemployment and poverty, which are often exploited by gangs and can fuel conflict. In addition, the UNEP worked with the governments of Haiti and the Dominican Republic to explore challenges and opportunities for cooperation on natural resource management in the border region. The resulting report established the basis for a new binational peace and development programme led by the UN country teams in both countries (UNEP 2015).

Protected areas

Protected areas are critical for maintaining biodiversity and, if managed well, can be effective for both conservation and maintaining the ecosystem services on which human livelihoods and welfare depend (UNCCD 2017b). These interventions focus on preserving vital habitats, protecting endangered species and maintaining ecological processes. Typically, it is governments that designate protected areas, but their management and enforcement entail collaborative efforts involving local communities to ensure sustainability and local buy-in. Projects in this space generally focus on establishing governance frameworks, conducting scientific research to inform management practices, and engaging in community outreach to foster stewardship and sustainable use of resources (UNCCD 2017b).[16] In recent years, so-called peace parks have also been established in many regions of the world, involving the collaborative conservation and sustainable development of natural areas in order to improve the social ecological systems that exist within them. By

16 It is important to note that, especially during armed conflicts, such areas can play a role in conflict dynamics, for example, by serving as bases for combatants to reside or for trafficking, which can continue even after a peace agreement is reached. For example, during the Mozambique civil war, the Gorongosa National Park was used for rebel bases and poaching (AP 2021), while the Zapatista rebel movement in southern Mexico occupied a biosphere preserve (Villavicencio Enríquez 2011). Land and resource interventions that specifically address these dynamics, therefore, can also be beneficial.

doing so, they present a more sustainable approach to managing border disputes compared to militarisation and barrier construction (Elbein 2022),[17] while also improving cooperation between governments across borders, as well as between businesses and Indigenous groups, depending on the context (Hsiao 2010). Examples include the Kavango Zambezi Transfrontier Conservation Area in southern Africa, the W Transboundary Biosphere Reserve in West Africa, and the Cordillera del Cóndor Mountain Range and Biodiversity Conservation Corridor between Peru and Ecuador (Box 16).[18]

Box 16

Enhancing bilateral cooperation through protected areas: The Cordillera del Cóndor

The Cordillera del Cóndor mountain range, located along the border of Peru and Ecuador, is a biodiversity hotspot of cultural significance for several Indigenous Peoples in the region, including the Shuar and Ashuar of Ecuador, and the Awajún and Wampís of Peru (Alcade et al. 2005). This border region has experienced territorial disputes for over 150 years (Kakabadse et al. 2016), escalating into armed conflicts most recently in 1981 and 1995, until the signing of the Acta Presidencial de Brasilia peace agreement between Ecuador and Peru in 1998 (Alcade et al. 2005). As part of this agreement, two ecological protection areas were established, one on either side of the border. These protection areas have created an enabling environment for bilateral cooperation, for example resulting in joint management and monitoring plans (Alcade et al. 2005). In addition to contributing to the resolution of a long-standing territorial dispute between the two countries, the transboundary agreement initiated an important phase of bilateral diplomacy, cooperation and post-conflict economic relations (UNCCD 2024).

Livelihood security and job creation

Strengthening local livelihoods is a promising conservation approach, especially in intact environments such as rainforests (Berkes et al. 2009). Sustainable livelihood interventions that address land degradation focus on enhancing local communities' economic and social wellbeing through culturally relevant and environmentally sustainable activities (Conca 2024). These interventions include agroforestry, ecotourism and sustainable agriculture, and promote non-timber forest products that align with traditional practices. A combination of government agencies, NGOs, international organizations and local community groups typically lead these initiatives, with private sector partners also involved sometimes. These programmes aim to align local demands and traditional cultures with conservation goals, ensuring sustainability and reducing the need for destructive or illegal activities, such as deforestation for ranching, informal gold mining or illicit crops (UNCCD 2017b). By providing alternative livelihoods that are both profitable and sustainable, these interventions help mitigate the economic incentives that drive environmental degradation and illegal economies (Morales-Muñoz et al. 2023).

17 These interventions can also be useful within a country that has experienced civil war, for example, by establishing a park that crosses ethnic and sectoral divides, or between government and opposition-held areas.

18 While peace parks have generally been touted as positive mechanisms for promoting peace and security across borders, they have also come under criticism in some cases, because protected areas may include Indigenous land, and people may be displaced when land use restrictions are too strict or do not appropriately value historical use and informal tenure rules (Brockington and Igoe 2006). Moreover, people may be forcibly displaced when land use restrictions prohibit any use of natural resources or economic activities within designated areas (Coad 2008). Successful and sustainable peace parks must consider the context and local conflict dynamics, including the possibility of generating new fault lines and exacerbating points of contestation when creating the park, and include appropriate governance mechanisms in the park design and implementation plan to manage risks.

Box 17

Supporting social cohesion between Côte d'Ivoire and Liberia through livelihoods and food security

The border region between Cote d'Ivoire and Liberia – which is rich in fertile land, water and natural resources, such as gold, diamonds and timber – has experienced insecurity for decades. Regular incursions by armed groups combined with food and livelihood insecurity have led to repeated refugee flows and border crossings as a coping mechanism for securing livelihoods (PBF 2019). Tensions re-emerged following the violent post-election crisis in Cote d'Ivoire in 2010, when more than 250,000 people fled the country to seek refuge in neighbouring Liberia. Without adequate community conflict prevention mechanisms in place, violence and intercommunity tensions erupted (NRC and DRC 2012). Land tenure disputes also increased throughout the border region, as the arrival of tens of thousands of refugees increased the strain on Liberia's existing mechanisms for land administration and dispute resolution (NRC and DRC 2012).

In this context, a core group of food security actors working on both sides of the border – including the respective offices of the Norwegian Refugee Council, the Danish Refugee Council, the Food and Agriculture Organization (FAO), World Food Programme and UNICEF – launched an integrated food security programming process in 2012, working closely with the local and national governments of both countries. The resulting Cross-Border Action Plan for Food Security and Nutrition was launched in 2013 with the aim of increasing cross-border collaboration to enhance food security and nutrition. Significantly, the plan explicitly integrated social cohesion and land tenure concerns into its programming, accounting for social groups and socioeconomic dynamics, such as female participation and youth employment. As part of this process, the FAO, UN Development Programme (UNDP) and UN Mission in Liberia also developed a project to promote the stabilisation and cohesion of 10 communities along the Côte d'Ivoire-Liberia border in Grand Gedeh and Nimba counties, with an emphasis on improving livelihoods (FAO 2019).

A total of 325 beneficiaries from 26 towns and villages, including women and young people, participated in activities enhancing financial management and value-added processes, as well as cross-border community dialogue. The construction of storage facilities and value-added practices at major crossing points strengthened cross-border trade and contributed to reducing tensions. Studies on concession areas improved understanding of their impact on local livelihoods, with enhanced monitoring and prevention. The project fostered cross-border dialogue, cooperation and conflict resolution, and strengthened trade and livelihood activities with stable support from Liberia's Ministry of Agriculture, indicating sustainability (FAO 2019).

Climate security

An increasing number of land and ecosystem restoration interventions are incorporating a climate security lens, considering how the impacts of climate change may exacerbate conflict drivers or open up opportunities for peacebuilding in a given context. This implies embedding activities, such as early warning mechanisms, that ensure these interventions are forward-looking, and account for eventual changes in water and land resource availability. In many cases, adding a climate lens to land and restoration interventions can mean focusing on preventing people from resorting to harmful adaptation practices, such as illegal charcoal production or overgrazing, into which they may be pushed as a result of climate change or conflict impacts. Finally, conflict-sensitive climate change mitigation activities have proven that it is possible to enhance stability and foster peace. For example, promoting alternative energy sources can encourage development and green industrialisation, while creating skilled jobs and generating income (ILO 2023). Similarly, the process

of establishing conservation areas for carbon credits can provide employment opportunities – for example, in conservation management, monitoring or ecotourism – or generate revenues through carbon revenue sharing (UNDP 2024).[19]

Box 18

Addressing security risks from climate change in the OSCE context

As a regional organization with a clear mandate on security and cooperation, the OSCE is well positioned to assess the security risks arising from climate and environmental change,[20] and explore how cooperation can be leveraged to address them. The OSCE's work is often complicated by long-standing border disputes in many of its regions, particularly following the dissolution of Yugoslavia and the Soviet Union. To this day, some territorial demarcations within the OSCE region remain complex (Sapeha et al. 2023). In such contexts, climate-related security provides the OSCE with a useful framework to advance cross-border cooperation by focusing on pressing issues that are shared between countries, such as illegal logging, wildfires and water scarcity, all of which are exacerbated by the impacts of climate change. This work is embedded in the 2021 Ministerial Decision on Climate Change Action and Cooperation, which acknowledges that climate change policy can serve as an opportunity for collaboration between states, building mutual confidence and promoting good neighbourly relations (OSCE 2021).

Under this umbrella, the OSCE has been working since 2020 on the extra-budgetary project Strengthening Responses to Security Risks from Climate Change in South-Eastern Europe, Eastern Europe, the South Caucasus and Central Asia, in partnership with adelphi and in close collaboration with OSCE field operations (OSCE 2023). Departing from the standpoint that transboundary issues cannot be tackled by individual states alone, the OSCE brings together national and local governments, as well as other relevant stakeholders – such as park rangers, fire responders, local CSOs and leaders from border municipalities – to look for joint solutions to shared climate change and security-related challenges. The project's activities foster cooperation, for example, by creating a safe space for actors with different – and sometimes conflicting – interests and priorities to sit together and focus on less contentious issues as areas for cooperation, or spawning partnerships and joint agreements for shared resource management, emergency responses and other issues of concern for all parties (OSCE 2023).

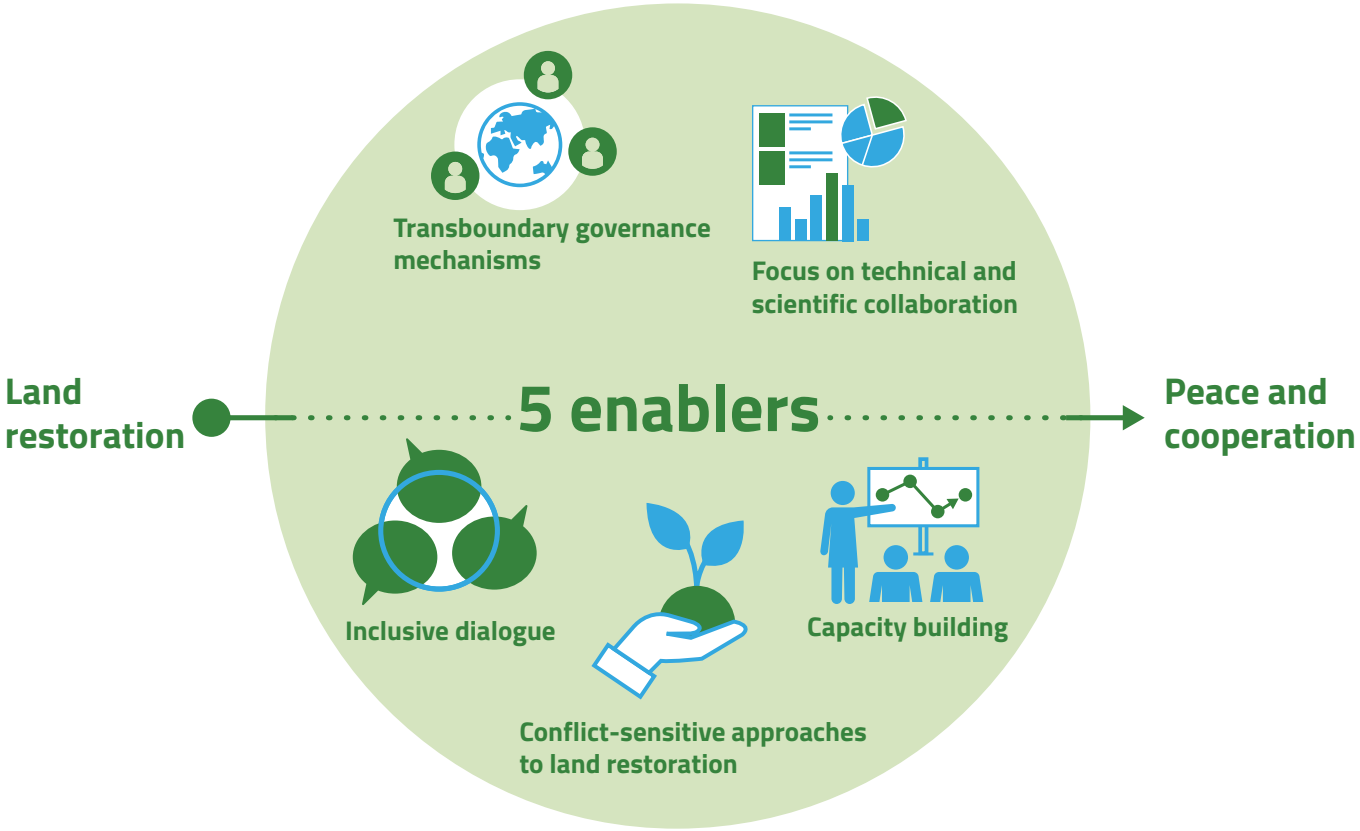
In southeastern Europe's Shar/Šara Mountains and Korab Massif Area, for example, local governments have worked together since 2021 to identify joint project opportunities to tackle issues such as illegal hunting and wildlife trade across four protected areas. These efforts have focused on actions with co-benefits for climate change adaptation, including conservation of nature, support for local populations, promotion of local livelihoods and cultural heritage, development of sustainable tourism, and improved waste management. In order to ensure conflict sensitivity and avoid entrenching patterns of exclusion, the project has a strong focus on the inclusion of women and young people, incorporating activities such as summer schools for young people in Central Asia to educate participants about the impacts of climate change on high mountain environments and collectively brainstorm ideas about their role in addressing such impacts (Viehoff and Mosello 2024). Overall, through this project, as well as high-level political engagement in relevant climate and security forums, the OSCE has been able to successfully mobilise action to address climate-related security risks to enhance regional cooperation in its focus regions.

19 The OSCE adopts a comprehensive understanding of security, which recognises that climate change threatens economic prosperity, institutions and stability.

3.2.3. How should land and ecosystem restoration initiatives be designed and implemented in order to be peace positive?

The analysis conducted in this report identified five key enablers for land and ecosystem restoration initiatives to promote cooperation and peace in FCAS and post-conflict areas, with a focus on transboundary contexts.

Figure 3: Key enablers for land restoration to promote peace and cooperation.



Focus on technical and scientific collaboration

In cross-border areas, technical and scientific collaboration to address land and ecosystem degradation challenges can establish the basis for pursuing shared goals. Many land interventions with cooperation and peace-positive outcomes started by identifying hotspots where land was a key conflict driver. Generally, the process focuses on the technical level, involving scientists and experts from different countries, as well as the exchange of data and information on land degradation and related trends.[20] As these technical experts work together, they develop relationships based on trust and respect, which can spill over into the broader political arena by building gradual connections to political spaces (Box 19).[21] Depending on the specific drivers of degradation, however, a technical approach should not ignore or try to conceal underlying structures that maintain discrimination and inequalities (Ide 2020).

Creating cross-border platforms for the exchange of data and information increases honest engagement and the likelihood of consensual decisions.[22] The exchange of technical data and information can help establish a non-political, functional space for cooperation founded on a shared baseline of information, enabling stakeholders to interact in ways that are less likely to become bogged down by political disputes. Over multiple iterations, such technical collaboration builds communities of experts, or

20 Interview with expert on climate change, land and security risks in Europe and Central Asia at UN agency, 14.05.2024.
21 Interview with expert on conflict-affected land and property rights at Canadian university, 9.04.2024.
22 Interview with independent expert on MEL, 29.05.2024.

epistemic communities, who share the common goal of environmental sustainability (Bonatti et al. 2022). These communities often transcend national boundaries, fostering a sense of shared purpose and mutual reliance. In Central Asia, for example, International Alert set up a working group composed of climate scholars and legal experts from Kazakhstan, Tajikistan, Kyrgyzstan and Uzbekistan focused on natural resources, in which the participants shared insights and study results on the impacts of climate change and natural resource management in the region. This helped create a shared narrative across divides, which in turn laid the basis for constructive cross-border engagement, despite the diplomatic tensions that the Tajik and Kyrgyz governments were experiencing at the time (International Alert 2024).

While technical engagement is crucial, it must be coupled with political support to achieve sustainable peace and cooperation. Technical solutions can serve as the initial catalyst for addressing certain problems, but their success hinges on political buy-in and support.[23] Simultaneously, coordinating technical and political efforts is essential, with targeted initiatives that ensure political buy-in for technical activities, with the political system embracing and supporting technical advancements. In Central Asia, for example, the involvement of officials from the technical departments of partner countries in the Working Group on Climate, Resources and Security established by International Alert was crucial for securing government buy-in for the group's recommendations (International Alert 2024).

Box 19

Technical collaboration on water management in the Kura-Aras Basin in the South Caucasus region

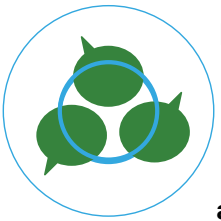
After the dissolution of the Soviet Union, the Kura-Aras Basin became an international river basin, shared by the South Caucasus states of Armenia, Azerbaijan and Georgia, and bordering Iran and Türkiye. Water shortages pose a challenge for all riparian countries, especially Azerbaijan, which relies almost entirely on the Kura and Aras rivers to meet its water needs. Water quality is also declining due to untreated wastewater from cities and industrial sites, as well as nutrients and pesticides from agriculture, sediment load from deforestation and flood irrigation practices (UN Water Activity Information System 2007; Yildiz 2017). Political tensions in the region and a lack of trust between the riparian countries have impeded significant progress towards agreements and actions to tackle these challenges (Stoa 2015; Veliyev et al. 2019), although water cooperation has been recognised as a viable entry point to peace and development in the region (Campana et al. 2008).

There have been various regional and subregional cooperation projects focusing on transboundary water management, water quality, and equitable sharing of water at the basin level in the Kura-Aras Basin. USAID's South Caucasus Water Programme, for example, has been running since 2000, and aims to promote integrated river basin planning in the Alazani and Khrami-Debed basins. Between 2002 and 2007, NATO and the OSCE realised the South Caucasus River Monitoring Project, which contributed to establishing the social and technical infrastructure for a joint river water quality and quantity monitoring, data sharing, and watershed management system between Armenia, Azerbaijan and Georgia. Between 2015 and 2017, the OECD worked with the Azerbaijani and Georgian governments to facilitate a shared knowledge base on the physical, social and economic features of cooperative river management.

What these projects have in common is an early-stage focus on technical collaboration, for example by promoting joint monitoring and data exchange between countries, providing training and data management tools, and establishing web-based data exchange mechanisms for hydrological and meteorological information. This focus served as a foundational entry point for establishing a basis for cooperation, even amid ethnic tensions and political stalemate (Vardanyan and Volk 2014). Continuous engagement has created

23 Interview with expert on climate change, land and security risks in Europe and Central Asia at UN agency, 14.05.2024.

space for dialogue, enabling cooperation to be scaled up to more political levels. For example, the USAID project successfully established trilateral regional task forces, while the NATO and OSCE project developed a reliable database that remains highly valued by experts from all three countries (Veliyev et al. 2019). However, such initiatives often remain small-scale, with limited long-term engagement, unclear roadmaps and inadequate conditionalities to scale up engagement. Moreover, cooperation benefits are rarely visible to the wider populations, making it difficult to overcome pre-existing sources of conflict.[24]



Inclusive dialogue

Community-led dialogue must be prioritised in transboundary ecosystem restoration and sustainable land management efforts. In recent decades, the land sector has recognised the importance of centring work on community demands (Dawson et al. 2021). This means that interventions must prioritise local interests and traditional culture. For example, it is not advisable to introduce a honey production project if local people have never engaged in this type of activity, as people will be reluctant to pick it up and sustain it.[25] Inclusive approaches align with the global commitment to leave no one behind, reinforcing the importance of equity and participation in sustainable development efforts (UNCCD 2022c). However, communities are not homogenous, requiring a careful understanding of the diverse needs and multiple perspectives of individuals, households and communities to avoid creating or exacerbating conflicts.[26]

To this end, robust stakeholder analysis and mapping, as well as consultations at the outset are essential tools, as they can help identify the most disadvantaged and marginalised stakeholders, those with the most power and access to resources, and those in between, enabling specific approaches on how to best involve each group in the initiative to be developed.[27] Active mapping requires working with CSOs, educational partners such as local universities and schools, business associations and other local actors to establish a core group of participants that understand the project, its goals and methodology, and thereby help ensure local buy-in.[28] Consultations are also useful for ensuring that communities are actively engaged and listened to. However, they must be conducted in a way that is not merely extractive, but also accounts for differentiated needs, vulnerabilities and cultural sensitivities, monitors unintended effects, and recognises that identity shapes how people respond (Conciliation Resources 2023). Importantly, experience shows that participants in dialogue processes, especially in deeply divided conflict contexts, may face distrust within their own communities: Why are they meeting with the "other"? Will they benefit financially? Will they compromise on issues that are important to the community? To counter these narratives and broaden local buy-in, dialogue processes must deliver clear and tangible results for the communities involved (Relitz 2022).

Integrating diverse voices in land restoration projects contributes to building social resilience and trust within communities living in border areas. By engaging women, young people and marginalised groups, projects can integrate and profit from diverse perspectives and knowledge, including traditional practices, thus creating a more robust and inclusive framework for action. Engagement with these groups also ensures that initiatives are more effective and equitable, tapping into the influence of local actors, including all genders and ages, to foster a cohesive and cooperative effort.[29] At the same time, such participatory processes help establish a shared narrative around land-related drivers of conflict, which is a first step to building consensus between conflict parties and helping identify cooperative solutions to common challenges.[30] For example, International Alert worked with communities and local governments in Turkana and West Pokot counties in northern Kenya, which were heavily impacted by drought and violence. Through community-level training, they raised awareness about the common threat posed by environmental degradation, and promoted

24 Information from South Caucasus expert provided on 23.08.2024.
25 Interview with land, food security and livelihoods expert at UN agency, 9.5.2024.
26 Interview with climate and peacebuilding expert at international NGO, 25.04.2024.
27 Interview with expert on climate change, land and security risks in Europe and Central Asia at UN agency, 14.05.2024.
28 Interview with land, food security and livelihoods expert at UN agency, 9.5.2024.
29 Interview with expert on climate change, land and security risks in Europe and Central Asia at UN agency, 14.05.2024.
30 Interview with climate and peacebuilding expert at international NGO, 25.04.2024.

collaborative action among pastoralists, farmers and fishers to address climate adaptation and conflict prevention (International Alert 2024). It is important to note, however, that this type of participatory and inclusive work is not always easy, as it must navigate complex political and social dynamics, and happens best through sustained, long-term investment and engagement.[31]

Environmental diplomacy can be a pivotal vehicle in peacebuilding. Successful land restoration transcends mere technical solutions, requiring the cultivation of conditions that enable ecosystems to recover and communities to thrive together. Key elements include inclusive dialogue platforms, addressing past grievances, establishing systems for conflict resolution and ensuring economic benefits for all affected parties.[32] Critically examining how the economic benefits that derive from activities in these areas, such as ecotourism and payments for ecosystem services, are distributed is also key to avoid perpetuating or exacerbating existing patterns of exclusion and marginalisation. By integrating environmental diplomacy with inclusive participation, ecosystem restoration projects not only contribute to environmental conservation, but also support social stability and peacebuilding (Kim and Ali 2016).

Box 20

The Great Ulster Peace Forest

For roughly 30 years (1969–1998), Northern Ireland was battered by armed conflict and political violence, with mostly Catholic Irish nationalists fighting Protestant unionists, who wanted the territory to remain part of the United Kingdom. A peace process started in the 1990s, culminating with the 1998 Good Friday Agreement, which provided for a power-sharing regional government and other measures to address the conflict, including police reform and state demilitarisation (Mitchell 2023). Yet, the reconciliation process is still ongoing, with remaining societal fractures across socioeconomic, political and religious lines. For example, only 7% of schools are officially integrated (rather than being either Catholic or Protestant) and so-called peace walls still physically divide neighbourhoods across sectarian lines (Taub 2023). Northern Ireland is also now one of the most nature-depleted areas in the world. Only 8% of its land is covered with trees, slightly less than Ireland (9%) and Britain (13%), and significantly less than the rest of Europe (44%), while 12% of species are under the threat of extinction (State of Nature 2023). Reversing these land and ecosystem degradation trends would allow for the restoration of healthy environments that are key for Northern Ireland's economic and hence social prosperity. Doing this could provide an opportunity to enhance dialogue and cooperation to further enable reconciliation between communities previously at war.

With this in mind, in September 2024, the UNCCD launched the Great Ulster Peace Forest initiative as part of the PFI. Embedded in the New Decade, New Approach Deal published by the UK and Irish governments in 2020 (UK Government 2020), and in line with UK government policies and Forest for our Future programme (Northern Ireland Assembly 2021), the initiative aims to promote joint reforestation actions that offer collective and participatory platforms to enhance the exchange of views and cooperation among communities with different backgrounds and faiths. In addition, the initiative contributes to the implementation of the Good Friday Agreement by leveraging activities for ecosystem conservation and restoration designed to enhance cooperation. While the specifics of the initiative will be defined with relevant stakeholders, it is intended to result in projects and programmes to restore up to 18% of forest cover in Ulster, prepare joint management plans for protected border areas, and extend greenways in border areas to boost sustainable tourism and other local businesses. To enrich culture and heritage, the initiative also envisages the establishment of a documentary collection of the peace process.

31 Interview with land, food security and livelihoods expert at UN agency, 9.5.2024.
32 Interview with land, food security and livelihoods expert at UN agency, 9.5.2024.

Participation and inclusion are central to the initiative, and are perceived as key to achieving the initiative's cooperation and peace – in addition to its restoration – objectives. The design and implementation of the initiative will involve a wide range of stakeholders, including government authorities, officials and experts from across sectors such as the environment, forestry, finance, education and tourism, as well as schools, universities and faith groups. The initiative will establish joint working groups and committees at various levels to monitor and document the progress of activities. Moreover, youth engagement is integrated into all activities, with the aim of building resilient and peaceful societies both for the present and the future.

Transboundary governance mechanisms

When linked to policy and dialogue processes, land and ecosystem restoration interventions can serve as an entry point to bring stakeholders together over common goals, which over the long term can help overcome conflicting goals. Evidence shows that in areas where cross-border agreements are in place, there is little conflict (Sousa 2013; Scherer and Zumbusch 2011). For example, the World Bank's Resilient Landscapes in Central Asia programme, which aims to restore degraded landscapes in the Aral Seabed and degraded mountain landscapes across the region, started by strengthening the capacity of local communities and governments to identify and implement innovative landscape management and restoration approaches (World Bank 2021). Over the course of the programme, and with sustained engagement, this work facilitated transboundary collaboration across Central Asia's shared borders and ecosystems, improving connectivity of natural resources, and increasing the resilience of transboundary communities and regional infrastructure against the impacts of land degradation.[33]

Strengthening cross-border cooperation through land and ecosystem restoration interventions requires working through different governance structures and at different scales. In some contexts, local agreements between cross-border communities – for example, in the form of negotiated settlements – or informal decisions taken by and implemented through traditional decision-making structures – such as councils of elders – can more effectively achieve cooperation over the sharing of land and land-based natural resources than formal accords signed by heads of state. Local agreements also have the advantage of securing greater buy-in and legitimacy from directly affected stakeholders.[34] In other cases, working at higher political levels may be a necessary entry point due to political or operational reasons, for example, in the case of agreements reached in the context of COP or G7 meetings. These efforts need to adopt long-term, institutional approaches to ensure that processes set in motion can continue despite changes in individual national governments.[35] The key point is that transboundary work typically requires sustained investment and a more deliberate, focused approach to fostering inter-governmental engagement and trust-building dialogue (Gaston et al. 2023).

The potential for achieving positive cooperation outcomes is enhanced when interventions tap into existing governance structures. In many contexts, national-level institutions, such as government ministries and departments with established diplomatic channels, can be leveraged to enable transboundary cooperation. This can reduce transaction costs, strengthen institutional capacity and legitimacy, and build trust with and among communities and stakeholders. When effective government authorities are absent, which is common in many FCAS, working with existing community structures – such as cooperatives, farmers' associations and CSOs – can be beneficial. These structures tend to be well-embedded in the local social fabric and widely trusted, while also sharing common interests with similar institutions across borders, facilitating cooperation.[36] In addition, many of these organizations are regional or embedded in regional networks, and, therefore, have a broader perspective on potential entry points for shared action between communities across borders.[37]

Economic and market incentives can help move transboundary cooperation forward. It is important

33 Interview with natural resource management expert in Europe and Central Asia at multilateral development bank, 8.05.2024.
34 Interview with expert on conflict-affected land and property rights at Canadian university, 9.04.2024.
35 Interview with natural resource management expert in Europe and Central Asia at multilateral development bank, 8.05.2024.
36 Interview with expert on land, peace and security in Colombia at UN agency, 23.04.2024.
37 Interview with land, food security and livelihoods expert at UN agency, 9.5.2024.

to look at economic incentives and market dynamics that can be leveraged to foster cooperation, as they have likely been key drivers of land-related conflicts or land degradation in the first place.[38] Governments may be more willing to accept land restoration interventions if the resulting economic benefits are clear. Similarly, governments may be more willing to cooperate with neighbouring countries on land and ecosystem restoration goals if they perceive national co-benefits, such as increased access to finance, including on other issues such as climate change adaptation, biodiversity and development.[39] However, this approach can be volatile if market conditions on either side of the border are imbalanced, as economic advantages in one country may disrupt markets in the other.[40]

Box 21

Regional strategy for addressing droughts, and sand and dust storms in Central Asia

Over 80% of Central Asia's 400 million hectares of land – which includes Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan – is covered by deserts and steppes, making the region particularly vulnerable to sand and dust storms. SDS have been exacerbated by climate change and unsustainable land practices (CAREC and UNCCD 2021). Recognising the increased risk of drought and SDS, in 2020, the UNCCD Secretariat supported a pilot project implemented by the Regional Environmental Centre for Central Asia, aimed at strengthening preparedness and resilience to SDS in the region. The project brought together key national and regional stakeholders. The final result was the Regional Mid-term Strategy for Sand and Dust Storm Management for 2021–2030, which defined concrete goals and steps to build systematic and institutional capacity. Technical cooperation and knowledge exchange were vital in bringing parties together to formulate the strategy, as this fostered expert communities that transcended political boundaries, thus enhancing trust and dialogue (CAREC and UNCCD 2021).

Conflict-sensitive approaches to land restoration

Applying conflict sensitivity to land and ecosystem restoration interventions helps identify proactive ways to build trust and cooperation. For a land or ecosystem restoration initiative to support peace-positive outcomes, it needs to be embedded in an in-depth understanding of the context in which it operates (Goddard and Lemke 2013). To this end, a conflict-sensitive approach throughout the intervention is essential, as it enables an understanding of pre-existing power relationships, as well as resource distribution and access patterns that may contribute to conflict.[41] For example, in the design phase of an intervention, conducting a conflict-sensitive political economy analysis of the context can help identify potential "spoilers", and whether and how they need to be engaged in the process.[42] Conflict sensitivity should also include consideration of historical trends, which are essential to understanding the root causes of the conflict, marginalisation and exclusion dynamics (USAID 2019).

A foresight approach is essential to ensure that land and ecosystem interventions do not have unintended negative impacts. Land and ecosystem restoration interventions can substantially modify the context in which they are implemented. Scenario development can help understand not only the context in which the intervention takes place, but also the potential socio-political effects of the intervention on the area.[43] Similarly, it is important to consider how identity, gender and other social norms shape responses to interventions. For example, in places as diverse as Nigeria, Fiji, Pakistan, Uganda and the Philippines, it has been shown that the construction of identities in some communities is deeply interwoven

38 Interview with climate and conflict expert at international development agency, 16.05.2024.
39 Interview with climate and peacebuilding expert at international NGO, 25.04.2024.
40 Interview with land and resource governance expert at international development agency, 2.05.2024.
41 Interview with expert on conservation, justice and Indigenous Peoples at international NGO, 4.06.2024.
42 More specifically, conflict sensitivity includes a focus on dividers and connectors, where dividers are factors that create division or tension, and connectors are factors that pull groups together or help groups to coexist in constructive ways. This framing helps understand intergroup relations within the context in which an intervention is implemented (CDA 2010).
43 Interview with independent expert on business, environment, climate and peace, 29.05.2024.

with knowledge of the environment and subsistence practices. Modifying these practices through land and ecosystem restoration interventions could jeopardise those identities, and lead to social tensions and violence.[44] Therefore, it is important that interventions integrate an intersectional gendered analysis and approach to avoid conflict, while also not shying away from promoting gender and social equality outcomes (Conciliation Resources 2023).

Explicitly integrating activities to address conflict dynamics in land and ecosystem restoration interventions enhances cooperation and peace outcomes. These include supporting or enabling mechanisms for shared resource management and other culturally appropriate conflict mediation mechanisms, which may entail support or engagement with formal and informal governance institutions (USAID 2019). For example, pastoral communities in the Karamoja cluster – Uganda, Kenya, South Sudan and Ethiopia – have successfully negotiated land access during droughts. With IGAD and FAO support, elders from these communities led the negotiations, which was a key factor in reducing conflict and ensuring equitable resource sharing among the various groups (FAO, IGAD and Interpeace 2023). Equitable and transparent sharing of project benefits is crucial to mitigating the risk of grievances and increased marginalisation in the aftermath of a project. Clear, enforceable land-use agreements decided upon prior to land restoration activities are beneficial to ensure the inclusion of the most vulnerable, and diffuse risks of predation by elites and encroachment by outside actors (Ahmadnia et al. 2022).

Conflict sensitivity needs to be monitored throughout. This requires devoting adequate resources to robust data collection, such as surveys to assess local conditions, mid-line evaluations and impact assessments. It also necessitates defining flexible theories of change and implementing adaptive management to allow for the modification and adaptation of activities that are ineffective or have negative impacts, particularly if the conditions on the ground change, as often occurs in FCAS (Bruch et al. 2023). To this end, long-term interventions may be more suitable than short-term efforts, because they enable the formation of partnerships and relationships, and a deeper understanding of push-and-pull factors on different dynamics.[45] However, it is also true that in certain circumstances, and especially during active conflict, short-term interventions may be more impactful – context is key.[46]

Box 22

Enhancing transboundary cooperation through conflict-sensitive environmental initiatives in the Balkans

Although environmental issues were not a driver of the conflicts that devastated the Balkan region throughout the 1990s, the violence and unrest had widespread environmental repercussions, including pollution from bombings, destruction of infrastructure and contamination from toxic substances (Council of Europe 2001). Many people fled or were displaced during the conflicts, which added to environmental degradation. For example, many refugees fled to Albania and Macedonia, neither of which had the resources to sustain a population influx, and refugee camps exacerbated environmental damage due to inadequate sewage, tree cutting, rubbish dumps and wastewater infiltration in groundwater aquifers (Edeko 2011). Partly because of the destruction of environmental infrastructure during the war, the 2000s also brought devastating climate change-induced flooding and droughts (Bruch et al. 2024).

In this context, the Global Environment Facility (GEF) has supported 195 projects in the Balkans, almost a quarter of which (45) have a regional focus. Although climate change has been the primary focus of GEF projects, the GEF portfolio also includes projects focused on land restoration and biodiversity conservation through the establishment of protected areas (Bruch et al. 2024). A recent review of eight of these projects revealed that they all incorporated conflict sensitivity, thoroughly considering the political and conflict context in preliminary and concluding project documents. A deep understanding

44 Consultations with the Community of Experts on land, peace and security held between March and July 2024.
45 Interview with expert on conservation, justice and Indigenous Peoples at international NGO, 4.06.2024.
46 Interview with independent expert on MEL, 29.05.2024.

of the conflict, and the involvement of local institutions and stakeholders contributed to the project's success and sustainability (Bruch et al. 2024).

For example, recognising the importance of repairing wastewater infrastructure damaged during the war in order to reduce waterway pollution, the Danube/Black Sea and Mediterranean Basin Water Quality Protection Project established a joint Bosnian-Croatian commission. The commission contributed to building trust between the states involved (Croatia, Montenegro and Serbia), helping to unlock complex and long-lasting conflicts over the use of freshwater, and fostering transboundary cooperation over the long term. Importantly, the commission continued to function even after the project concluded, pointing to the importance of involving local stakeholders in a conflict-sensitive way to ensure project sustainability (GEF 2018b). Similarly, conflict analysis was crucial in shaping the activities of the West Balkans Drina River Basin Management Project, enhancing multi-state cooperation and developing a shared vision for the use of the transboundary Drina waters (GEF 2014). These examples demonstrate that in post-conflict contexts, such as the Balkans, even technical interventions require conflict-sensitive analysis to be effective and promote active cooperation.

Capacity building

Greater capacity is needed to leverage land and ecosystem restoration interventions for cooperation and peace. In order for land and ecosystem restoration to open up avenues to address entrenched social dynamics and inequalities in a sustainable way, it is necessary to invest in capacity building on conflict resolution and cooperation for stakeholders responsible for land and natural resource management. As a case in point, while UN agencies operating in conflict or post-conflict contexts typically possess mediation capacities, these are often disconnected from the land sector. However, embedding land mediation units within international agencies and their national counterparts would support peacebuilding outcomes.[47] Similarly, at the local level, leadership training – for example, targeting under-represented groups – could facilitate more inclusive decision-making processes over land and natural resource management.[48] Indonesia, for example, faced challenges in managing its extensive forest and natural resources due to the coexistence and lack of alignment between national and customary (*adat*) laws governing traditional communal land tenure systems. To address this issue, the central government supported local governments through training and capacity building to manage these functions effectively and transparently (World Bank 2011).

Capacity building is a tool for promoting cooperation and peace. Training, exchange visits and other capacity-building activities targeting stakeholders at different levels work to provide opportunities for dialogue and support a common understanding of the issues at stake, helping to overcome prejudices and misconceptions between parties that may have different positions and interests.[49] Giving visibility to the outcomes of these processes can encourage collaboration in other sectors and at higher levels when success is captured and shared. Capacity building can also be an important mechanism to expand experts' and policymakers' perceptions and understandings of land- and climate-related issues beyond the scientific and political dimensions to include a societal dimension more focused on people's vulnerabilities. In Central Asia, for example, International Alert trained government officials at the local and national levels on conflict and gender sensitivity. This enhanced their grasp of the issues people in their communities were experiencing, including the impact of shrinking water resources on livelihoods, and associated insecurities and conflict risks, which was key for creating a new, shared, cross-boundary narrative on water, climate and security (International Alert 2024).

47 Interview with expert on land, peace and security in Colombia at UN agency, 23.04.2024.
48 Interview with expert on conservation, justice and Indigenous Peoples at international NGO, 4.06.2024.
49 Interview with expert on climate change, land and security risks in Europe and Central Asia at UN agency, 14.05.2024.

Box 23

Capacity building among local communities for land-related conflict prevention and peacebuilding in the Liptako-Gourma region

The Liptako-Gourma region, a vast and arid area straddling the borders of Mali, Niger and Burkina Faso, is experiencing a complex and multi-faceted crisis driven by communal tensions, climatic variability, demographic pressures, increasing poverty, dwindling resources, and the absence of state institutions and basic services. Since 2015, the region has experienced a surge in intercommunal conflict, particularly between nomadic herders and farmers, as well as military coups in Mali and Burkina Faso (Gaston et al. 2023).

To counter these dynamics, the UN Peacebuilding Fund (PBF) funded nine projects in Liptako-Gourma as part of its climate security portfolio, with the combined funding amounting to more than USD 21 million (12.5% of the overall PBF climate security portfolio). The funded projects use capacity building to enhance natural resource management as an entry point to promote social cohesion within civil society and among local communities. All the projects have a specific focus on women's leadership, and on preventing and managing resource-related conflicts, including land-related issues and tensions arising from transhumance (PBF/IRF 353-354-355). For example, in Mali, Niger and Burkina Faso, the FAO and International Organization for Migration (IOM) trained government representatives and traditional leaders, as well as women and young people from local communities on conflict prevention and management strategies around natural resource and transhumance-related issues. This training enabled local communities to collaborate more effectively in preventing and addressing conflicts (PBF/IRF 353-354-355 2021).

Niamey, Niger, photo by Michel Isamuna on Unsplash

3.3. **What are key gaps?**

While the growing number of cross-border land and ecosystem restoration interventions offer important lessons in terms of what works for ensuring conflict sensitivity and building peace, some important gaps remain.

First, only limited attention has been dedicated to the unintended consequences of these projects. Land and ecosystem restoration interventions can inadvertently generate negative consequences that foster conflict, and undermine efforts to establish cooperation and promote peacebuilding.[50] For example, the creation of the Kahuzi Biega National Park in the DRC, while protecting a natural area, also led to the displacement of the Batwa Indigenous Peoples, as well as violence and conflict between the state, park rangers, non-Indigenous actors and various other interests over the recognition of the rights and land tenure claimed by Indigenous Peoples, which continues to this day (Flummerfelt 2022). To counter these risks, critical reflection and active information sharing to enhance understanding of the effectiveness and raise awareness of any unintended consequences of these interventions is urgently needed to develop good practices that can be applied across projects (Ide 2020). What is also often missing is the limited acknowledgment of international actors' positionality within a conflict system. Their geopolitical interests, historical relationships and value systems inevitably shape their approach to peacebuilding and land-related interventions, for example, by limiting their effectiveness as local actors see them as biased towards certain outcomes or sides. Therefore, more attention needs to be paid to how international actors can better understand and more explicitly address the nature of their involvement in conflict situations (Relitz et al. 2023).

Second, questions remain on how to ensure the sustainability of interventions, especially in conflict-affected and post-conflict contexts. Ensuring that land and ecosystem restoration interventions continue beyond a project's conclusion can be challenging, especially in situations of active conflict or immediately after conflict when social and political dynamics can still be volatile. Support for and opposition to the project and the changes it introduces can evolve rapidly, as can the conflict and security situation on the ground, sometimes bringing into question the viability or adequacy of activities (Gaston et al. 2023). Further, there is limited understanding of the types of incentives that most effectively mobilise community support for sustainable conservation and reforestation activities, particularly as these efforts often require long timeframes to implement and realise their promised benefits (Crouzeilles et al. 2020). Attempts have been made to understand how these challenges can be overcome, for example, by conducting scenario exercises to imagine potential threats to a project's achievements over the long term and developing risk mitigation strategies accordingly (Gaston et al. 2023). Ensuring stakeholder buy-in from the very beginning of a project, and embedding it in all the interventions, including those of a more technical nature and favouring regenerative practices that help communities become more self-sustaining, also increases the chances that they will be sustained. For example, in the case of the Odzala-Kokoua and Nouabalé-Ndoki national parks in the Republic of the Congo, the integration of income-generating activities, livelihood alternatives and development opportunities for communities affected by the project increased their buy-in and strengthened their support for the conservation initiative (Dia 2019). However, more research needs to be dedicated to this.

Finally, there have been very few attempts to meaningfully engage the private sector in land and ecosystem restoration. This represents a major gap, as both small and medium-sized enterprises, as well as large companies can be important users of land resources, and may contribute significantly to both local livelihoods, and national and regional economies. Involving the private sector may facilitate the shift from short-term relief to income generation and economic development, while fostering innovative solutions to longstanding issues that may be difficult for the public sector alone to resolve, such as land degradation dynamics. The private sector can also play a key role in pushing for and opening up avenues for transboundary cooperation, as central governments typically have strong interests in attracting private companies and investment. There is some momentum for involving the private sector in land and ecosystem restoration, as companies and investors are starting to see it as an avenue for managing nature-related risks, achieving their net-zero targets and taking advantage of new business opportunities (World Bank 2024). However, more evidence is required to better understand the role that private sector actors – both small-scale private sector

50 Previous research has identified the "six Ds" of unintended, adverse side effects with reference to environmental peacebuilding, namely depoliticisation, displacement, discrimination, deterioration into conflict, delegitimisation of the state and degradation of the environment (Ide 2020).

actors within communities and large companies operating at a national or transnational level – can play in promoting peace and cooperation, using land and ecosystem restoration as an entry point. Programmes in this space exploring various engagement modalities – from technical collaboration to embeddedness of land and ecosystem restoration in the company's core business case – are required to shed light on what can work best in different contexts and what safeguards need to be in place to ensure peace dividends.

Box 24

Promoting financial investment in restoration: The experience of Bosques Amazónicos

Bosques Amazónicos (BAM) is a private company involved in the conservation and restoration of the Amazon forest. BAM implements forest preservation projects that generate carbon credit projects under the REDD+ mechanism and works towards removing barriers to financial investments in restoration. By preserving forests and enhancing carbon stocks, BAM's projects generate carbon credits that can be sold to offset emissions elsewhere. For example, a BAM project in Peru successfully restored 18,000 hectares of degraded forest and pasturelands, focusing on the sustainability of its intervention by selecting resilient tree species (World Bank 2024; BAM 2024). By restoring these lands, the programme has significantly contributed to reducing illegal logging and creating economic opportunities for local communities. BAM has worked closely with Indigenous Peoples and local communities, engaging them in conservation efforts and decision-making processes, and providing them with the tools to counter the increasing encroachment of organised crime groups in the Amazon rainforest (Crisis Group 2024). The removal of financial barriers and the generation of carbon credits have been instrumental to restoring large tracks of degraded forest in the Amazon, proving the potential contribution of the private sector and finance in land restoration.

Polomolok, South Cotabato, Philippines photo by Julienne M on Unsplash

Huelva, Spain, photo by Victor on Unsplash

4. Financing land and ecosystem restoration

To fully harness the potential of land restoration for cooperation and peace outcomes, adequate finance must be made available and accessible. While attention on finance in the environmental peacebuilding space is rapidly growing, there remains a lack of focus on the land-peace nexus, especially in transboundary contexts.

This chapter presents an analysis of financing mechanisms to support peace-positive land and ecosystem restoration initiatives. In particular, it includes a(n):

- **High-level mapping of the current finance landscape** for land and ecosystem restoration initiatives, including the major funds and donors, their funding priorities, and the main recipients of funds
- **Analysis of gaps** in the existing finance system
- **Overview of current approaches** to address the identified gaps and what more or different funding is needed

4.1. Current state of funding

At present, the level of finance for land and ecosystem restoration is inadequate. While at least 40% of intrastate conflicts have a link to land and natural resources (UN Habitat and GLTN 2018), less than 10% of global funding for climate action and peacebuilding addresses land issues. Looking at funding to combat desertification, land degradation and drought (DLDD), 2022 finance flows were estimated at USD 66 billion (UNCCD Global Mechanism 2024). In contrast, to reach the Rio Conventions' land-related commitments and objectives to combat DLDD more generally, annual investment must reach USD 355 billion over the coming years, with total investment requirements of USD 2.1 trillion between 2025 and 2030 (UNCCD Global Mechanism 2024).

Most of the finance for DLDD solutions comes from public sources. Public funding accounts for 72% of total DLDD-related funding (UNCCD Global Mechanism 2024). Bilateral and multilateral resources account for 22%, underscoring the importance of international cooperation and aid in addressing DLDD issues. Although private sector investment makes up only 6% of the total, their involvement is growing. In addition, domestic and international public resources can play an important role in leveraging private sector resources, suggesting potential areas for further development and collaboration with public sectors.

In nature-based solutions (NbS) financing more broadly,[51] private investment is limited and narrowly defined. Of the USD 35 billion in private finance or 18% of total NbS funding, roughly a third – USD 11.7 billion in 2022 – is directed to biodiversity offsets, largely driven by regulatory requirements such as Biodiversity Net Gain in the United Kingdom, New South Wales Biodiversity Offset Scheme in Australia and Clean Water Act mitigation banking in the United

51 NbS are activities that employ the protection, restoration or management of natural ecosystems to address societal challenges such as climate change, DRR and food insecurity (IUCN 2024). Land restoration is a major category of NbS.

States (UNEP 2023). The second largest portion of private investment – USD 8.6 billion – goes to sustainable supply chains, such as the certification of cocoa and coffee production (UNEP 2023). Other areas of private investment include approximately USD 4 billion of farmer investment in conservation agriculture, USD 1.5 billion in carbon markets, and USD 0.7 billion in private finance mobilised by funds and groups such as the Development Assistance Committee, GEF and Green Climate Fund (GCF) (UNEP 2023).

In addition to volume, the type of funding is a key consideration. Traditional investment in NbS occurs in established economic sectors that have clear revenue streams and can ensure return on investment, such as agriculture, forestry and tourism (Van Raalte and Ranger 2023). Other categories of NbS, such as green infrastructure and traditional conservation, while important, have struggled to monetise their social and economic benefits, and leverage the necessary funding (Van Raalte and Ranger 2023). Therefore, more innovative finance approaches are needed for sectors and beneficial projects without traditional revenue streams, examples of which are discussed later in this chapter.

Funding in conflict-affected contexts

There is a gap in data on specific NbS financing for FCAS. However, recent attention to climate funding for FCAS provides insights into the challenges of securing adequate finance in fragile contexts. As well as degraded land, many FCAS face significant climate impacts. Yet, less than 1% of total climate adaptation finance reached the 10 most fragile states in 2021, totalling only USD 223 million (Mercy Corps 2023). Indeed, the more fragile the context, the less climate finance it statistically receives. Further, climate finance decreased for this group between 2018 and 2021, despite overall climate finance increasing during this time (Truscott and Mason 2023).

This lack of financing for FCAS can be attributed to several factors, including overly complicated procedures to apply for funding, risk aversion among donors and investors, lack of state authorities with the necessary accreditation to apply for funds, institutional barriers – such as not having handled large budgets, and inadequate capacity to absorb funds and implement projects – and lack of implementing partners on the ground (adelphi 2023). As only approximately 10% of funding is delivered directly to the local level, the lack of state capacity to absorb funds is a major challenge (ICRC 2022). This is particularly the case in settings with active non-state armed groups. For example, the Liptako-Gourma transboundary region is highly susceptible to attacks by jihadists. Following the coups in the Sahelian countries, donor appetite decreased due to insecurity, instability and uncertain political environments.[52]

Too little funding is provided as grants and concessional finance, with current funding modalities increasing the debt burden and, consequently, the vulnerability of FCAS. In fragile contexts with high vulnerability to climate change, grants and concessional finance that avoid creating additional debt are desperately needed (UNDP 2021). However, only a quarter of climate finance is delivered as grants (Truscott and Mason 2023). A study of climate finance to FCAS in 2019–2020 found that more than half of finance received was debt-creating, with nearly 10% of finance coming as non-concessional loans without preferential terms (Reeve, Walsh and Jayoussi 2023). Funding that increases the debt burden of FCAS reduces their capacity to invest in development and reconstruction that would otherwise build resilience, increasing their vulnerability to future crises (Truscott and Mason 2023).

Small, context-specific projects are outside the scope of many funds. The GCF Simplified Approval Process for small projects, for example, has a cap of USD 25 million (Mercy Corps 2023). The project and approval requirements for projects in this fund can reasonably be assumed to be designed for the upper limit of this budget and are, therefore, excessively complicated for small-scale projects (Mercy Corps 2023). Yet, FCAS require these localised projects alongside large infrastructure projects (Mercy Corps 2023).

52 Consultations with the Community of Experts on land, peace and security held between March and July 2024.

4.2. **Mapping the funding landscape**

A variety of funding streams are relevant for peace-positive land restoration initiatives. Vertical climate funds, multilateral and bilateral donors, market mechanisms, and peacebuilding funds all have a role to play.

Vertical climate funds

Vertical climate funds are a major source of finance for land restoration projects. The relevant vertical funds can be sorted into three categories: adaptation funds, REDD+ funds and multiple focus funds (Table 1).

Of these, the largest funds for land and peace-relevant projects are the GEF, GCF and Adaptation Fund. A snapshot of their funding priorities, modalities and recipients is provided below (Table 2).

Looking collectively at the climate vertical funds, more than 3,500 projects were supported between 2015 and 2024 (Heinrich Böll Stiftung 2022). Of these, 342 were relevant to land and forest, representing approximately 10% of the total. The total amount of funding approved for these 342 projects is USD 4.4 billion, of which nearly USD 1.5 billion has been disbursed.

Table 1: Overview of vertical climate funds.

Fund category	Example funds	Total funds pledged for land- and forest-related projects 2015–2024 (USD)	Total funds disbursed for land- and forest-related projects 2015–2024 (USD)
Adaptation funds	Adaptation Fund, Least Developed Countries Fund, Special Climate Change Fund, Adaptation for Smallholder Agriculture Programme	192 million	112 million
REDD+ funds	UN-REDD Programme, Forest Carbon Partnership Facility – Readiness Fund, BioCarbon Fund Initiative for Sustainable Forest Landscapes, Forest Investment Program, Amazon Fund, Congo Basin Forest Fund, Central African Forest Initiative	906 million	384 million
Multiple foci funds	GCF, GEF, Global Climate Change Alliance, Indonesia Climate Change Trust Fund, and Adaptation for Smallholder Agriculture Programme	39.8 billion	24.3 billion

Source: Heinrich Böll Stiftung 2022.

Table 2: Snapshot of major funds.

Fund	Priorities	Funding level	Funding modality	Regional distribution
Global Environment Facility	Agriculture, forestry and other land uses; forest and landscape restoration; forests; land degradation; sustainable forest and land management	• 25 billion total • 3.4 billion for 500 forest-related projects • >1 billion in 200+ projects on land degradation and SLM	18 partner agencies, including regional development banks, FAO, UNDP, UNEP, World Bank Group, Conservation International, International Union for Conservation of Nature, WWF	• 28% Africa, 27% Asia, 23% Latin America and the Caribbean, 14% Global, 7% Europe and Central Asia, 1% Regional • 21% LDC, 11% SIDS
Green Climate Fund	Eight results areas: health, food and water security; livelihoods; infrastructure; ecosystems; energy; transport; buildings; and forests and land use	• Lifetime: 13.5 billion approved (8.5 billion grant equivalent) • 1.1 billion for 92 projects in ecosystems and ecosystem services • 1.7 billion for 68 projects in forest and land use	• National Designated Authorities and Focal Points in 148 out of 154 eligible Non-Annex 1 countries • Some subnational institutions accredited	• 106 projects Asia-Pacific, 104 Africa, 66 Latin America and the Caribbean, 14 Eastern Europe (253 total projects, some overlap in projects implemented in multiple countries / regions)
Adaptation Fund	• Food security (19%) • Agriculture (13%) • DRR and early warning systems (12%) • Water management (11%) • Rural development (9%) • Forests (1%) • Ecosystem-based adaptation (3%)	• Lifetime: 1.1 billion for more than 150 projects • 121 million for 36 land and forest-related projects 2015–2024	Direct access model to accredited implementing agencies: • National Implementing Agencies (57%) • Multilateral Implementing Agencies (27%) • Regional Implementing Agencies (16%)	37% of implementing agencies are in Latin America and the Caribbean, 34% in Africa, 27% in Asia and the Pacific, and 2% in Eastern Europe

Sources: Adaptation Fund 2020; Adaptation Fund 2024; GCF 2024; Brown 2023; Aleksandrova, Kuhl and Malerba 2024; GEF 2024.

Recipients of finance from vertical climate funds

The main recipients of funding are designated state institutions, government ministries and international organizations, while very little finance goes to local civil society and community-based organizations. The GEF has 18 agencies through which its funds are disbursed, including regional development banks, FAO, UNDP, UNEP, World Bank Group, Conservation International and WWF (GEF 2024). These agencies are responsible for project proposals and managing projects on the ground, further supported by operational focal points (GEF 2024). The Adaptation Fund highlights its pioneering direct access model, with funds directly transferred to accredited implementing agencies in performance-based tranches. However, 57% of these are still national implementing agencies (Adaptation Fund 2020). In line with the Adaptation Fund's direct access approach, the GCF has also moved to allow some subnational institutions to become accredited to receive funds. However, in practice, the complexity of the process means that the majority of funds still go through international agencies (Brown 2023). Overall, therefore, the primary recipients remain state institutions and international organizations, which then allocate funding to national and local implementing partners. Some funds require

a minimum portion of the funding to be spent through civil society and local actors. The GEF also manages a small grants programme, providing grants of up to USD 50,000 to CSOs and community-based organizations for context-specific projects, with a focus on projects that fall under its Community-based Threatened Ecosystems and Species Conservation: Land and Water strategic initiative (GEF 2024).

Transboundary initiatives represent only a small portion of funded projects. To date, most climate finance for land-relevant projects has been directed to individual countries, with only approximately 60 projects – about 17% of total funding – allocated to multiple countries and categorised as either regional or global (Heinrich Böll Stiftung 2022). For example, within the GEF's land degradation focus area, there were 50 projects and two programmes across the GEF-6 and GEF-7 replenishment cycles from 2014 to 2022, of which only two projects were classified as global (Lebel et al. 2024). Further, while projects classified as regional or global may implement similar interventions across several countries, they do not necessarily include an explicit focus on transboundary implementation or cooperation.

FCAS receive limited funding from vertical climate funds. Of the 342 land and forest-relevant projects from vertical climate funds specifically, 121 are implemented in least developed countries (LDC), 21 projects are in small island developing states (SIDS) and 56 projects – 16.3% of total land and forest-related projects – are implemented in FCAS (Heinrich Böll Stiftung 2022).[53] FCAS have received USD 523 million in approved funding, of which only USD 209 million – less than half – has been disbursed (Heinrich Böll Stiftung 2022). The disbursed funds represent 14.2% of the total land and forest-related projects, and 0.8% of the total budget of vertical funds. The projects in FCAS largely focus on entry points such as agriculture, forestry and general environmental protection (Heinrich Böll Stiftung 2022).

Box 25

GEF funding for FCAS

In 2018, the GEF Independent Evaluation Office conducted a thematic review on environmental security, which examined conflict sensitivity in its portfolio focusing specifically on FCAS (UNDP 2021). Among the different vertical climate funds reviewed, the GEF has integrated conflict sensitivity into its work to the greatest extent (UNDP 2021). Since the inception of the fund in 1991, 77 recipient countries – half of all recipients – have experienced armed conflict, with 61 of these countries having proposed and implemented GEF projects while armed conflict was ongoing (GEF 2018a). Almost a third of total GEF funding has been allocated to projects during years in which the recipient countries were experiencing conflict (GEF 2018a). Specifically looking at land degradation projects, nearly three-quarters of recipient countries for GEF projects are affected by conflict (GEF 2018a). For land degradation projects in Africa, two-thirds of project sites were in or near areas with conflict events (GEF 2018a). Conflict sensitivity is, therefore, paramount for the GEF to be able to operate in such contexts.

The GEF's Independent Evaluation Office review identified four areas of environmental security relevant to the fund, namely that ecosystems are central to human wellbeing and security, that conflict impacts the sustainability of investments, that ecosystem degradation and resource competition can increase vulnerability and risk of conflict, and that environmental cooperation can support conflict prevention and management (GEF 2018a). The review also highlighted equitable resource governance as a tool for conflict prevention (GEF 2018a).

53 The FCAS where vertical climate funds have allocated resources are Afghanistan, Burundi, Central African Republic, Chad, Comoros, DRC, Côte d'Ivoire, Djibouti, Eritrea, Gambia, Guinea-Bissau, Haiti, Lebanon, Mali, Mozambique, Myanmar, Papua New Guinea, Sudan, Timor-Leste, Yemen and Zimbabwe. Overlap between the LDC, SIDS and FCAS categories is possible.

Bilateral and multilateral donors

Bilateral and multilateral donor organizations have also played a major role in funding land and ecosystem restoration interventions, although mostly using climate action as an entry point. Under its climate change work area, for example, USAID has a sub-focus on natural climate solutions, funding sustainable landscape programmes, including reforestation and forest conservation, with a goal to conserve, restore, and manage 100 million hectares of critical landscapes by 2030 (USAID 2024). Under its environment, energy and infrastructure work area, it committed USD 383 million in fiscal year 2022 to conserve biodiversity in more than 60 countries, as well as USD 330 million to fund forestry projects in more than 50 countries (USAID 2023). Among bilateral donors, especially Germany, the United Kingdom, Japan, Sweden and the United States have provided funding for NbS (Swann et al. 2021). Agriculture is the largest project type receiving funding, followed by biodiversity, water, disaster risk reduction (DRR) and forestry; NbS for adaptation is rarely an explicit investment priority (Swann et al. 2021).

Market mechanisms

Carbon market mechanisms have also been used to fund land and ecosystem restoration work, but their full potential has yet to be exploited. One key potential area of funding is Article 6 of the Paris Agreement, which covers the cooperative implementation of Paris Agreement targets, and comprises Article 6.2 on bilateral agreements, Article 6.4 on carbon markets and Article 6.8 on non-market mechanisms. At present, there are 82 bilateral agreements under Article 6.2 at varying degrees of formalisation, aimed at transferring finance for programmes that support climate change mitigation targets (UNEP and CCC 2024). However, thus far, none of these have focused on forest, peatland and other nature-based carbon offsets, with the exception of Suriname announcing in September 2023 its intention to sell forestry-based internationally transferred mitigation outcomes (UNEP and CCC 2024). Article 6.4 establishes a carbon market crediting mechanism, known as the Sustainable Development Mechanism. However, its rules have been the subject of ongoing debate for several years, and it is unlikely for credits to be traded until before the end of 2024 or 2025. Once in effect, the mechanism will cover a variety of land-based activities, including reforestation, afforestation and carbon reductions, as well as removals from restoring and managing ecosystems (Granziera et al. 2024).

While the rules of the compliance carbon market are still under discussion, the voluntary carbon market (VCM) is already in operation, providing insights into funding priorities. From 2015 to 2024, USD 264 million in credits were issued in the VCM, USD 30 million or roughly 11% of which involved NbS projects (Climate Focus 2024). Within the NbS category, the largest project type was avoided conversion, followed by afforestation and reforestation, avoided deforestation, improved forest management, reduced emissions in agriculture, wetland restoration, and carbon sequestration in agriculture (Climate Focus 2024). More than two-thirds of the NbS carbon credits represented avoided emissions, with the remaining third being removals (Climate Focus 2024). The crediting of avoided emissions can raise environmental integrity concerns, necessitating an accurate baseline for offset calculations and demonstrating the additionality of emission reductions, so that only emission reductions that would not occur without the offset funding are credited (Calvin et al. 2015; Hyams and Fawcett 2013).

Peacebuilding funds

Peacebuilding funds are increasingly integrating climate and environmental considerations into projects they support. Among the main funding mechanisms in this space, the PBF has supported 1,057 projects since its inception (PBF 2024).[54] Specifically considering land-related peacebuilding projects since 2015, the PBF has funded 60 projects which either aimed to address a land-related issue in hope of positive peace dividends or that considered land as a driver of conflict. The total funding for land-related peacebuilding projects was USD 154.7 million, approximately 10% of the total PBF budget for 2015–2024 (MPTF 2024). Most of these 60 land-related projects, 80%, were implemented on the African continent.[55]

The PBF is one of the few funding mechanisms that has explicitly examined the transboundary

54 The PBF was established in 2006 with the aim of investing in conflict prevention and peacebuilding opportunities, bringing together the development, humanitarian and peacebuilding pillars (PBF 2024). The PBF is funded by more than 60 UN member states, with the largest donors being Germany, Sweden, the United Kingdom, the Netherlands and Norway (PBF 2024).

55 More specifically, the PBF has funded 33 projects in West Africa (providing USD 82.3 million in total funding), 10 projects in East Africa (USD 35.7 million) and five projects in Central Africa (USD 12.6 million). In addition, the PBF has funded five projects in Latin America and the Caribbean (providing USD 11 million in total funding), three projects in the Pacific region (USD 6.2 million), two in Central Asia (USD 4.9 million) and one in the Middle East (USD 2 million) (MPTF 2024).

component, with nine multi-country projects in West Africa, the Liptako-Gourma region, the Pacific and Central Asia as part of its climate, peace and security portfolio. For example, in its project Kyrgyzstan's youth cohesion and interaction towards Uzbekistan (PBF/IRF-258), the PBF identifies competition over access to arable land and natural resources in the border region between Kyrgyzstan and Uzbekistan as a key conflict driver, noting the absence of constructive dialogue mechanisms to address border disputes (UNICEF 2021). The project invested in youth empowerment, including mini-grants for youth-led local projects and cross-border events to build social cohesion (UNICEF 2021). Interventions include equipping farmers with climate-smart agricultural technologies such as drip irrigation, drought-resistant seeds and artificial glaciers in remote pastures; training in communication, mediation and negotiation; and raising awareness about pasture reforms and sharing good practices on pasture use in border regions (PBF/IRF-258).

4.3. Gaps

Overall, the lack of well-integrated social and peacebuilding considerations in climate change vertical funds represents a major challenge. While these funds may include environmental and social safeguards that indirectly benefit peace and security or at least reduce risks, conflict prevention and peacebuilding are generally not mainstreamed as co-benefits or decision criteria (UNDP 2021). Exceptions to this are the PBF and GEF, which include peacebuilding considerations in their funding priorities and strategy (UNDP 2021). Further, conflict settings can be a limiting factor against receiving funding. For example, the Economic Community of West African States had to refocus a project to build resilience in agro-pastoral production systems in the Liptako-Gourma region to cover countries with lower conflict risk, as the GCF viewed the conflict setting as too risky (Brown 2023).

Resources specifically for transboundary land restoration projects are limited. At present, the majority of land restoration funding recipients are national governments. However, from an ecological perspective, political boundaries often transect ecological landscapes with shared environmental processes that could best be managed holistically (WWF Tigers Alive et al. 2020). Different regulations across jurisdictions adds complexity to transboundary projects compared to national ones. For example, different data collection protocols or restrictions on data usage and sharing can lead to data gaps (WWF Tigers Alive et al. 2020). This would require relevant national authorities to work together and unite around common principles or frameworks, as discussed in Chapter 3 on focusing on technical and scientific collaboration. However, this may be difficult in cases with a history of conflict and tensions between countries and communities across borders.

There is a gap in finance reaching the local level where it is most needed for contextualised, locally appropriate solutions. Most vertical funds require states or large implementing partners to absorb funds in order to meet donor and MEL requirements. However, in some cases, there is a disconnect between national and local realities, particularly in settings with high government turnover.[56] This can mean that funds absorbed at the national level may not reach those who need them most, for example in remote rural areas.

Another challenge is the need for long-term funding for programming balanced with short-term funding cycles and pressure for quick results. Many funders experience pressure to lower transaction costs and demonstrate positive results quickly (ICRC 2022). This leads to a preference for short-term interventions, often favouring large-scale, more standardised investments in settings that pose limited risk. In contrast, long-term strategic investment is required to ensure peace and security goals, with responsive, risk-tolerant programme design in fragile contexts (ICRC 2022).

Finally, the private sector is severely under-utilised in financing and implementing restoration projects. While the private sector has the potential to drive innovation and scale up land restoration, current funding mechanisms often do not adequately engage or incentivise private companies to participate (World Bank 2024a). This lack of engagement overlooks the crucial role that private sector actors, from small businesses to large corporations, can play in bridging funding gaps, introducing sustainable practices, and fostering public-private partnerships that are essential for the long-term success of restoration efforts. Encouraging greater private sector involvement could lead to more diversified funding sources and innovative approaches. Yet, this potential remains largely untapped in current frameworks (World Bank 2024a).

56 Interview with independent expert on MEL, 29.05.2024.

4.4. Current efforts to address the gaps

To overcome the risks associated with investing in FCAS, several donors have tried out new and innovative funding approaches. The PBF, for example, has taken a risk-tolerant approach to its portfolio, offering small funding to pilot climate and land projects in FCAS, and disbursing funds in tranches for projects with particularly high risks to ensure flexibility in high-risk and volatile contexts (adelphi 2023). The International Food Policy Research Institute and CGIAR have also recently piloted risk-contingent credit, which essentially bundles credit with an insurance component, to improve credit access for smallholder farmers in Kenya and Ethiopia (Timu et al. 2023).[57] Debt-for-nature swaps are another tool being explored, whereby countries lower their debt burden or receive more favourable terms for them by investing in conservation (Economist Impact 2024). Peru has signed an agreement that will reduce its debt to the United States by more than USD 20 million over 13 years in exchange for forest conservation (Economist Impact 2024). Governments are also considering debt-for-climate swaps as an approach under Article 6.8 of the Paris Agreement (Vaughan and Di Leva 2023). Other innovative finance approaches include valuation attempts for ecosystem and adaptation benefits, for example, through conservation credits, and market mechanisms that stack payments for carbon and biodiversity outcomes (Van Raalte and Ranger 2023). For example, the BBVA Colombia bank announced that it will issue a USD 50 million biodiversity bond to finance reforestation, land and wildlife habitat restoration, and climate-smart agriculture, with the International Finance Corporation supporting as an investor (BBVA 2024). Peace bonds are another proposed financing instrument in which proceeds are directed to finance projects with verifiable peace impacts (Interpeace and SEB 2022). Peace enhancing mechanisms, which reduce the risk of project implementation in FCAS, are embedded in and financed by these peace bonds, lowering risk premiums and increasing willingness to invest (Interpeace and SEB 2022).

Box 26

Examples of direct local finance

The Climate Justice Resilience Fund (CJRF) provides small grants to individuals and local organizations for adaptation projects in the areas of water access, food security, sustainable livelihoods, migration and relocation, and climate-induced loss and damage (ICRC et al. 2022). While still relatively small, having disbursed USD 15 million in 34 grants as of 2022, the CJRF's focus on small grants to local organizations supports capacity building, enabling them to act as implementing partners for projects from larger funds (ICRC et al. 2022).

The Community Resilience Fund provides finance to grassroots women's groups in risk-prone areas, currently operating in 18 countries across Asia, Africa and Latin America (ICRC 2022). This approach ensures that risk assessments and action plans are suitable for the local context, and supports the development of local governance systems to manage funds, thereby demonstrating their competence as implementation partners for other larger funders (ICRC 2022).

Box 27

Financing for transboundary water management

More than half of the world's population lives in transboundary river basins (SIWI 2024). Transboundary waters can be a source of tension between states, while their shared and sustainable management can be an entry point for cooperation and peace (SIWI 2024). Initiatives to harness the cooperation and stability potential of transboundary water management include the multi-donor Shared Waters Partnership programme of the Stockholm International Water Institute, which aims to raise awareness of the many benefits of cooperation over shared water resources and encourages the development of cooperative management frameworks (SIWI 2024). In 2022, governments, UN entities

57 Under this programme, farmers apply for loans with minimal collateral requirements, which makes the loans more accessible, but for which the farmers pay an insurance premium. The insurance component reduces risks to the lender, as – in the event that a weather threshold is crossed, which would undermine production and the ability of the farmer to pay back the loan – the insurance provider assumes partial or full responsibility (Timu et al. 2023).

and other organizations launched the global Transboundary Water Cooperation Coalition to strengthen transboundary water governance at the bilateral, transboundary, regional and global levels (UNECE 2023a).

Access to financing for transboundary water organizations is a frequent challenge (IWRM 2024). Given the public good nature of water, public funds are a key source for transboundary water management, including direct contributions of member states, public loans and grants, user fees, and tax revenues (UNECE 2023b). Private finance – for example, bank loans, bonds and impact investment – plays a role, but it comes with the expectation of financial returns and must be repaid (UNECE 2023b). Basin-level trust funds and transboundary partnerships are also common funding arrangements, as exemplified by the South Asia Water Initiative and the Cooperation in International Waters in Africa, which pool resources for the joint development of projects (IWRM 2024). Specific funds for transboundary water financing are often established for specific basins, such as the long-running Indus Basin Development Fund, established in 1960 and administered by the World Bank (IWRM 2024). Multilateral and regional development banks, along with vertical climate funds, are also important funders. For example, water management projects accounted for 11% of Adaptation Fund funding (Adaptation Fund 2024). Meanwhile, health, food and water security were the second-largest areas for the GCF, encompassing 128 projects and USD 1.6 billion in total funding (GCF 2024).

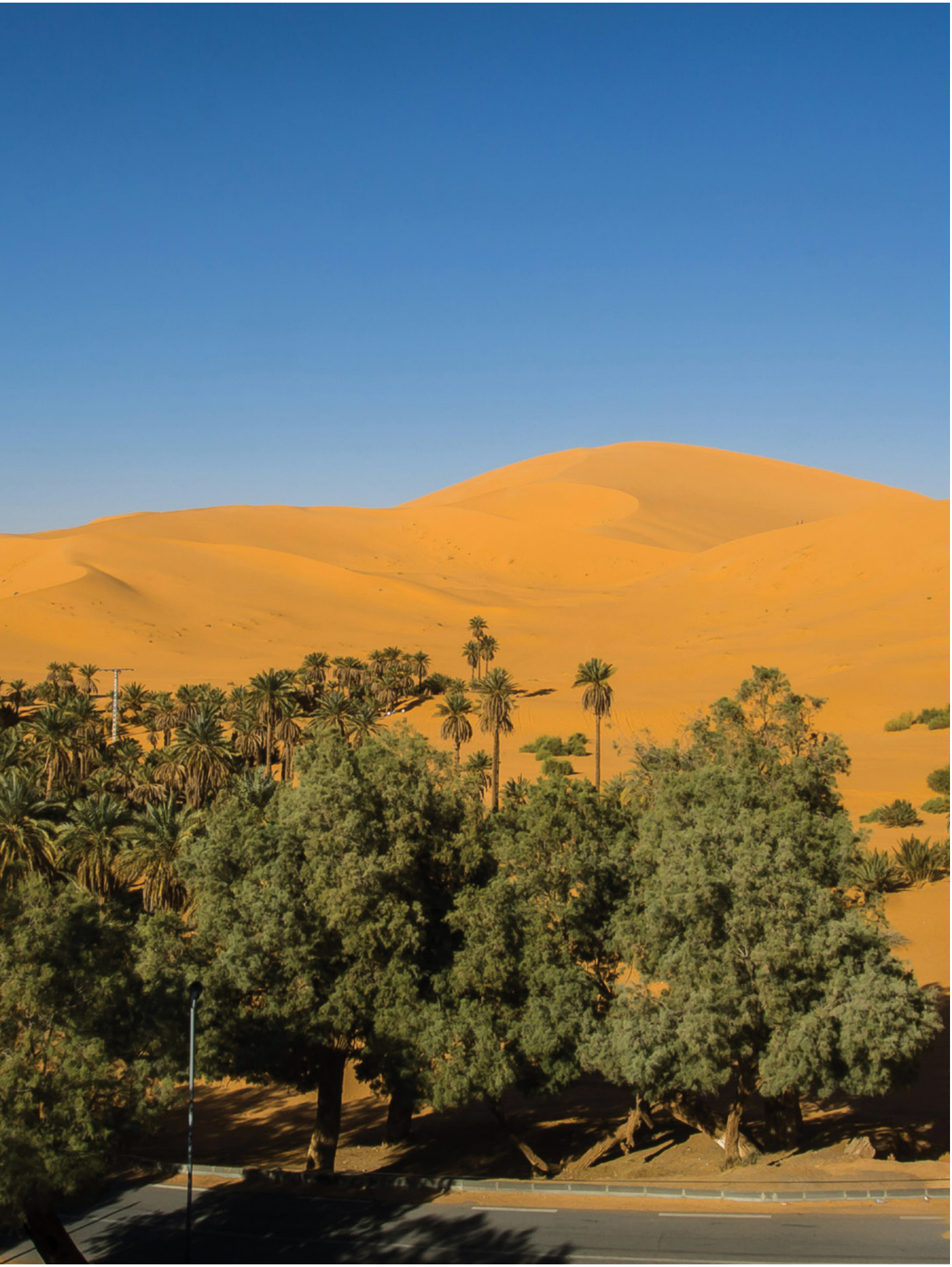
At present, investment in water infrastructure and services is done largely on a national and sectoral basis, while other key water management actors – such as river basin organizations and local governments – lack access to funds (UNDESA n.d.). To address this gap, the Blue Peace Financing Initiative, funded by the Swiss Federal Department of Foreign Affairs, and the Swiss Agency for Development and Cooperation, works to improve capacities and access to public and private finance among non-sovereign water management actors, with the aim of mobilising USD 20 million between 2022 and 2030 (UNDESA n.d.). The approach encourages the creation of multi-sectoral joint investment plans, and supports their implementation with blended public and private finance in the form of blue peace bonds (UNCDF 2024).

There is also broad consensus on the need to align funding with the needs and priorities of local communities. While more than 100 organizations have endorsed the Principles for Locally Led Adaptation (WRI 2022),[58] their implementation remains hampered by current barriers to delivering funding to the local level. These, in turn, are linked to the logistical constraints of disbursing money to smaller institutions and individuals, donor monitoring and reporting requirements, and the low risk tolerance of major financing mechanisms. Some small funders aim to put decision-making power in local hands by delivering grants directly to the local level (Box 26). The IOM, for example, has established a matching grants programme to help deliver funding to the local level in Somalia's conflict-affected regions. Accordingly, communities identify their development priorities and raise funds or other contributions for the projects, with IOM providing grant funding into a community-created and -owned account at a minimum of a ratio of double (Brown 2023). For funds that require large implementing partners, there are cases of large NGOs serving as intermediary implementing partners, accepting funds and disbursing smaller subgrants to local projects. The direct access model of the Adaptation Fund and GCF are examples of this shift in funding recipients. However, the process of accreditation for implementing partners is still prohibitively complex for many local institutions (Brown 2023).

Initiatives such as the PFI work to address the gap in transboundary land restoration for peace by providing a platform for collaboration on land and forest restoration. Through focusing on transboundary projects at the landscape scale, bringing diverse actors together and having participants collectively identify project implementation sites, the PFI facilitates an expanded focus on regional initiatives.

58 These include devolving decision-making to the lowest appropriate level; addressing structural inequalities faced by marginalised groups; providing accessible, predictable funding over long timeframes; strengthening local institutions; and enhancing transparency and accountability to communities (WRI 2022).

Taghit, Algeria, photo by Halima Bouchouicha on Unsplash



5. Looking ahead

Land and ecosystem degradation are often key drivers of conflict, threatening livelihoods, challenging social structures and accentuating competition over ever scarcer resources. In turn, conflicts often have negative impacts on the environment, contributing to deforestation, soil degradation and loss of biodiversity, and even causing the intentional destruction of vital crops, pastures and watering systems. Those who already live at the margins – often Indigenous Peoples excluded from owning their land, poor households in remote rural areas, women, and migrant or displaced persons, among others – especially suffer the brunt of these damaging land-conflict dynamics.

The good news is that there is increasing evidence that these trends can be reversed. SLM approaches offer important entry points for rebuilding trust and social cohesion within and among communities, ultimately contributing to peace, especially in FCAS or post-conflict contexts. They do so by helping to restore livelihoods and a healthy environment that can better sustain people, all the while creating a space for inclusive dialogue and decision-making. And because land and ecosystems naturally ignore political borders, their management can also present opportunities for transboundary and regional cooperation.

It is therefore time to take the peace potential of land more seriously, especially at the regional and international levels. Several programmes and initiatives worldwide are already moving in this direction. For example, the PFI has supported consultations to foster dialogue and partnerships to catalyse transboundary cooperation on ecosystem restoration among countries in the South Caucasus, Central Asia and East Africa, and between Northern Ireland and the Republic of Ireland. The numerous initiatives launched as part of the UN Decade of Ecosystem Restoration (2021–2030) also offer important entry points to explore how land and ecosystem restoration can incorporate a more explicit focus on achieving peace and cooperative outcomes. Overall, however, much more remains to be done.

This report identifies three key areas for action for donors, implementing agencies, governments, civil society and researchers working at the intersection of land and ecosystem restoration, environmental protection, climate action, peace and security, and development.

5.1. **Delivering to scale: Land, peace and security for all**

When designed and implemented with intentionality, transboundary land and ecosystem restoration interventions hold significant potential for strengthening international peace and security. To this end, donors and implementing agencies should seize opportunities to ensure that relevant programmes and activities are designed and implemented so as to:

1. **Pursue land and ecosystem restoration through multi-sectoral and inclusive activities,** including livelihood security, education, health and trade. This requires proactive inter-sectoral collaboration, with appropriate funding and reporting mechanisms that encourage cross-cutting organizational input into and accountability for the design and implementation of projects. Given the relative dearth of investment in conflict-affected areas today, priority should be placed on increasing investment that benefits populations affected by fragility, conflict and violence. In these contexts, the focus should be put on conducting these activities in a joint and participatory way (not only at the donor level but also among implementers and beneficiaries), with the aim of strengthening inter-community relationships, especially in contexts with a history of violence and mistrust between groups, actively integrating trust-building and peace-positive activities throughout the interventions.

2. **Recognise the value of "technical diplomacy" in land-peace-security work,** understanding that, in some contexts, engagement on technical and scientific issues may be the first necessary step towards broader cooperation and peace goals, while in others high-level political engagement may be required from the beginning. Interventions need to be able to simultaneously work at different levels and consist of activities of a different nature.

3. **Build the capacity of institutions and people to create an enabling environment for land-related peace and sustainability.** Organizations implementing land restoration initiatives should include in their programmes a specific focus on reinforcing relevant policy and governance frameworks, and appropriate capacity building at the regional, transboundary, national and local levels, working with both formal and informal institutions, as needed. This could include, for example, building the mediation and arbitration capacities of local and national governance structures to address and prevent land-related conflicts, supporting staff to register and track land tenure claims, usage rights and disputes, as well as technical training on designing NbS, and land and ecosystem restoration interventions.

4. **Promote talent and innovation,** recognising that encouragement of new and different perspectives on problem-identification and solution-finding can open opportunities for progress, sometimes in unexpected ways and often in ways that not only mitigate risk but also build on resilience capacities. Similarly, interventions should include individuals and groups who have in the past been excluded from access to and decision-making over land and land-based resources, for example based on identities such as gender, age, social and migration status, ethnicity or religion.

5. **Harness technology.** New technologies, such as satellite imagery, and digital citizen reporting and storytelling tools, can enhance peace and land restoration outcomes. These tools can play a crucial role in conservation and climate adaptation, and – when appropriately deployed and utilised – can help break the conflict cycle.

6. **Think regionally, while acting locally,** prioritising those contexts where clear entry points exist for regional and transboundary collaboration. In this context, integrated regional and transboundary programmes should ensure that local and national efforts are valued, built upon and reinforced. In particular, consideration must be given to when and how to work with local and traditional authorities, as their involvement is often a critical component of ensuring legitimacy, buy-in, coordination and support at the local level.

5.2. **Catalysing action on land, peace and security**

Multilateral and bilateral agencies, donors, and policymakers working at the intersection of land and natural resource management, climate, and peace and security must recognise the potential of land and ecosystem restoration approaches to serve as pathways for peacebuilding, especially in transboundary geographies. To this end, they should:

1. **Elevate the agenda of land, peace and security,** and embed it more deeply within key security and peace organizations. Strengthening the relevance of this agenda for the UN Security Council – for example, through high-level debates, Arria formula meetings and secretary general reports – would be a valuable initial step towards engaging member states more meaningfully in these issues, while also paving the ground for more action and finance on land, peace and security.

2. **Operationalise action on land, peace and security.** UN and regional organizations should make their land, peace and security agenda more explicit – as a complement to, rather than a subchapter of – their climate agenda. They should also work towards developing a coherent and coordinated portfolio of activities that simultaneously support land and ecosystem restoration objectives, as well as peace and cooperation objectives, with a focus on the transboundary level.

3. **Recognise the importance of international agreements for sustainable development and the protection of the environment,** including the Rio Conventions – such as the UN Convention on Combating Desertification – and other multilateral environmental agreements, for delivering conflict prevention, management and resolution, as well as promoting peacebuilding. Parties to these agreements could assist by promoting the explicit integration of peace and cooperation objectives into the mandates of these multilateral environmental agreements as well as the activities they support on the ground in FCAS. Elaborating a shared narrative on peace promotion could also highlight the linkages between the Rio Conventions, and help parties and donors better address the interconnectedness of sustainable development solutions in negotiated outcomes by focusing their investment on integrated land-based projects and programmes that deliver co-benefits for peace and cooperation wherever possible.

4. **Use the momentum around the UN Decade of Ecosystem Restoration, and the World Decade of Afforestation and Reforestation to ensure peace and cooperation outcomes are achieved.** This includes ensuring that all the initiatives under these umbrellas are able to demonstrate conflict sensitivity at a minimum, but also in what ways they are actively aiming to contribute to building cooperation and peace, especially in fragile, conflict-affected and post-conflict contexts. This type of information could offer insights that would open the door to including land as a key topic in upcoming international peace- and security-related forums, such as the Summit of the Future and the Peacebuilding Architecture Review, both of which are planned for the second half of 2024. There is also scope for collaboration with related initiatives – including those aimed at integrating Indigenous and local knowledge such as the International Land Coalition – to promote restoration action that also ensures respect for the land and resource rights of Indigenous Peoples, environmental defenders and local communities.

5. **Build on ongoing initiatives and programmes at different levels.** New initiatives on land, peace and security should build on and coordinate with existing initiatives at regional, national and local levels. Regional initiatives – such as those carried forward by bodies such as IGAD, ASEAN and the OSCE – can provide useful entry points for advancing land and ecosystem restoration interventions that simultaneously reinforce cooperation dynamics. Meanwhile, working together with and supporting local initiatives by NGOs and CSOs – which are often the only actors operating in FCAS – can open doors to more inclusive and effective peacebuilding and resilience solutions. New initiatives should also be aligned with national plans and strategies in the countries involved to actively contribute to overall development and peace goals.

6. **Leverage the land-peace narrative to garner public and political support for land and ecosystem restoration.** Integrated programmes should emphasise how restoring landscapes can improve cross-border relations, peacebuilding and regional stability, thereby impacting everyday issues such as livelihood security. Investing in storytelling and communication products that capture compelling stories that highlight what is achievable and exploring the complexity of lived dynamics in ways that are understandable and accessible to a range of audiences, including policymakers, donors and the public, is essential to this end.

5.3. **Seizing opportunities for more and better financing**

Finance must of course be available and accessible in order to harness the potential of land restoration for peace. Multilateral finance instruments, as well as bilateral donors and private finance, should:

1. **Ensure long-term financial sustainability and flexibility in land restoration initiatives** by diversifying funding sources and incorporating mechanisms that allow for adaptive management. Funding for initiatives that aim to produce co-benefits – for example, in terms of poverty reduction, addressing health risks, climate adaptation and mitigation, as well as peacebuilding and conflict resolution – should be prioritised. Additionally, long-term financial planning should accommodate the evolving nature of restoration projects, ensuring that funding commitments extend beyond typical short-term cycles to maintain momentum and adapt to emerging challenges and opportunities.

2. **Improve coordination** with other financial instruments to identify synergies, avoid the duplication of efforts and scale up successful initiatives. Working towards harmonising components such as eligibility criteria and disbursement procedures, and introducing conflict-sensitivity approaches for these instruments would also help improve the capacity of funds to work synergistically, and de-risk and scale up investments. Engagement with regional entities to enhance synergies among funding streams designed for cross-border and transboundary efforts is also key.

3. **Direct more funding to the local level** by reducing the complexity of applying for small grants and investing in capacity building of local groups to enhance their ability to accept funds and implement projects going forward. This should include looking at options to provide flexibility for working in volatile contexts, for example, by disbursing funds in tranches and trying out innovative funding approaches, such as risk-contingent credit, and debt-for-nature and debt-for-climate swaps that can provide co-benefits in terms of improving resilience and addressing structural inequalities in these contexts. Investing in building the capacity of local and national institutions to accept and manage funds is key for increasing the amount of localised funding that is made available and disbursed.

4. **Consider establishing an innovation fund** that provides grants to encourage organizations to engage in transboundary and regional peace and land restoration efforts. This fund could emphasise MEL to establish a robust evidence base and improve knowledge management from these innovations. Grants could support new or modify existing programmes – for example, an existing land, restoration, peacebuilding or regional programme – that may not currently focus on land and peace but have the potential to incorporate these elements.

5. **Encourage private finance** by de-risking investment and demonstrating the investment returns that protecting and restoring land and ecosystems can offer, including market opportunities with sustainable products and certifications, carbon market revenues, increased food production yields, reduced risks to raw material supply chains, and avoided costs from natural disasters. Adequate checks, however, need to be introduced to ensure that private funding adheres to international standards, placing the onus on companies investing in FCAS to conduct thorough due diligence. Encouraging companies to adopt a conflict-sensitive approach – for example, by supporting the development of targeted guidelines, standards and capacity-building approaches – would also contribute to increasing projects' value and integrity, especially in the case of carbon market projects.

6. **Include follow-up mechanisms, and adequate funding and capacities to understand the effectiveness and long-term impacts of transboundary projects.** Donors and funding mechanisms should support learning through investment in impact measurement to build the knowledge base of the effectiveness of integrated and transboundary interventions. This should apply to both their own programme design and those of the organizations they fund, encouraging the use of integrated land and peace indicators, and theories of change, while also strengthening the guidance they provide. This is critical to back up additional funding with a strong evidence base, and to create baselines that actively measure economic, social, health, environmental and political co-benefits.

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Annex 1:
List of interviews and consultations

Expert interviews

Title, affiliation	Date
MEL practitioner, independent	29.05.2024
Climate and conflict advisor at international development agency	16.05.2024
Co-founder and president of Peruvian conservation nonprofit	4.06.2024
Independent expert on business, environment, climate and peace	29.05.2024
Consultant for the State and Peacebuilding Fund-supported project Environmental Peacebuilding in Fragile and Conflict-Affected Situations, World Bank	12.07.2024
Climate and security advisor, African Union	29.04.2024
Senior director for Justice and Equity in Conservation International's Global Indigenous Peoples and Local Communities Centre	4.06.2024
Professor, University of Koblenz-Landau	8.04.2024
Professor, McGill University	9.04.2024
Senior land and resource governance advisor, USAID	2.05.2024
Regional climate security advisor, UNOCA	17.05.2024
Director, World Food Programme Global Office	9.04.2024
Senior liaison officer, Misión de Verificación de la ONU en Colombia	23.04.2024
Lead expert on natural resource management in Europe and Central Asia	8.05.2024
Climate and peacebuilding advisor, International Alert	25.04.2024
Director of food systems / resilience, World Food Programme	6.05.2024
Regional programme specialist for climate change and security risk, UNDP Istanbul Regional Hub / Crisis Bureau	14.05.2024

Community of Experts

Meetings	Place, Date
Inception meeting of the Community of Experts to discuss the report's design and focus (13 participants, eight project team)	Online, 27.03.2024
In-person workshop with the Community of Experts to discuss the report's first findings (literature review, analytical framework, finance analysis) (12 participants, eight project team)	Berlin, 21–22.05.2024
Concluding meeting of the Community of Experts to discuss the report's final findings and recommendations (14 participants, eight project team)	Online, 23.07.2024

Participants	
Name	**Affiliation**
Anab Ovidie Grand	Climate Security Mechanism / UNDP
Aurélie Brès	FAO
Brenda Chepngetich	Alliance Biodiversity-CIAT
Carl Bruch	Environmental Law Institute
Cynthia Brady	Independent consultant
Elise Doumergue	World Bank
Elvis Paul Tangem	African Union
Evidence Tendai Kasinganeti	African Union
Ginevra Cucinotta	UN System Staff College
Harriet Mackaill-Hill	International Alert
Joseph Makanda	Alliance Biodiversity-CIAT
Laura Aumeer	Conciliation Resources
Marie Schellens	PAX
Marion Arnaud	Climate Security Mechanism / UN Department of Peacekeeping Operations
Martin Frick	World Food Programme
Matti Lehtonen	Climate Security Mechanism / UNEP
Maylina St-Louis	UN Systems Staff College
Niklas Sax	CGIAR
Nynke Schaap	PAX
Paola Agostini	World Bank
Pauliina Upla	Plan Adapt
Samuel Martell	Climate Security Mechanism / UN Department of Political and Peacebuilding Affairs
Utchang Kang	UNCCD
Walid Ali	Climate Security Mechanism / UNDP

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