

GLOBAL LAND OUTLOOK

Working Paper



United Nations
Convention to Combat
Desertification

GENDER AND LAND RESTORATION



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Gender and Land Restoration

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Key messages

- Gender-responsive actions are central to effective, efficient and sustainable land-restoration projects and programs.
- Land-restoration programs or initiatives should not be assumed to be gender-neutral. They should, whether new or old, be screened for possible gender-differentiated impacts using sex-disaggregated data.
- Equitable and secure land rights for women and vulnerable groups are critical for successful land restoration.
- Gender-responsive land and forest-sector laws, policies, strategies and interventions that protect and enhance women's rights and access to restored land are important for women's effective participation in land restoration.
- Active (rather than passive) involvement of both men and women at various levels of land restoration is important.
- Equitable access to credit and control over benefits and income from land restoration, especially for women, are important for successful and sustainable land-restoration programs.
- Gender-responsive land restoration requires training and capacity building for various stakeholders, including women, community members, policymakers and project implementors.
- Gender-responsive land restoration requires collective action and strong multi-level governance approaches that engage institutions, partnerships, alliances, and networks.



Summary

Land degradation is a global challenge that affects everyone through food insecurity, higher food prices, climate change, environmental hazards, and the loss of biodiversity and ecosystem services. In many parts of the world, land is being degraded at an unprecedented rate, contributing to a dramatic decline in productivity of the croplands and rangelands on which many people rely for their livelihoods. Deforestation and land degradation make it difficult to meet the growing demand for energy, water, fiber, medicines, wood, and food.

Land degradation is currently one of the world's most pressing environmental problems, and it is expected to worsen unless rapid remedial action is taken. It is estimated, that more than a quarter of the Earth's land is degraded, affecting the lives of 3.2 billion people, especially smallholder farmers, people in rural communities and the world's poorest populations. While in the long run the most cost-effective approach to reducing land degradation is to prevent it from occurring, recent findings show that the world is falling short of its targets to combat land degradation and biodiversity loss. Land restoration has been proposed as an important measure to reverse degradation and address the problems it causes. Land restoration offers multiple benefits to society simultaneously

contributing to food and water security, helping to address biodiversity loss, and helping to mitigate and adapt to climate change.

The year 2021 is the start of the United Nations Decade on Ecosystem Restoration, a culmination of increasing global attention, agreements, and ambitions for restoration and improvement in land management. The diverse benefits from restoration have resulted in commitments from many parts of the world. Given how complex restoration projects are, their successful implementation requires careful planning to minimize conflicts and ensure a balance among the multiple functions of a landscape and all relevant stakeholders.

The effectiveness of restoration is often enhanced by the integration of human aspects and of indigenous and local knowledge and practices.

Many poor people, especially women, girls, and indigenous peoples, depend heavily on renewable natural resources that are threatened by land degradation and climate change. One in three people on Earth depends directly on agriculture, while almost 80% of employed women in least-developed countries rely on agriculture as their primary livelihood. Women constitute the majority of the people who rely on land in many regions affected by desertification, land degradation and drought. Even more important, women continue to play a critical role in ensuring that their families are fed. Land degradation results in food availability fluctuations, affecting women's role in food production and the distribution of food within the family: Due to food insecurity, women reduce their nutritional intake and that of their children, greatly harming their health and that of their families.

When land is degraded and becomes scarce, women and girls are uniquely and differentially affected due to the major role they play in agriculture and food production, their heavy reliance on forests, their vulnerability to poverty, their lack of education, and their typically weak legal protections and social status.

Although the interlinkages among agricultural production, poverty alleviation, land conservation and gender mainstreaming are understood and accepted, the gender dimension remains largely ignored in the implementation of land-restoration projects. Most such projects are still gender blind, meaning that they do not consider gender as an important factor in restoration practice. As a result, gender issues are either overlooked or neglected in restoration practice.

A review of literature shows that land-restoration projects that integrate gender dimensions remain the exception rather than the rule. Women tend to be excluded from the conservation and management of land and forests, lack access to agricultural extension services and institutional credit, and face many barriers that prevent them from participating in processes of development, planning and policymaking. Women often have less access to information and resources than men and tend to lack legal rights to land and natural and productive resources, which further hinders their participation in land restoration. Land degradation, drought, and climate change further burden women and girls by making their gender-based tasks harder: fetching water, washing, feeding, and caring for their families. Unequal power relations and gender-based discrimination in legal and customary systems in many societies deny women the right to plant trees, control soil degradation and take measures to enhance soil fertility.

Any effort to achieve land restoration must ensure that the varied roles, priorities, contributions and influences of both women and men in land use and management are understood, recognized, and rewarded. All land-restoration projects must be gender mainstreamed and account for impacts and outcomes in gender equality and women's empowerment. Transformative land restoration that overcomes gender biases, promotes women's empowerment and land rights, and fosters inclusion and equal opportunities is critical. It would accelerate progress toward reaching multiple Sustainable Development Goals (SDGs), in particular those on advancing gender equality, ending poverty, and improving food security.

Many countries are currently preparing for the start of the United Nations Decade on Ecosystem Restoration and for the challenging task of implementing their Land Degradation Neutrality (LDN) targets. This working paper attempts to fill the gap in knowledge of the important linkages between gender and land restoration. It takes stock of what works and what does not work in interventions that seek to address gender inequality in land-restoration programs. A review of the peer-reviewed and grey literature helps to highlight the successes and lessons with regard to gender issues in land-restoration projects from different parts of the world.

The paper draws on several frameworks, including Gender matters in Forest Landscape Restoration framework,¹ UNCCD's Scientific Conceptual Framework for Land Degradation Neutrality (LDN),² IUCN's Gender Responsive Restoration Guidelines,³ the Manual on Gender-Responsive Land Degradation Neutrality,⁴ and Feminist Ecology.⁵

Eight case studies – from Brazil, Ethiopia, Ghana, Jordan, Kenya, Lao PDR, Malawi and Vietnam – are reviewed in detail to provide evidence and examples of good practices on gender responsiveness in land-restoration projects. These case studies emphasize the increasingly active role of women (and men) in land restoration, rather than the oft-taken view that women are victims who lack agency and respond only to environmental crises.

The paper argues that mainstreaming gender responsiveness into land-restoration practice has two main benefits. First, it is desirable from a human rights and gender equality perspective. Second, it can promote the efficiency and effectiveness of land restoration. Several approaches are discussed to ensure gender is mainstreamed in land restoration. These approaches are not specific to land restoration but can be applied to other interventions addressing gender issues in environmental use and management.

1. INTRODUCTION AND BACKGROUND

Land is a vital resource to humankind. Land degradation is a global challenge that affects everyone through food insecurity, higher food prices, climate change, environmental hazards, and the loss of biodiversity and ecosystem services. In many parts of the world, land is being degraded at an unprecedented rate, contributing to a dramatic decline in the productivity of the croplands and rangelands on which many people rely for their livelihoods. Unsustainable land uses, natural hazards, and worsening climatic effects are some of the main causes of land degradation.⁶ Land is being deforested and otherwise degraded, making it impossible to meet the growing demand for energy, water, fiber, medicines, wood and food.

Land degradation is one of the world's most pressing environmental problems and it is expected to worsen unless rapid remedial action is taken. Across all biomes, estimates of the value of ecosystem services lost due to land degradation and conversion range from USD 4.3 to 20.2 trillion per year.⁷ The Global Mechanism of UNCCD states that a quarter of the Earth's land is degraded, affecting the lives of 3.2 billion people, especially smallholder farmers, people in rural communities and the world's poorest populations. It is estimated that globally, 74% of people live in poverty and are directly affected by land degradation.⁸ One study of 14 Latin American countries showed that the annual losses due to desertification were 8–14% of agricultural gross domestic products; another study estimated the global cost of desertification at 1–10% of annual agricultural gross domestic products.⁹

While it is well established that in the long run, the most cost-effective approach to reducing land degradation is to prevent it from occurring, a United Nations report¹⁰ shows that the world is falling short of its targets to combat land degradation and biodiversity loss. Productive land and forest areas continue to decline at an alarming rate, mainly driven by agricultural expansion. Between 2015 and 2020, an estimated 10 million ha of forests were destroyed each year, affecting approximately 3.2 billion people across the globe, driving species

into extinction, and intensifying climate change. Half of the affected people are women and girls.^{11, 12, 13, 14} Many poor people, especially women, girls and indigenous peoples depend heavily on renewable natural resources that are greatly threatened by climate change. While indigenous people account for only 5% of the world's population, they manage approximately 22% of the Earth's land surface.^{15, 16}

Land degradation and climate change greatly impact indigenous women and worsen the potential for discrimination they face within and outside their communities. When land is degraded and becomes scarce, women and girls are uniquely and differentially affected due to the major role they play in agriculture and food production, their heavy reliance on forests, their vulnerability to poverty, their lack of education, and their typically weak legal protections and social status.¹⁷

Globally, rural women and girls work longer hours than men when one takes into account paid productive and unpaid reproductive, domestic or care responsibilities. Women and girls carry out most of the unpaid and undervalued work, such as collecting water, cooking, cleaning and caretaking, all while struggling with the impacts of climate change, unpredictable rainfall, natural disasters and non-productive farms and gardens.¹⁸

Women constitute most of the people who rely on land in many regions affected by desertification, land degradation and drought. One in three people on Earth depend directly on agriculture, while almost 80% of employed women in least-developed countries rely on agriculture as their primary livelihood.¹⁹ Women also play a major role in conserving the large area of agricultural land already affected by soil degradation. Even more important, women continue to play a critical role in ensuring that their families are fed.

Fluctuations in the availability of food impact women's role in food production and the distribution of food within their families, with women often reducing their nutritional intake and that of their

children, greatly harming their health and that of their families.²⁰ Land restoration has been proposed as an important measure to reverse degradation and address the problems it causes. Degraded lands must be urgently restored to protect biodiversity and ecosystem services, and further degradation must be halted and reversed.²¹

1.1 Global context: Land restoration

The year 2021 is the start of the United Nations Decade on Ecosystem Restoration, a culmination of increasing global attention, agreements and ambitions for restoration and improvement in land management. Land restoration offers multiple, simultaneous benefits to society — contributing to food and water security, helping to address biodiversity loss, and helping to mitigate and adapt to climate change.²² The diverse benefits from restoration have stimulated commitments from many parts of the world, including the Aichi Biodiversity Target 15,²³ the Bonn Challenge,²⁴ the New York Declaration on Forests,²⁵ UNCCD's Land Degradation Neutrality Fund,²⁶ and Sustainable Development Goal 15²⁷ (See Appendix 1 for a detailed list of commitments).^{28, 29, 30}

Land restoration covers a wide range of activities and interventions that improve environmental conditions by avoiding, minimizing, and reversing land and ecosystem degradation. These activities can often be designed to deliver multiple benefits (i.e., goods and services) that contribute to the current and future sustainability of communities and the planet. For example, they may permit the full or partial restoration of an ecosystem by fully restoring an area to its natural state. Land may also be rehabilitated to serve a specific use, for example, by managing grazing to allow grasslands and their soils to recover from overgrazing and erosion.

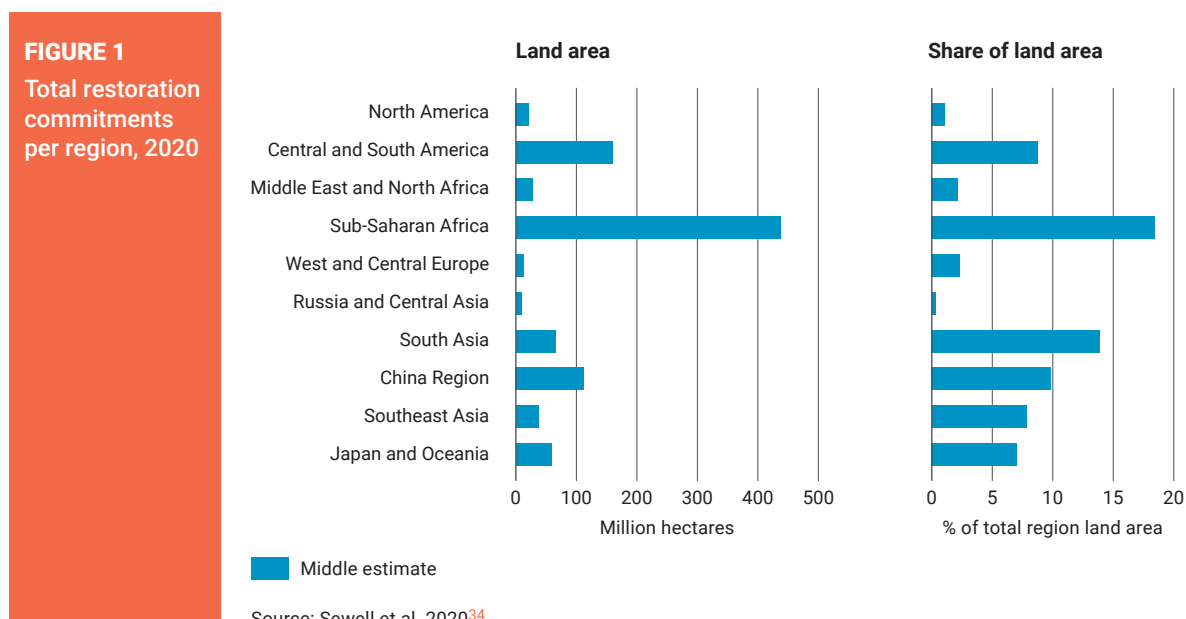
An area does not have to be abandoned for it to require restoration. Agricultural areas that have suffered erosion but are still used to grow crops can be restored. A clear link thus exists between restoration and land management. Improved land management, or sustainable land management, may reduce or avoid degradation processes and, over time, lead to ecosystem recovery.

The Society of Ecological Restoration distinguishes three categories of restorative activities:^{31, 32}

- Ecological restoration aimed at the complete recovery of the ecological functions and processes, and the biotic community structure of the original ecosystem.
- Rehabilitation aimed at repairing key ecosystem functions, processes, and services and not necessarily leading to a complete recovery of the original ecosystem.
- Reclamation which is limited to repairing only minimal functions of the land.

In this working paper we use the term land restoration in a broad sense to encompass all these types of restoration.

Globally, governments have committed to restoring approximately 1 billion hectares in all, almost half in Sub-Saharan Africa, followed by Central and South America, China and South Asia (Figure 11). A few commitments have been made by countries in North America, Europe, Russia, Central Asia, the Middle East and North Africa. The commitments appear roughly balanced between planned measures that focus on the restoration and protection of natural areas, and on management and rehabilitation of agricultural and forestry areas.³³



Effective and sustainable land restoration has many benefits:

- Protecting biodiversity
- Improving human health and wellbeing
- Increasing food and water security
- Delivering goods, services, and economic prosperity
- Supporting climate change mitigation, resilience, and adaptation.

The benefits of restoring degraded land are higher than the costs of inaction. For example, a study of large-scale landscape restoration in Mali showed that agroforestry is economically beneficial, providing direct local benefits to farmers of USD 5.2–5.9 for every dollar invested over a time horizon of 25 years. Investments in restoration can also create jobs and promote economic growth. In the USA, the direct employment of 126,000 workers in restoration projects generates USD 9.5 billion in economic output annually and indirectly creates an additional 95,000 jobs and USD 15 billion in annual economic output.³⁵

Many policy and program initiatives have been tried, tested, and proven effective. These include political strategies, program designs, and projects to restore land. There is no “one-size-fits-all.”³⁶ Given how complex restoration projects are, their successful implementation requires careful planning to minimize conflicts and ensure a balance among the multiple functions of a landscape and relevant stakeholders.^{37, 38, 39} The effectiveness of restoration is often enhanced by integrating human aspects and indigenous and local knowledge and practices.^{40, 41, 42}

Restoration efforts need to take into consideration:

- The types and severity of degradation drivers and processes affecting the land
- Past and present land uses and their socio-economic contexts
- The institutional, policy and governance environments.

For interventions to be sustainable in the long-term, it is also important not only to address issues of land tenure and rights⁴³ but also the drivers of degradation.⁴⁴ It is even more important to incorporate gender considerations in land restoration.

1.2 Gender and land restoration

The United Nations Convention to Combat Desertification (UNCCD) stresses the need for women’s input, knowledge, and guidance for any productive, sustainable efforts to avoid, reduce and reverse degraded land. Any effort to achieve the goals and aspirations of land restoration or land degradation neutrality must ensure that the varied roles, priorities, contributions and influences of both women and men in land use and management are understood, recognized, and rewarded. All land-restoration projects must be gender mainstreamed and account for impacts and outcomes in gender equality and women’s empowerment.

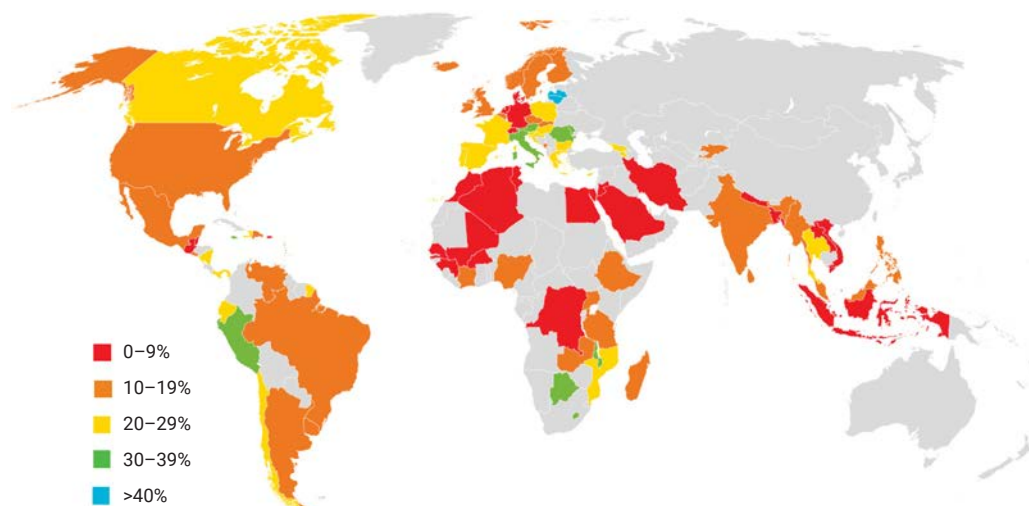
Transformative land restoration that overcomes gender biases, promotes women’s empowerment and fosters inclusive and equal opportunities to leverage and gain co-benefits for women is critical and could also accelerate progress toward reaching multiple Sustainable Development Goals (SDGs), in particular those on advancing gender equality, ending poverty, and improving food security.⁴⁵

While restoration programs and processes mainly focus on the restoration of land and forest ecosystems, there are human aspects of land restoration that need to be taken into consideration. Land-restoration initiatives can only be successful and achieve both social and environmental outcomes if supported by and involving contributions and cooperation of a wide range of stakeholders at all levels.^{46, 47, 48} This is especially true for stakeholders that rely on restored or restoration-targeted natural resources and land for their livelihoods — and whose rights and wellbeing must be safeguarded and promoted.

Local resource users or people that depend on the land for their livelihoods play an important role in restoration initiatives because they live on or near the area to be restored, or they themselves do the restoring. They should play an important role in restoration projects as experts, volunteers, or as people affected by the activities.⁴⁹ Although women, especially rural and indigenous women, often act as environmental stewards and keepers of traditional conservation knowledge, they tend to be excluded from the conservation and management of land and forests. They may lack access to agricultural extension services and institutional credit, and face barriers to participating in processes of development, planning and policymaking.

FIGURE 2

Distribution of agricultural landholders by sex, global and regional averages



Source: FAO 2018. Data are based on 104 countries for which census data were available: 20 in sub-Saharan Africa, two in North America, 20 in Latin America and the Caribbean, eight in the Near East and North Africa, 14 in Central, East and South Asia, 34 in Europe, and six in Oceania. The regional averages are weighted by the total number of landholders in each country.⁵⁶

Furthermore, women often have less access to information and resources and tend to lack legal rights to land and natural and productive resources. Land degradation, drought, and climate change further burden women and girls by making their gender-based tasks harder: fetching water, washing, feeding, and caring for their families. Unequal power relations and gender-based discrimination in legal and customary systems in many societies deny women the right to plant trees, control soil degradation and take measures to enhance soil fertility.⁵⁰

Women's ownership of and control over assets such as land are very important for a range of development outcomes, both for women themselves and for their families and communities. Secure rights to land and property are increasingly seen as important drivers of economic growth and social development, as well as being critical to human rights for women. Having such rights benefits women, their families, and communities. Unfortunately, in most parts of the World, women remain disadvantaged with regards to property and rights to land, productive resources, and markets. Gender roles determine rights to the land and other resources directly, as well as the rights to decide on how resource and land are used, managed, and protected from degradation. Cultural norms and tradition in many rural communities dictate that only men can manage land and other key assets, and that they have ultimate authority over important decisions over resources. In contrast, women's rights to land may depend on perilous relationships with their male kin. Furthermore, biased or gender-blind laws and social practices often limit the ability of women to invest in conservation, make decisions or enjoy benefits from land restoration.⁵⁴

Data on women's roles in agriculture indicate deep gender inequalities. Women are far less likely to be agricultural landholders. FAO (2018) shows that the distribution of landowners by sex, the share of women landowners ranges from less than 20 percent in several countries, such as Nigeria, Tajikistan and Peru, to slightly over 50 percent in Ecuador and Malawi (Figure 2).⁵⁵

When women own land, their plots are generally smaller and of lower quality than men's, and their rights to the land are less secure.^{57, 58, 59} In some cases, improving women's land rights has had positive environmental impacts e.g., on soil conservation⁶⁰ When smallholder farmers have secure rights to land, they are more likely to preserve the soil, plant trees and protect forests.⁶¹ Formal land ownership by women farmers is correlated with increased farm productivity in Latin America and Asia. In Africa, where women farmers have access to land based on customary laws, formal ownership would protect them from losing their farms, for example if they are widowed. Formal land ownership in rural areas has resulted in increased women's influence and decision-making at both the household and community levels. Security in land tenure has been linked to sustainable land management by women and is an avenue to effective land restoration. Countries with more secure land rights tend to have lower rates of deforestation. Yet in many countries, discriminatory laws or biased social norms prevent women's rights to access, use, inherit, transfer, control, benefit from or own land.⁶²

Without secure rights to land, women are left without resources and incentives to improve the productivity of the land on which they depend.

Enforceable legal rights to land, especially for women, enhance tenure security and lead to multiple, leveraged benefits for both land restoration and gender equality.^{63, 64, 65, 66, 67} Understanding the roles and responsibilities of men and women, along with power relations in land management, is a primary requirement to achieving effective outcomes when combating land degradation and implementing gender-responsive and sustainable land-restoration initiatives. The fact that men and women are affected differently by land restoration,^{51, 52, 53} necessitates the careful consideration of gender in land restoration.

1.3 Frameworks and calls to action for improved women's land rights

Without secure land rights, women are not empowered to actively participate in community-level institutions, including those involved in land restoration.⁶⁸ If women have rights to land, they also have more say in decisions affecting the household, including food choices, education and nutrition.⁶⁹ A plethora of international frameworks articulate the key role of women's land rights in sustainable development and environmental management and use (see Appendix 2).

The 2030 Agenda's **Sustainable Development Goals** (SDGs) recognize women's land rights as an explicit, crosscutting catalyst for ending poverty (Goal 1), reaching food security and improved nutrition (Goal 2), and achieving gender equality and empowering women and girls (Goal 5).

The **International Covenant on Economic, Social and Cultural Rights** (ICESCR) and the **Convention on the Elimination of All Forms of Discrimination Against Women** (CEDAW) require gender-equality measures in the context of rural reform, climate change, natural disasters, and property and land rights.

The **UNCCD** stresses gender concerns and women's roles in addressing land degradation. Numerous UNCCD Conference of the Parties declarations and decisions "pledge to address gender inequalities which undermine progress in the implementation of the Convention," including by recognizing the crucial contributions of gender equality and empowerment of women.⁷⁰ The UNCCD 2018–2030 strategic framework (Dec. 7/COP.13) also mandates all UNCCD stakeholders and partners to adopt gender-responsive policies and measures, strive for full and effective participation of both men and women in planning, decision-making and implementation at all levels, and enhance the empowerment of women, girls and youth in the affected areas. The UNCCD Gender Action Plan, adopted in 2017, emphasizes that need to address the gender inequalities that undermine women's effectiveness as agents of change.^{71, 72} Several priority thematic areas are highlighted that would close the gender gap in land restoration (Figure 3).⁷³ Because priority actions may vary across countries and regions, UNCCD asserts that the expected outcomes need to be consistent.

When governments mainstream gender into land-restoration initiatives, they fulfil multiple essential commitments toward a more sustainable, just, inclusive and equitable future. A number of countries have committed to implementing these frameworks and guidelines and have recognized women's equal rights in their constitutions.⁷⁴ In Africa, several countries have recognized women's equal rights in their laws and frameworks, including:

- The recognition of customary land rights of women (Ghana, Mozambique, Uganda)
- Legal protection of individual use/occupancy rights of women (Ethiopia, Malawi, Nigeria, Tanzania)
- Community land demarcation and collective titles (Ethiopia, Ghana, Mozambique, Uganda)
- Decentralized land-administration systems (Ethiopia, Ghana, Mozambique, Tanzania, Uganda, Zambia)

FIGURE 3

Priority thematic areas to close the gender gap under the UNCCD Gender Action Plan

Ensuring	Integrating	Strengthening	Enhancing
Ensuring women's participation in decisions taken during the design, planning, implementation and evaluation of initiatives to implement the Convention.	Integrating women's economic empowerment in UNCCD implementation activities in order to eradicate their extreme poverty.	Strengthening women's land rights and access to resources.	Enhancing women's access to improved knowledge and technologies that relate to effective UNCCD implementation.

Source: Illustrated by author from UNCCD 2018

- Land registration/documentation (Tanzania, Uganda, Mozambique, Rwanda, Ethiopia)
- Forms of decentralized dispute-resolution mechanisms (Uganda, Tanzania, Ethiopia, Malawi).^{75, 76}

These frameworks and commitments have indeed improved cultural and legal rights of women to land and should ensure that at least basic consideration of gender is incorporated in land restoration. But in a number of countries, women continue to be denied equal rights to land. In Eswatini, Kenya, Lesotho, Nicaragua, Peru, Vietnam, Zambia, and Zimbabwe and elsewhere, gender discrimination is still permitted in customary and personal law matters such as inheritance and registering land purchases.

Successful land restoration requires careful consideration of gender issues, including land rights, as these determine not only access to restored land and its products but also participation, sustainability, and effectiveness of the restoration initiative.

1.4 Organization of the working paper

This paper is organized into six sections.

- **Section 1** introduces the working paper and gives a brief background on land restoration with a gender lens.
- **Section 2** provides key definitions of concepts used in this paper and describes the methodology used to develop the paper.
- **Section 3** provides an overview of why gender matters in land restoration, drawing from experiences from different parts of the world.
- **Section 4** highlights the gender gaps in land restoration.
- **Section 5** presents promising approaches to addressing the gender gaps in land restoration, drawing on eight case studies from around the world that have attempted to mainstream gender into land restoration. The case studies are taken from projects in Brazil, Ethiopia, Ghana, Jordan, Kenya, Lao PDR, Malawi, and Vietnam (Table 1). The cases provide practical examples that will help guide land-restoration practitioners who face similar challenges. They cover diverse issues and have used different approaches, resources, and funding mechanisms. Detailed case studies are included in the appendices.
- **Section 6** draws some conclusions and lists some promising approaches for mainstreaming gender in land restoration.



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TABLE 1
Summary of promising gender mainstreaming land-restoration initiatives

Country	Name of project	Implementer/ development partner	Project aims
Brazil	Bolsa Floresta Program	Sustainable Amazonas Foundation (Fundação Amazonas Sustentável, FAS) Government of Brazil Other funders	Improving the quality of life of traditional forest-dwelling people, while conserving the environmental services provided by the forests
Ethiopia	Management Environmental Resources to Enable Transitions (MERET) project	Government of Ethiopia Alaba District Office of Agriculture Alaba local administration Energy Saving Stove Women's Association (ESWA) Community peasant associations	Rehabilitation of denuded and degraded lands in Alaba District
Ghana	Ghana Public Private Partnership for the Restoration of Degraded Forests in Tain li, Asubima And Afrensu Brohuma Forest Reserves in 2016	FORMAS Ghana Ltd African Development Bank Climate Investment Fund Government of Ghana	Restoration of degraded forest reserves by establishing a large-scale sustainable commercial forest plantation
Jordan	Agricultural Resource Management Project Phase II (ARMP II) Including GEF-supported Mainstreaming Sustainable Land Management Practices Project	Government of Jordan GEF	Improving food and water security and the socio-economic livelihoods of local small-scale farmers with an emphasis on conserving the environment
Kenya	Green Belt Movement (GBM)	Green Belt Movement	Addressing the challenges faced by women due to increased drought/improving women's livelihoods
Lao PDR	Sustainable Forestry for Rural Development-Scaling Up Project (SUFORD-SU)	World Bank FIP Government of Lao PDR	Participatory forest management and alleviation of rural poverty
Malawi	Malawi National Forest Landscape Restoration	Government of Malawi IUCN	Restore degraded land in Malawi
Vietnam	United Nations collaborative initiative on Reducing Emissions from Deforestation and forest Degradation (UN-REDD)	FAO UNDP UNEP Government of Vietnam	Address deforestation and forest degradation through capacity building at national and local levels

2. KEY DEFINITIONS AND METHODOLOGY

2.1 Key definitions

Eight central terms are used throughout this report:

- Gender
- Gender analysis
- Sex-disaggregated data
- Gender mainstreaming
- Gender-responsive
- Agency and voice
- Land rights
- Land-tenure security.
- Land restoration

These terms are defined here to ensure a nuanced understanding of the findings and recommendations.

Gender

Gender refers to the social roles and identities associated with being a man or a woman and deals with the relationships between men and women. Gender differences are diverse and highly location-specific: each region or country will have different approaches in addressing gender differences. Furthermore, although women share common experiences in the face of environmental degradation, social differentiators such as age, class, ethnicity, religion, education, and others may impact different groups of women differently. Hence the need to avoid looking at women as a homogenous group. Gender equality (or inequality) should not be taken as a comparative metric between the two sexes. In using the term, reference should be made to the structural origins or relations of power and domination.^{77, 78}

Gender analysis

Gender analysis is the examination of how differences in gender roles, activities, needs, opportunities and rights or entitlements affect men, women, girls and boys in certain situation or contexts. Gender analysis assesses the

relationships between females and males and their access to and control of resources and the constraints they face relative to each other. A gender analysis should be integrated into all sector assessments or situational analyses to ensure that gender-based injustices and inequalities are not exacerbated by interventions, and that where possible, greater equality and justice in gender relations are promoted.⁷⁹

Sex-disaggregated data

For a gender analysis, all data should be separated by sex (and where relevant, by other variables such as age, etc.) to allow differential impacts on men and women to be measured.⁸⁰

Gender mainstreaming

Mainstreaming gender entails assessing the implications for women and men of any planned action, including legislation, policies or programs, in all areas and at all levels. It is a strategy for making women's (as well as men's) concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs. This should be done in all political, economic and societal spheres so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal is to achieve gender equality.⁸¹

Gender-responsive

This term is used to describe laws, policies, programs and public services that are formulated and/or delivered to:

- Take into account existing structures and relations of gender inequality and seek proactively to overcome and remove them, and
- Identify and bring attention to women's contributions and critical roles as agents and leaders

Gender-responsive laws, policies, programs and public services facilitate gender equality, the empowerment of women and women's enjoyment of human rights.⁸²

Agency and voice

Agency may be defined as “empowerment”; or the capacity to make decisions about one’s own life and act on them to achieve a desired outcome, free of violence, retribution, or fear. Agency may be expressed in different ways, through:

- Personal relationships
- Autonomy in decision making and ability to amass endowments (such as land or property, education, or good health)
- Participation in politics
- Freedom of movement.

Voice, on the other hand, is the capacity to speak up and be heard, and to shape and share in discussions, discourse, and decisions that affect them.

The gender-equality agenda requires expanding agency and voice of women.⁸³

Amplifying the voices of women and increasing their agency can yield broad development dividends for them and for their families, communities, and societies.

Land rights

Land rights consist of a bundle of rights that include access, withdrawal, management, exclusion, and transfer rights. They may relate to different elements or benefit streams from land.

For any land parcel, different individuals may have different relationships or rights.⁸⁴ Land rights are often referred to as a “bundle of sticks” because various actors can have different (and sometimes overlapping) claims to land. Secure land rights improve women’s actual and potential roles in land restoration.

Land-tenure security

Land tenure is the relationship, whether legally or customarily defined, between people (individuals or groups), with respect to land (in which this working paper includes other natural resources such as water and trees). Land tenure is an important component of land governance, i.e., rules set by societies or communities to regulate behavior in land use and management. Land-tenure systems determine who can use what resources for how long, and under what conditions. Tenure can be on individual or collective basis.⁸⁵

Tenure security is the assurance of ongoing duration of land rights, supported by the certainty that one’s rights will be recognized by others and protected by legal and social remedies when challenged.^{86, 87, 88} Land-tenure security is, therefore, the right to remain on one’s land and/or make use

of and profit from that land in ways the individual or groups value (so long as they do no harm).^{89, 90}

Land restoration

Land restoration is the process of ecological restoration of a site to a natural landscape and habitat.⁹¹ The process entails assistance of recovery of an ecosystem that has been degraded, damaged, or destroyed.⁹² Restoration also covers efforts to rehabilitate and improve systems that are under human use and management. They may include a broad range of sustainable land management, soil, and water conservation practices, and nature-based solutions, reforestation activities such as agroecology, conservation agriculture, agroforestry and sustainable forest management, all of which can successfully restore land and its provision of a range of ecosystem services. This working paper uses the term “land restoration” to encompass all these degrees of restoration. It uses the term broadly to encompass a diverse range of ambitions, activities, scales, environments and societies and end-uses.

2.2 Methodology

To understand issues of gender and land restoration, this paper takes a practical focus on case studies from around the world. The case studies highlight what steps are required to address gender issues in land restoration, what was done and why it was done, whether or not the intervention worked and what can be learned from the experience.

To find out whether and to what extent gender was considered in restoration initiatives, desk research was first conducted, covering project documents as well as contextual framework analysis. Past and existing case studies of land/ecological restoration projects were screened and examined for references to the terms “women” or “gender.” The cases were collected through a review of literature on land, ecological, and forest restoration and on gender and the environment in general.

In addition, a search for restoration projects in the Global Restoration Network Database and those mentioned on the website of various organization working on land restoration, including the UNCCD, the World Bank, FAO, UNDP, IUCN and IFAD was carried out. Broad input was also sought from a range of practitioners, organizations, and agencies from around the world. The search resulted in a limited number of restoration projects that address certain aspects of the gender dimension of land restoration. This was partly because as a relatively new area of attention, few projects met the threshold criteria, and partly because many projects were at a stage that was too early to tell whether the interventions were meeting their objectives.

Over 30 cases were looked at. Effort was made to include a range of projects that covered a diverse aspect of mainstreaming gender, locations (region of the world), types of implementer, and types of funder (government, INGO, international donor).

Private sector

The paper draws on several frameworks:

- Gender matters in Forest Landscape Restoration framework⁹³
- UNCCD's Scientific Conceptual Framework for Land Degradation Neutrality (LDN)⁹⁴
- IUCN's Gender Responsive Restoration Guidelines⁹⁵
- The Manual on Gender-Responsive Land Degradation Neutrality⁹⁶
- Feminist Ecology.⁹⁷

All these frameworks identify a set of issues common to women vis-a-vis land restoration, and which should be put into consideration when planning and implementing land-restoration programs and projects. The case studies are assessed to see how they respond to these issues. The issues are:

1. Conducting **gender analysis** and the collection of **sex-disaggregated data** to provide insights into the roles, responsibilities, uses, rights and

practices that affect the way that women and men from various socio-economic and cultural groups use and manage natural resources, and to support regular monitoring and assessment.

2. **Improving and protecting women's rights to land** and other productive resources in land restoration, with an aim of promoting equality and their access to adequate standard of living.
3. **Strengthening and equalizing access to use and control** over productive and natural resources, and benefits or income from land restoration at various scales.
4. **Empowering** women and ensuring their equal and meaningful participation and decision making in land restoration.
5. **Supporting and promoting gender-responsive land/forest laws, regulations, and interventions** that protect and enhance women's rights and their participation in land use and restoration.
6. **Strengthening women's access to credit and value chains** for land/forest-related activities.
7. **Training and capacity-strengthening** efforts for women, men, and other stakeholders involved in restoration.
8. Setting up **inclusive partnerships and alliances** with regional and national restoration networks to enhance inclusiveness of women and marginalized groups in land restoration.



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3. WHY GENDER MATTERS IN LAND RESTORATION

The literature review and the five frameworks listed above make a strong case for mainstreaming gender into land restoration land restoration. The main reasons include: the following.

3.1 Women have a right to participate in land restoration

Entrenched gender norms make it difficult for women to obtain the same opportunities as men in land-restoration initiatives. Gender plays an important role in determining who does what, who makes decisions around land being further degraded or restored, who participates in land restoration, who decides whether land will remain restored and not degraded again, and who has access to resources and other assets, including benefits from restoration initiatives.⁹⁸ Land restoration may greatly affect women's livelihoods. Preventing women from participating in it takes away one of their human rights, disempowers them, and reduces their opportunities for better livelihoods.

The Committee on the Elimination of Discrimination against Women (CEDAW) in its General Recommendation 34 points out that rural women make vital contributions to rural development. CEDAW calls for the urgent recognition and protection of their human rights, including their rights to land and other natural resources. OHCHR and UN Women report that women's access to, use of and control over land and other productive resources are essential to ensuring their right to equality and to an adequate standard of living.⁹⁹

Improvement to women's rights to land requires that all stakeholders embrace a human rights-based approach to create solutions that work for women. Land restoration must be anchored in policies and frameworks that support women's land rights and provide for their full participation. A human rights-based approach requires that the legitimate land rights of the landless, rural tenants,

smallholders, indigenous peoples, internally displaced people, customary landholders, and informal settlers be respected and protected.^{100, 101} It will be necessary to ensure that the pressures from higher land values resulting from land-restoration initiatives do not lead to dispossession of existing rights.

National gender policies and strategies in many countries govern land restoration and contain general statements related to gender equality. Where gender gaps occur, international frameworks and policies (Appendices 1 and 2) can be applied as a legal basis to involve women better in land restoration and to address underlying social and gender inequalities in the communities where restoration is taking place.^{102, 103}

BOX 1 The consequences of ignoring gender

Failing to incorporate a gender-responsive approach to land restoration may result in several risks:

- Limited sustainability and effectiveness of restoration measures and outcomes
- Establishment or exacerbation of inequitable systems of benefits-sharing due to inadequate identification of stakeholders
- Maintenance of existing inequality in land tenure and resource-use rights
- Limited access to resources and services within families and communities
- Marginalization of women's full and effective participation and voice in decision-making.

Source: IUCN 2017

3.2 Gender considerations improve the efficiency and effectiveness of land restoration efforts

Numerous studies have shown that encouraging and incentivizing women's participation can enhance the effectiveness and sustainability of land and forest management.^{104, 105, 106} Ignoring gender concerns, on the other hand, may result in missed opportunities, ultimately harming the effectiveness and efficiency of the initiatives.^{107, 108, 109}

UNEP argues that gender equality is catalytic to environmental progress, and should be integrated all land-restoration initiatives, environmental policies, strategies, and action plans.¹¹⁰ Understanding societal structures, existing inequalities, and power imbalances between men and women can help explain the choices people make, ensure that the needs and expectations of the stakeholders are targeted and met, and provide an incentive for participation in and protection of restored resources. Involving both women and men in land restoration therefore increases project effectiveness and efficiency.¹¹¹

3.3 Gender considerations improve equality for women in land restoration

Across Africa, Asia, and Latin America, many communities and people living inside and close to degraded areas are marginalized and poor.^{112, 113} Forests and lands provide food, medicinal products, firewood, and in many cases act as "safety nets."¹¹⁴ Gender-responsive land restoration that encourages inclusive participation can result in greater equality in gender roles and decision making at various levels. Where REDD+ interventions failed to recognize gender differences, women's workloads rose, greatly reducing their incentives to participate in land restoration.¹¹⁵ Some tree-planting schemes unintentionally benefited men more than women.^{116, 117, 118} Gender-responsive restoration necessitates enabling women and men at all levels to have an equal say in strategic decisions, and ensuring this translates into equality in the outcomes. To achieve gender equality, women and men in indigenous and local communities must be recognized as rights-holders and legitimate stakeholders who can exercise voice and influence changes in land use, restoration, governance, and distribution of the resulting benefits and costs.¹¹⁹

3.4 Gender considerations enable targeted interventions in land restoration

Gender considerations are important to give a better understanding of women's needs and interests, and to learn about the knowledge they have on ecosystems and resource management. Women's and men's environmental knowledge, preferences, uses of land and forest resources, and priorities for restoration will often differ. Recognizing this is important for the successful planning and implementation of land-restoration initiatives.¹²⁰ Ignoring such gender differences, on the other hand, means that the priorities and knowledge of half of the population is ignored.

3.5 Gender-responsive land restoration improves women's agency and empowers them

Recognizing women as land managers and holders of ecological knowledge can empower them and enhance their recognition and social standing within their communities.¹²¹ Equitable participation in restoration initiatives results in broader local buy-in and enhanced capacities, with improved prospects for both human and socio-economic development and positive environmental outcomes.¹²² An explicit gender lens can help enhance women's agency and reduce their vulnerability by enhancing their socio-economic empowerment; reducing informality in the production and marketing of restoration by-products, and promoting legal reforms in land tenure.

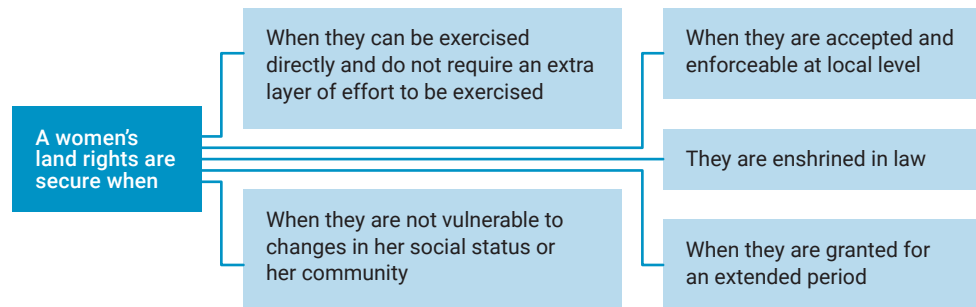
3.6 Gender affects land rights and tenure security

Gender inequality in land and property rights hinders women's roles in avoiding, reducing and reversing land degradation, as well as their efforts to improve their livelihoods and that of their families and communities.¹²³ Secure land rights tenure can:

- Increase women's ability to invest in land
- Increase women's ability to enter into contracts
- Increase women and access credit girls' empowerment by enabling them to participate in make decisions in their households
- Increase women and girls' ability to act autonomously
- Are important for the well-being of families.¹²⁴

FIGURE 4
Security of women's land rights

Security of women's land rights



Source: Designed by author from literature

Women with more secure land tenure are more likely to plant trees or make other investments to improve the land and generate ecosystem services.¹²⁵ Efforts to improve women's land rights can also create enabling conditions for land restoration. Secure land rights empower women to participate more actively in community-level institutions, including those involved in restoration.^{126, 127} Women's land rights are positively correlated with enhanced decision-making power on land use, food choices, nutritional, and educational outcomes at the household level.^{128, 129, 130} In reforestation and other restoration activities, secure rights for both men and women are key to success.^{131, 132} If women (and poor men) have insecure rights to land and trees, they are unable or reluctant to plant or manage trees because they may not be able to make decisions about or use the trees in the long term.^{133, 134} Where their rights are enshrined in law, women's participation in land and natural resource governance improves, with wider benefits for the families, communities and countries.¹³⁵

It is however important to note that enshrining gender issues in law alone is not enough. Women's rights to land may still be weak due to local governance structures.^{136, 137} Their legal rights need to be granted for an extended period, and accepted and enforceable at the local level. The rights should be exercised directly without a need for extra layers of approval or effort, and they should not depend on the women's social status (Figure 4).

Men and women with stronger land rights are more likely to invest in natural resource management and in restoring land.¹³⁸ Restoration initiatives often take place on lands utilized by communities, which may not be formally titled. Women's rights to land are especially tenuous due to legal and cultural barriers, and they may lose their land to restoration initiatives. In farming, for example, women's limited and insecure rights may hinder women's investment in following and utilization of farm inputs, and restrict their access to support and services to improve production.^{139, 140}

3.7 Women and men differ in their adoption of technologies

Whether a household is headed by a man or a woman often determines its access and control of land and related resources. Women are generally confined to the lower end of the value chain of agroforestry products (retailing), restricting their control over and returns from the productive process.¹⁴¹ Gender norms and lower education levels compared to men mean that women tend to have limited access to extension information, new technologies and crop varieties. Even when women have opportunities to join extension activities, gender roles, lower education and literacy levels limit their appreciation of the potential benefit of adopting innovations.

Women need access to labor, land-preparation equipment, manures and fertilizers, seeds and knowledge, crop storage and processing technologies – and most fundamental of all, the cash to invest in these inputs. Efforts to restore degraded land can only be successful and equitable if they address issues of land and natural resource rights, agency, social norms, and household decisions.^{142, 143, 144}

3.8 Women and men may have different incentives to restore land

Women and men have different incentives to behave in certain ways. Those incentives are driven by gendered roles and responsibilities, social norms, and rights. For women and men to change their behavior about land, different incentives may be needed to ensure their meaningful role in land restoration. For example, when land is degraded, rural women and girls are faced with even more time-consuming, labor-intensive but unpaid (or poorly paid) work, tied to their household responsibilities such as producing food and fetching water.^{145, 146}

In summary, articulating and addressing gender in land restoration is important. The challenges in gender norms, values, attitudes, and behaviors can

be used as entry points in addressing the gender gaps which would enhance both land-restoration initiatives and gender equality in general.



4. GENDER GAPS RELEVANT TO LAND RESTORATION

Women are increasingly viewed as change agents who can influence land-restoration efforts. However, multiple gender gaps still need to be addressed.^{147, 148} These exist in varying degrees and levels across contexts and countries. Because they overlap, policy, project, or programmatic responses to them may need to be sectoral in nature, rather than being addressed in a dynamic, collaborative, and comprehensive manner which is likely to be more effective.¹⁴⁹

Land-restoration programs that promote equitable participation, benefit-sharing, and empowerment are likely to address other critical factors limiting desired outcomes and impacts.¹⁵⁰ Some gender gaps are difficult to deal with and may take a long time to address. For example, changing laws can be more difficult than implementing local project activities as laws require several layers of approvals and buy-ins. Some challenges that women face may not be easily addressed directly but may need to be tackled at the community governance level; doing so requires engaging with community authorities and would be based on customary norms and rules. Complicated local gender gaps may require creative solutions. For example, community authorities may not be willing accept more inclusive participation of women, so to direct support to women on technical/managerial skills may not work.¹⁵¹

This section identifies six broad categories of gender gaps and explores them in relation to potential land-restoration initiatives.

4.1 Poor access to use and control over land and benefits from land restoration

Land-restoration interventions need to address the specific needs and opportunities of women, particularly the poorest, to reduce inequalities that may exist in the communities. It is also important to explore and understand the broader picture of

gender, as other related factors will determine who implements and potentially benefits from restoration.^{152, 153} The costs and benefits of land restoration tend to differ for men and women. Women rarely have control over productive resources such as land, credit, agricultural inputs, training, and extension services. Furthermore, their productive assets, including their labor and output, are often considered to be less valuable than those of men.¹⁵⁴ Land-restoration interventions therefore need to strengthen equitable access to credit and markets for women and other traditionally less-empowered groups. For example, in many forest value-chains, women are mostly active in harvesting and small-scale retail trade, while men are involved in larger forest-related businesses. This gap can be addressed through targeted activities. Interventions aimed at improving the position of women may include improved technology and marketing advice, infrastructural support, value-addition to products, and improved marketing.¹⁵⁵

4.2 Inequitable land rights and insecure tenure

Land and forest rights, especially for women, are critical to effective land-restoration outcomes. Women have more limited land rights and tenure security than men, limiting their participation in land restoration. Land rights and tenure security determine how land is used, transferred, managed, controlled, bequeathed, and inherited, how income can be collected from it, how it can be protected, and how long it can be used.¹⁵⁶

Women's land rights and tenure are much less secure than men's in most developing countries.¹⁵⁷ The World Bank database on women, business and the law shows that there was some improvement in women's rights to land and property between 1960 and 2010 in sub-Saharan Africa, Latin America and the Caribbean, East Asia and the Pacific. But significant gaps remain in addressing property and land rights especially in the Middle East,

North Africa and South Asia.¹⁵⁸ The largest gender inequalities in access, control, and use of land are found in North Africa and the Near East, where only around 5% of all landholders are women.¹⁵⁹ Even in Latin America and the Caribbean, where there has been considerable progress, the level of land ownership by women in Honduras, Mexico, Nicaragua, Paraguay and Peru is still very low.^{160, 161, 162}

A study by Espaço Feminista found that in **Brazil** only 12% of total registered land, and only 5.5% of total agricultural land, was registered in women's names.¹⁶³ In most rural areas in Africa and South Asia, few women own land, and where they do, their properties are smaller and less valuable than those of men.¹⁶⁴ Furthermore, although women may have the legal right to own land, due to traditional gender roles and the lack of independent financial resources, they rarely purchase it.

In **sub-Saharan Africa**, where collective property regimes are common, community heads favor men in assigning land. Cultural norms generally dictate that men are the owners, while women gain access to land through their relationship with their father, husband, brother or other relative.^{165, 166, 167, 168} Male household heads in Africa are still the main controllers of land; it is assumed that they hold the rights in trust for all household members. Women are granted only the right to access or use land.¹⁶⁹ Similar findings were reported in Tanzania¹⁷⁰ and Rwanda,¹⁷¹ as well as in Vietnam and India. Where land rights are held by the collective (or group), they are allocated to members of that group, so may exclude some community members. Group membership is culturally defined and is usually based on lineage, which is often patrilineal. This means that while men (who are born into the group) are members, women (who marry in) are not. Yet many women rely on land for their livelihoods: even if they lack the same rights as men, they still have a huge interest in what happens to the land.¹⁷²

4.3 Inadequate laws and poor enforcement

Legislation, regulation, and strategies that guarantee rural women's equal rights to land and other natural resources, irrespective of their civil and marital status, are crucial for sustainable land restoration and sustainable development.¹⁷³ A legal analysis of women's rights in community-based forests in 30 low- and middle-income countries in Africa, Asia, and Latin America found that almost all fail to adequately acknowledge and protect the rights of women to property, inheritance, community membership, community-level governance, and community-level dispute resolution.¹⁷⁴

Implementation of these laws is also important. Where laws and policies that support women's rights exist, implementation, women rarely exercise their rights to land and to resources from land restoration.¹⁷⁵ A study from **Kenya** shows that formalization of land tenure does not necessarily benefit women.¹⁷⁶ Furthermore, in some developing countries, customary law still takes precedence as far as land inheritance is concerned. Even when laws give women rights to land, these rights are not realized in their communities. For example, in **Cameroon**, marriage property-laws give more power to the husband over commonly owned marital property. The majority of marriages are recognized only under customary law, which does not guarantee they can keep or access their property in the case of divorce or death.

Where statutory laws do provide for women's independent rights, mechanisms to enforce the laws are often absent. For example, although **Mauritania** introduced gender-neutral laws in the 1980s, they included no provisions to address existing discrimination in Mauritanian society. National laws were ignored in rural villages in favor of customary law. Barriers to land ownership and the economic security of women continue, mainly due to persistent patriarchal traditions and a lack of awareness of women's legal rights.¹⁷⁷

In **Nepal**, women are unable to obtain land certificates even though they have the constitutional rights to inherit land.¹⁷⁸ In **Peru**, although it is not expressly stated, in practice constitutional protections for the autonomy of local communities are stronger than constitutional protections for women. The constitution of Peru provides for gender equality before the law, including equal rights to property and inheritance, but at the same time it allows peasant communities to self-govern, including on matters of land rights. The self-governance provision has resulted in women being excluded from inheriting and from decision making related to property rights. Similarly, in **Zimbabwe** and **China** gender equality is taken into consideration in the laws but due to devolution of authority over governance decisions to village collectives, women's rights to land are very weak. In Zimbabwe, women lost part of their traditional rights to land when a reform was put in place requiring registration of land: land was registered in the name of the head of household, most of whom were men.¹⁷⁹

4.4 Low participation and decision making by women

The extent to which women (and men) at different governance levels can influence and participate in decision making in land restoration and provide the type of knowledge that supports initiatives will influence the outcomes for restoration for women.

Women's participation in many land-restoration initiatives is limited. Restoration initiatives that are gender-blind and do not include women tend to worsen gender inequalities. In such cases, women's rights to land and resources are further restricted and their voice and agency are undermined, making it difficult for them to participate or benefit effectively in land-restoration initiatives.^{180, 181, 182, 183}

Women are excluded from forest decision-making bodies for many reasons. Forest agencies are usually male dominated, and timber-related jobs are seen as men's work. As a result, women tend to have limited access to information related to forest management.¹⁸⁴ In a REDD+ project in **Burkina Faso**, women were not involved in making decisions, yet bore a high level of responsibility and labor burden of project activities. In the **Democratic Republic of Congo**, women spend as much time in the forests as men, but men's activities are more highly valued, and men dominate forest governance.¹⁸⁵ Women also have fewer leadership roles in community-based forest governance than men, and women's roles are often limited.¹⁸⁶ Studies of REDD+ projects show that when women participate in forest-related land restoration, there is improved forest condition.^{187, 188} Despite this, women's participation is rare.

4.5 Poor access to knowledge, extension and technology services

Women often have much lower access to knowledge of new practices, mainly because they are not reached by extension services. They may therefore lose interest in land restoration.¹⁹⁰ Nonetheless, efforts to restore lands are often knowledge intensive. REDD+ programs have found that women receive little or no information related to land or forests, or opportunities to enhance their skills. When extension services were matched with the needs of men and women farmers, men's demand for services rose by 400%—and women's by 600%.¹⁹¹ Even in countries where REDD+ has been underway for a long time, women are not as well informed and knowledgeable about land restoration or tree planting opportunities and potential benefits.¹⁹²

Although women hold valuable traditional knowledge on land use, they rarely get a chance to use it. They should be able to benefit from scientific advances that have grown out of this knowledge.¹⁸⁹

4.6 Paucity of sex-disaggregated data

Currently, there is a paucity of systematic, consistent data on the scope of women in land restoration. The sex-disaggregated problem is compounded by the fact that most statistical agencies and government programs are structured around the male as the head of household. Gender analyses should be carried out before, during and after any land-restoration project. If gender differences are not recognized and considered, actions that are assumed to be gender-neutral could have detrimental effects on women and on their contribution to household income and wellbeing.

The design of appropriate policies and land-restoration interventions, and avoiding unwanted outcomes, requires research on “people in nested and overlapping constituencies that reflect the multiple roles, identities and interests of men and women across class, location, occupation and other points of difference and affinity.”¹⁹³ Sex-disaggregated data and gender analyses are important because communities are more than just the typical primary “categories”: men, hunters, fishers, farmers, adults, or heads of household.¹⁹⁴ Without sex-disaggregated data and preliminary gender assessments, the findings can be incomplete or misleading.¹⁹⁵

There is, therefore, a great need to invest in the collection and analysis of sex-disaggregated data. An understanding of how sex, ethnic group, age, assets, wealth, and other factors influence decisions in land restoration is critically needed in many countries.

5. APPROACHES FOR ADDRESSING GENDER GAPS IN LAND RESTORATION

From a review of the literature and the frameworks mentioned above, several approaches stand out as critical for gender-responsive land restoration. Gender considerations should be taken into consideration at the earliest stages of project conceptualization so that critical gender dynamics, issues, challenges, and opportunities that may influence the project outcomes are identified and incorporated into the project design.^{196, 197, 198, 199}

Six general approaches to gender-responsive land restoration are highlighted in this section. There is considerable overlap between these approaches, and actions aimed at closing one gap may also help close other gaps. For example, strengthening women's participation will also strengthen institutions and actions that strengthen women's land rights, and may also empower women. Each of the sections below (Box 2) includes a case study to illustrate how the approach for gender mainstreaming was incorporated into a project.

5.1 Gender analyses using sex-disaggregated data

Addressing gender gaps in land restoration requires context-specific analysis. That is why gender analysis prior to, or during, the conceptualization stage of projects is important. During implementation, it is important to monitor sex-disaggregated outcome measures to address any unintended negative outcomes in a timely manner. Initiatives need to take into consideration the different perspectives, interests and needs of the various stakeholders. Gender analyses provide important information with respect to the differentiated access to, control over, and knowledge about existing resources in a potential restoration area.²⁰⁰

The analyses provide information on the division of work, levels of participation, and distribution of benefits, so revealing existing power dynamics and inequalities. It is important to consult with academics or other experts in the country on land and resource tenure, cultural norms, gender inequalities, and social conflicts over resource use.

This will help ensure that appropriate gender-differentiated knowledge and data can be collected.²⁰¹

BOX 2

Approaches for mainstreaming gender in land restoration

1. Gender analysis using sex-disaggregated data to provide insights into the roles, responsibilities, uses, rights and practices that affect the way that women and men from various socio-economic/cultural groups in the target area use and manage natural resources and to support regular monitoring and assessment.
2. Equalizing access to land and benefits from land restoration at various scales to equitably distribute benefits and costs associated with restoration for both women and men.
3. Strengthening women's land rights and tenure security in land restoration.
4. Empowering women and ensuring their participation in land restoration by involving them in decision making, as stakeholders and in practice, to address underlying social and gender inequalities.
5. Supporting gender-responsive policies, laws, regulations, and interventions that protect and enhance women's rights.
6. Strengthening women's access to credit and value chains for land- and forest-related activities.
7. Training and capacity building, such as leadership and technical trainings targeted at women.
8. Supporting partnerships with regional and national restoration networks to enhance inclusiveness of women and marginalized groups.

BOX 3

Malawi: National Forest Landscape Restoration

Malawi committed to restore 4.5 million hectares of its degraded land by 2030 as part of the African Forest Landscape Restoration Initiative and Bonn Challenge in 2016. The restoration started after the National Forest Landscape Restoration Assessment, launched in February 2016. By 2017, the project had collected and validated data in 27 of Malawi's 28 districts. The target stakeholders were local communities who practiced small-scale agriculture and woodcutting for fuel.

Malawi has been lauded as one of the countries that developed a strategy to tackle forest restoration while taking gender into account. The 2017 National Forest Landscape Restoration Strategy outlined activities targeted towards the goal. The Restoration Opportunities Assessment Methodology was used in all its districts to identify areas that required urgent intervention due to severe degradation. It also provided information on women, women's organizations and gender experts at the national and sub-national level.

At the beginning of the study, a multi-sector national task force was organized to guide and facilitate the national assessment process. The task force was supported by three technical working groups organized to oversee:

- Stocktaking and mapping activities
- Policy and institutional analysis
- Economic and financial analysis.

Given the differences in local objectives and situations, national-level assessment processes were different and intended to address context-specific economic, environmental and social issues including gender. The National Forest Landscape Restoration Strategy laid down strategies for gender inclusiveness and responsiveness.

Restoration started with a preliminary policy and institutional background research on gender equality. Furthermore, there was stocktaking of relevant restoration activities during field visits through stakeholder dialogues, including separate women's and men's discussion groups on preferences, income-generation, and co-benefits. Additionally, sex-disaggregated data were gathered at the national level on anything from access to primary education to average marrying age, to data on cell-phone ownership to existence of bank accounts. This gave an overview of how gender equality is progressing on the ground.

Women and men participated equally in identifying challenges, opportunities, and interventions in restoring land. A facilitation team and funding designated for gender-responsive planning and activities promoted a comprehensive gender-responsive approach throughout the forest-landscape restoration assessment.

For example, in **Uganda**, before the implementation of the Climate Smart Agriculture Project, an analysis identified gender-based constraints such as inequitable access to productive resources that limited women's participation and led to unequal decision-making, even though women did most of the work. The land-restoration initiative was therefore designed to address these issues, including co-educating farmer groups.²⁰²

Similarly, in **Jordan's** Azraq Oasis Restoration Project, a baseline study resulted in mainstreaming of gender into restoration activities. The study identified a number of gender issues and the importance of women's participation in raising

awareness and encouraging the change of attitudes and practices. The project took gender issues into consideration and improved women's participation in land restoration by convincing the local community of the importance of women in land restoration and in the community as a whole.²⁰³

The case study from **Malawi** (Box 3 and Appendix 3, Case 1) is considered one of the best practices on mainstreaming gender-restoration processes from design to implementation. This was done through an assessment of the existing data on gender equality, political and institutional frameworks before implementation began.

Before the project began, a National Forest Landscape Restoration Assessment made it possible to formulate gender-responsive strategies to address the social, economic, and biophysical realities of degradation and restoration.²⁰⁴ From the outset, the project planners paid attention to the possible gender dimensions of the restoration project. The project utilized the Restoration Opportunities Assessment Methodology.

Sex-disaggregated data at the national level on topics ranging from access to primary education, average marrying age, cell-phone ownership, and existence of bank accounts, gave an overview of how gender equality is advancing in Malawi. This analysis was used to target interventions to meet local needs and address gender gaps. Various stakeholders, especially women, were involved in identifying needs, gender gaps and challenges faced by women. This inclusive participatory process identified solutions and ensured the project could be implemented without resistance from local communities.

The national-level preliminary assessment showed that in land restoration, women's preference for species was different from men. Most women preferred fruit and medicinal trees that to improve food security and health in the community. While men preferred tree species for commercial purposes. Training the project teams and stakeholders on gender issues and involving gender specialists in the technical working groups enhanced efforts to address gender issues in the project areas. Most importantly, these gender-specific initiatives were included in the planning, policies, and strategies for restoration. Two unique features of this project are the designation of funding for gender-responsive planning and activities, and the creation of a facilitation team to promote a comprehensive gender-responsive approach.

Key messages

- Mainstreaming gender should start right from the design stage through to implementation. Comprehensive gender analyses are needed before land restoration, not only to ensure women's involvement but also to uncover existing social and gender inequalities. The utilization of frameworks such as Restoration Opportunities Assessment Methodology can improve mainstreaming of gender. Facts pertinent to the project should be communicated to all stakeholders, and all must have opportunity to voice their concerns in an appropriate manner.
- Gender analyses and the utilization of sex-disaggregated data at the national level facilitate the identification of gender issues and can help provide information for targeted

interventions to meet local needs and addressed gender gaps. Continuous assessment of progress and success should be used to inform possible amendments in the approach.

- Gender-inclusive participation in assessments and planning by local communities and at the start of the project plays an important role in mainstreaming gender and ensuring that land-restoration projects are reflective of community needs, roles and challenges faced by women and men. The use of participatory methods can lead to a broader understanding of the relationship between the rural communities and the degradation of land ecosystems. It can also uncover reasons for women's participation, to lead to creating incentives for them to participate. The involvement of stakeholders, especially women, in the identification of needs and gender gaps results in the application of appropriate solutions to challenges faced during land restoration.
- Public-awareness exercises and capacity building for institutions at the local level are important to prevent cultural biases. Training of the project teams and stakeholders on gender issues in land restoration as well as the involvement of gender specialists in the technical working groups, women groups and other implementing agencies are important for successful land restoration.

5.2 Equalizing Access to Use and Control over Productive and Natural Resources, and Benefits/Income from Land Restoration

As indicated above, gender has a significant impact on access to and control over benefits of land restoration. Unless gender considerations are considered right from the start of a project, women may not benefit as much from land restoration as they should.

Gender-responsive restoration requires enabling women and men at all levels to have an equal say in strategic decisions, and this must translate into substantive equality in restoration outcomes. Women, men, and minority groups should be recognized as rights-holders and legitimate stakeholders who can exercise voice and can influence decisions and the distribution of benefits and costs.²⁰⁵

Effective interventions need to take into consideration potential increases in labor and time burdens on women, especially given the constraints they face: their disproportionate care responsibilities, their limited financial means to

BOX 4

Brazil: Bolsa Floresta Program

The Bolsa Floresta Program is an incentive-based forest-conservation initiative of the State of Amazonas. It was established in 2007 and is operated by a non-governmental organization, the Sustainable Amazonas Foundation (*Fundação Amazonas Sustentável*, FAS). The program is a state-level public policy aimed at improving the quality of life of traditional forest-dwelling people, while conserving the environmental services provided by the forests in which they live.

The program consists of an integrated set of interventions designed to reward forest stewards who commit to zero net deforestation, adopt sustainable land-use practices in state-owned forest reserves, and agree to various other rules. Cash income for local people comes primarily from government transfers and to some extent from cassava farming, while few cattle were held inside the two reserves. The program contains a financial compensation program, where households are given a small economic incentive of BRL 50 (USD 30) per month in return for their commitment to zero net deforestation. Participation in the Bolsa Floresta program is voluntary. Nevertheless, some components, such as education and health facilities, are delivered at the community or reserve level, so equally benefit nonparticipants.

The main component of the program, Bolsa Floresta Family, makes monthly payments to households who have lived in a protected area for at least two years and sign a zero-deforestation commitment. Payments are made every month to the female household head or wife. Gender was a major component of the program, with clear monitoring of indicators to measure progress that show how control of cash, active support to engage in economic activities, and empowerment through dialogue, all contribute to the reduction of inequality associated with gender.

The program improved the consideration of gender by:

- Ensuring that women controlled the cash resources
- Putting in place incentives for women's participation in planning workshops, leadership meetings and other participatory management processes
- Incentivizing leadership of women in projects that generate income and enterprise
- Conducting educational activities on the rights of women
- Supporting the creation and strengthening of clubs and associations of women.

Through its social component, the program resulted in improved provision of health and education services in many villages, along with zero deforestation.

access and invest in experimental practices, hire additional workers, or pay for costly inputs, and their generally lower social status and authority over land-related decisions. Initiatives should empower women by providing targeted services to address their specific needs.^{206, 207} This may entail supporting their participation in training, leadership forums, and economic development opportunities, as well as ensuring they have rights to the land and natural resources they depend on for their livelihoods.

Creating value chains and promoting equitable sharing of benefits can provide non-monetary incentives for changing behavior, such as conserving soils, planting suggested restoration species, or protecting trees and forests. Since land restoration has costs associated with it, the benefits should outweigh the costs. Fair and equitable benefit-sharing arrangements require a good

understanding of the drivers of land degradation, the stakeholders involved, the incentives needed to restore land, and mechanisms for distributing benefits against agreed responsibilities and obligations.^{208, 209} Equalizing access to credit, use and control over income or other benefits from land restoration is crucial for long-term land management. Secure rights to future benefits through enhanced tenure security correlate positively with the likelihood that women engage in restoration and with successful land-restoration initiatives.^{210, 211, 212, 213}

The Bolsa Floresta case in **Brazil** (Box 4 and Appendix 3, Case 2) is a good example of how land restoration in tandem with improved access to resources for women (such as conditional cash-transfer programs), can improve household well-being through impacts on health, purchasing

power, household productivity and resource allocation, asset consolidation, and reduction of inequality. This project had twin benefits of addressing deforestation and at the same time reducing the number of people in poverty from 28% in 2001 to 17% in 2008.

A unique feature was that women were direct beneficiaries of this project was Bolsa Floresta Family component and received a monthly reward for environmental services. Women controlled cash resources; the project supported women's associations and it gave incentives for women to participate in planning workshops, leadership meetings and other processes in land restoration. The project also provided an opportunity for women to earn money from basket-weaving and other economic activities. These observations were also made for young people in terms of income generation and the strengthening of social organization. While participation in the Bolsa Floresta program was voluntary, some components, such as education and health facilities, were delivered at the community or reserve level, so equally benefited non-participants.

Another project that improved access, use and control of resources during land restoration can be found in **Senegal**. The Climate Change Adaptation Project from 2012 to 2016 aimed to increase the resilience of agricultural production systems and associated value chains to climate impacts on water resources. Women benefited from a reduction in their workload. The project enabled women to water their kitchen gardens using solar pumps; their economic empowerment improved enabling them to provide for their families.²¹⁴ Successful outcomes included improved women's access to restored land and resources, rehabilitation and restoration of agricultural land and natural resources, and as positive socio-economic impacts such as economic empowerment and lower time poverty.²¹⁵

Key messages

- Women's access, use, and control of restored resources may be enhanced through greater recognition of informal markets, the opportunities and constraints associated with them, and their position relative to markets.
- Interventions targeted to women are important for promoting equitable land restoration outcomes.
- Supporting women's associations and providing incentives for women to participate in planning workshops, leadership meetings and other processes in land restoration are important.
- It is important to address the needs of the local women and men. This can then act as an incentive for their involvement in the restoration initiatives and for protecting the restored land.

5.3 Strengthening Women's Land Rights and Tenure Security in Land Restoration

Research shows a positive correlation between women's land rights and effective land restoration. Men and women with more secure land rights are more likely to invest in natural resource management technologies and land restoration. Since project areas often include varied land-governance regimes, planners need to account for women's rights in these regimes, including their land and inheritance rights to communal, family, ancestral, indigenous, public and private lands. In many countries, legal regimes that regulate "family land" or "ancestral land" might undermine women's rights to use and manage the land, which could result in low uptake of land-restoration activities.

Where legal gaps and informal legal systems exist, it may be necessary to harmonize the regulatory and legal framework for gender equality and women's rights to land, forests, and other natural resources. Land-restoration projects may need to equip women with knowledge about their land rights and land restoration.

Innovative practices and programs have been developed to facilitate gender-equitable land rights in many parts of the world. The innovations provide examples of how the complex issue of women's access and rights to land can be addressed in different contexts. Examples include:

- The women's land tenure framework for analysis²¹⁶
- The voluntary guidelines on the responsible governance of tenure²¹⁷
- The governance of tenure technical guide²¹⁸
- The assessing gender-sensitive implementation and country-level monitoring of the tenure governance and Africa land policy guidelines.²¹⁹

In a number of developing countries, laws have been enacted that protect women's land rights. While formal laws by themselves are not enough, formal law does create the space for change and, if well enforced, can support women's secure rights to land. In some countries, governments have recognized and strengthened customary laws in ways that emphasize the rights of women. Understanding the complexity surrounding women's land rights is critical to ensuring that those rights are protected and improved in land restoration. Because laws, customs, and norms can vary among regions and ethnic groups within countries, women must be meaningfully included in the design and implementation of projects and policies and in decision making. In land restoration, it is important to support rights awareness and positive behavior

BOX 5

Ethiopia: Exclosures to rehabilitate degraded land in Alaba District

In 2009, the Management Environmental Resources to Enable Transitions (MERET) project was initiated to rehabilitate severely degraded areas in Alaba. The project focused on the use of exclosures (areas where grazing animals are kept out) to restore forests. The state would benefit from the carbon credits obtained, while the local communities would benefit through improved environmental management and livelihoods.

The district administration mobilized the community through awareness-raising campaigns and discussions with elders and representatives of peasant associations. The Department of Agriculture provided tree seedlings and grass tufts, technical advice, supervision, and networking, and facilitated activities in the exclosures. The project provided some incentives, for instance, wheat, as part of the food-for-work program for building soil-and-water-conservation structures to reduce runoff.

A women's organization, ESWA, was allocated the responsibility of the daily management of the exclosures; the peasant associations took on an oversight role. The 281 members of in ESWA were from Chorko village within the local area. ESWA developed rules and regulations to manage the exclosures. Members who lived near the exclosures were allowed to cut and carry grass to feed to their livestock and to sell to local people at low prices. Priority was given to association members to buy grass for fodder at below market prices. They received energy-saving stoves for free.

The ESWA members collected stones and moved soil and grasses from other areas to build conservation structures. They maintained the structures, planted trees, managed tree nurseries, and tended trees and grasses planted in the exclosure.

The women were required to save USD 1.10 per month from their earnings. Their savings habit improved as a result.

To overcome problems of land tenure insecurity, the district land administration department and the Department of Agriculture offered land-use-rights certificates for ESWA members. The project was supported by the land certification and registration program, which mandated the issuance of certificates in the names of both spouses as joint holders, and the consent of both as a prerequisite to selling or renting land. Registering land boosted landowners' likelihood to invest in soil-and-water-conservation measures by 20–30 percent.

The local committees that defined the boundaries of common-use areas and registered individual farmers' plots included women household heads, including widows and divorcees. The land registration and the corresponding security of tenure had a strong positive effect on conservation, maintenance, and improvement of plots, which raised agricultural productivity and contributed to reducing poverty.

change among women, local customary institutions, and formal legal systems regarding women's land and property rights. Men should be included in these programs because this increases dialogue among stakeholders, as well as men's understanding of the need for women's participation in land restoration. This ultimately is likely to increase community acceptance and support for women's participation in land restoration.

The Management Environmental Resources to Enable Transitions (MERET) project in **Ethiopia** was aimed at rehabilitating degraded land for carbon credits. The case study (Box 5 and Appendix 3,

Case 3) demonstrates that effective land policies and frameworks are essential for ensuring successful land restoration.

In 2005, Ethiopia systematically mapped out its lands and initiated a certification program with an aim of granting joint ownership rights to women and men, as well as individual ownership rights to divorced or widowed women. The land registration mandated the issuance of land certificates in the names of both spouses as joint holders, and the consent of both as a prerequisite to selling or renting land. This registration boosted the landowners' likelihood to invest in soil and water conservation measures by 20–30%.^{220, 221}

The MERET project had the support of this program, which greatly improved women's participation in land restoration. When gaps in land rights were found at local level, the Department of Agriculture offered a certificate of land-use rights for members of the women's organization, ESWA, further securing women's land rights in the restored areas.

Policy provisions protecting women's land rights, backed by rules and regulations developed by ESWA, allowed women to participate in the planning, managing and utilization of restored lands. The rules also acted as incentives for women to invest in planting or sustainably managing restored areas. The local committees responsible for defining common-use areas and registering plots included women. The registration and stronger tenure security promoted conservation and plot-improvement, boosting agricultural productivity and cutting poverty.²²²

Key messages

- Insecure tenure reduces people's incentives to make long-term investments in land restoration because they have no long-term rights to the land. Because women have even less access to (and control of) land than men, targeted interventions may be needed. Also, because customary practices and laws that limit women's right to land may prevail over legislation that guarantees their right, there may be need for capacity building and increasing the awareness of stakeholders in the communities on the important role of secure land rights for women and other minority groups.
- Gender analyses at the beginning of land restoration facilitate better understanding of land rights in the community. Understanding local customs and social norms and how they influence land rights gives planners a realistic view of what the project will need to address: what rights men and women in the communities have, hinderances women face in accessing land, whether there is a desire for change by either men or women, what is the potential benefit or harm of change and to whom. This understanding also enables planners to build on existing institutions.
- It is important to improve women's and communities' legal literacy about land rights and to equip them with skills and technologies to conserve and manage their land and related resources.
- Monitoring and evaluation throughout the project provide information for project implementers on whether the project is meeting its targets.
- Involving both women and men is an important prerequisite for equitable and successful land restoration. The involvement of different stakeholders in implementation may increase chances of the project meeting its targets.

5.4 Empowering women and ensuring their equal and meaningful participation

For land restoration to be effective and gender-responsive, active participation by women is very important. This goes beyond merely involving women in the process. It requires that women and men have equal voice and influence in strategic decisions related to the land-restoration initiatives. Initiatives that are gender-blind or that exclude women may exacerbate gender inequalities.^{223, 224, 225, 226}

Discriminatory gender norms and practices,²²⁷ exclusionary institutions,²²⁸ and persistent information asymmetries,²²⁹ among other factors, may limit women's ability to voice their views and interests. It is therefore important that both women and men are recognized as rights holders and legitimate stakeholders who can exercise their voice and agency to influence decisions.^{230, 231}

When gender-sensitive approaches are taken and women are involved actively in land restoration and are assigned the role of managers of resources, there can be spillover benefits for women, the community and the environment in general.²³² Women and men use and manage forests differently, and women's use of forests products and management of the forests is likely to be less visible if no effort is made to incorporate their needs and input.^{233, 234, 235, 236, 237}

The promotion of women's participation in land restoration may entail independent legal status, increased access to technology, and improved organization and managerial capacity. Increased awareness amongst government units and NGOs of the less-visible roles that women play, along with targeted interventions in areas of policy and legislation, training and collective action, could enable women to benefit more from their current activities and perhaps to expand into new areas of value chains.²³⁸

In the **Ghana** case (Box 6 and Appendix 3, Case 4), traditional gender stereotypes (in which women are expected to focus on non-forest-related work) were demystified. This case describes a project that empowered women to gradually participate in the formal economy, decision-making processes and land restoration.²³⁹ Before the project, significant gender inequalities existed in how women and men accessed land and forest resources.

BOX 6

Ghana: Public–private partnership for the restoration of degraded forests

The objective of the Ghana Public Private Partnership for the Restoration of Degraded Forests in Tain II, Asubima and Afrensu Brohuma Forest Reserves was to restore degraded forest reserves by establishing 11,700 ha of sustainable commercial forest plantations.

The government of Ghana signed a 50-year lease and a benefit sharing agreement with the local people and Form Ghana Ltd., a forest plantation-management company. A socio-environmental impact-mitigation action plan was created in 2015, and an environmental and social impact assessment in 2016 generated information about the living conditions of local people.

The action plan identified a package for livelihood support and assistance to people affected by the project. This package was offered to female-headed households, cattle-herding households, and settler and farmer households. This greatly improved the purchasing power of the women.

The project noted the gender inequalities in terms of how women and men in the project areas accessed land and forest resources within the reserve. Gender-inclusive consultation and participation by local communities at the beginning of the project ensured that gender was taken into consideration during implementation. Findings from the environmental and social impact assessment, the action plan, and the public consultation processes, led to gender being mainstreamed in the following ways:

- Encouraging women to apply for jobs
- Establishing affirmative actions in recruitment processes
- Providing training and capacity building opportunities to female employees with potential talent for leadership
- Supporting the women's association at the company
- Hosting regular meetings with women and men in the communities
- Developing a gender policy for the company with principles and procedures addressing equal rights, responsibilities, and opportunities for both women and men.

Forty percent of the jobs created were allocated to women, as well as 25% of the land allocated to local people for intercropping. Two daycare facilities were established so women employees could bring their small children to work. Both men and women employees were trained on sustainable forest management, restoration of the degraded forests, carbon sequestration, tree-nursery management, tree planting and growing, monitoring, teamwork and leadership, and computer literacy, among others. This training enabled women to be involved in non-traditional activities.

Gender-inclusive consultations and participation by local communities at the beginning of the project ensured that the project reflected the needs, roles and challenges faced by each gender. The project targeted interventions to encourage women's participation in restoration.

Public awareness and training sessions enabled women to play roles that were usually set aside for men. Women workers are encouraged to disregard cultural beliefs and practices that prevent them from taking advantage of these opportunities. The project convinced the local community of the necessity of women's involvement in the planning and decision-making processes and highlighted the crucial role women play in restoration. After the project, the behavior of men in the community changed: they were more ready to accept and support women in activities normally set aside for men, such as truck driving and using chainsaws.

The implementing agency —Form Ghana Ltd—founded a support group dubbed "The Ladies Club". This provided a safe haven for women to discuss their problems and find solutions. Furthermore, the project empowered women to work by providing daycare facilities at the two sites for children under three years.

Key messages

- If land restoration is to succeed, it must be participatory, with all players (especially women) given fair and ample opportunity to take part and benefit. Sometimes quotas are needed to ensure women's representation and their active participation.

- Assessments to understand the environmental, social and gender issues in a proposed project are critical. They should be done before the project is designed, and the information used to inform and improve the land-restoration initiatives.
- It is necessary to understand women's time and mobility constraints, and the gender division of labor, then to build opportunities around to improve women's participation. Time away from home can hinder women's involvement. The opportunity-costs of time away from household responsibilities and the security concerns related to their engagement in a field that is culturally set aside for men should be taken into consideration. Simple solutions to free up women's time, such as facilitating child-care services, can improve their participation.
- Capacity building through training and transfer of skills, as well as offering a platform for women to practice acquired skills, can enhance women's participation in project activities.
- Public-awareness exercises on gender and land restoration are important for getting buy-in for projects, and for garnering support for women to take on roles that are culturally set aside for men.

5.5 Developing and/or Supporting Gender-Responsive Policies, Regulation and Interventions

An enabling environment is vital to safeguard women's rights and to ensure women's views and priorities are adequately reflected in land restoration. National and international policy frameworks play a key role in promoting a positive environment to address gender issues at all stages of an intervention.

Although women play essential roles in the management of forest landscapes, their tenure rights are much less secure than men's across most developing countries.²⁴⁰ Land- and forest-sector laws, strategies, regulations, and interventions that protect and enhance gender-responsive land restoration include:

- Legal frameworks that reflect land and forests' multiple uses and diverse users' rights
- Contracts related to land restoration signed by both spouses
- Laws that recognize community-based tenure, including specific provisions on respecting and protecting women's rights.²⁴¹

Policies that change discriminatory practices must go beyond women's right to own land and account for the quality of land rights. They must put in place appropriate frameworks to back up women's land rights and take measures to implement them properly. They must also ensure active participation and enforceability of the land rights.

National policies and strategies may contribute to gender mainstreaming by providing a first negotiation stage and an opportunity to prioritize gender in the project design and implementation.²⁴² The Lao PDR case (Box 7 and Appendix 3, Case 5) presents an example of a policy reform that was intended to improve participation and gender equality in land management. The national forestry strategy and the community-engagement framework presented inclusive institutional frameworks for engagement and participation in forest policies by women, indigenous persons, civil society, and the private sector. The framework established processes for mainstreaming gender in land restoration and also established procedures for assisting those facing temporary or permanent loss of access to resources, resettlement and grievance mechanisms through the national system.

Key messages

- Supportive frameworks such as the Lao national forestry strategy and the community engagement framework provide an enabling environment for gender-responsive land restoration. The development of frameworks such as community engagement are important as they articulate the processes for engaging with local communities, women and men.
- Community consultation, including explicit consultation with women, and the recognition of gender differences and needs, are essential for supporting sustainable land restoration and livelihoods.
- Participatory assessments and involvement of local stakeholders in planning, monitoring and evaluation of projects should be core elements of land restoration. The information can be used to improve existing frameworks, strategies, policies, and plans, or to create new ones that would improve the participation of women and men.
- The inclusion of female facilitators with local language skills in project extension and livelihood teams, especially in minority ethnic communities.

BOX 7**Lao PDR: SUFORD-SU participatory forest management project**

Lao PDR embarked on an ambitious reform of the forestry sector to achieve economic growth that is more sustainable, more resilient, and more inclusive. The National Forestry Strategy to the Year 2020 highlights the need to enhance “village-based natural resource management for poverty eradication” as a key policy direction.

The objectives of the Sustainable Forestry for Rural Development (SUFORD-SU) project were to:

- Sustainably manage production forest
- Alleviate rural poverty
- Improve policy and legal frameworks for sustainable forest management

The project sought to improve the policy, legal, and incentive framework enabling the expansion of participatory sustainable forest management in priority production forest areas. It attempted to improve villagers’ well-being and livelihoods by harnessing the benefits from sustainable timber harvesting and extraction of other forest products.

Women and girls have equal rights to land and forests under the Lao constitution. It attempted to improve villagers’ well-being and livelihoods by harnessing the benefits from sustainable timber harvesting and extraction of other forest products. The project collaborated with the Lao Women’s Union and sub-Committee for the Advancement of Women to work at the village level in 13 provinces on forestry, agriculture, village development, weaving, and other alternative livelihood issues.

A key strategy in forest projects and REDD+ consultations in Lao PDR has been the inclusion of female facilitators with local language skills as part of project extension and livelihood teams, especially in minority ethnic communities. At the national level, there are few women foresters. In the national REDD+ program, however, the Lao Women’s Union and Lao Front for National Construction (ethnic languages) are engaged in the Safeguards and Stakeholder Participation Technical Working Group. Eight of 36 participants in the six technical working groups have been women.

Forestry officers, villagers and village forest associations were actively involved in forest inventory, discussions to prepare forest management plans, pre-harvest inventories, harvesting, postharvest assessment, restoration, monitoring and evaluation.

A requirement for funding of the project was development of a community engagement framework, which outlined processes for engaging with ethnic communities, women and men, as well as how to include free prior and informed consent and cover preparation of both forest management plans and community action plans. The framework also established procedures for assisting those facing temporary or permanent loss of access to resources, as well as resettlement and grievance mechanisms through the national system. All interviewed villagers reported that they had been consulted, including women and ethnic groups.

5.6 Strengthening access to credit and value chains

In many rural areas, women have little or no access to credit in land-restoration projects. Interventions to strengthen equitable access to credit are crucial in many countries. These include programs targeted at women and other traditionally less-empowered groups in communities where land restoration is taking place or planned. For example, loans or grants may be given to women to improve their purchasing power.²⁴³

Land-restoration interventions therefore need to strengthen equitable access to credit and markets for women and other traditionally less-empowered groups. In many forest value-chains, women are active in harvesting and small-scale retail trade, while men are involved in larger forest-related businesses. Interventions aimed at improving the position of women may include improved technology and marketing advice, infrastructural support, value-addition to products, and improved marketing.²⁴⁴

BOX 8

Vietnam: Unlocking the entrepreneurial power of indigenous women to protect forests

The United Nations' Reducing Emissions from Deforestation and Forest Degradation program, or UN-REDD+, has as its main priorities reforestation, ensuring biodiversity conservation of the tropical forest, increasing forest carbon stocks, and implementing sustainable forest management.

In Vietnam, the program has worked with the government and local stakeholders to ensure that women and men, across all stakeholder groups, not only benefitted from REDD+ action but were also actively engaged in its implementation as well as decision-making processes. The program began with a comprehensive gender analysis of REDD+ in the country, examining progress and room for improvement from the national to local levels. This revealed various needs to address the lack of women's participation in REDD+, including:

- Capacity building on gender and REDD+ with provincial level staff
- The creation of provincial gender focal points
- A gender-specific overhaul of Lam Dong's Provincial REDD+ Action Plan.

The initial Action Plan failed to consider gender equality and women's empowerment. Few women or women's rights organizations had been included in its development. Groups such as the Women's Union, a major civil society body advancing women's rights, were not assigned a clear role or financial resources.

Steps were taken to address these concerns. The revised Provincial REDD+ Action Plan included greater consideration of civil society groups working on gender issues in ethnic minority communities. This resulted in more innovative collaborations between the government and women's groups.

For instance, empowered by a special provincial decision, the Lam Dong Forest Protection Department has joined forces with the Women's Union, developing joint work-planning activities to raise awareness and promote women's inclusion in forest reforestation and management activities. UNDP worked actively with the government to develop markets and partnerships for natural forest-based economic models which support the active participation of women.

In Lao Cai province, public-private partnerships are being piloted between the provincial government and ethnic minority communities and businesses focusing on traditional medicines. Through this initiative, traditional medicines managed and harvested according to indigenous knowledge and practices are being sold by local women to partner companies that provide the market access that the women previously lacked. UNDP worked with the women to complement their ancestral knowledge with training on sustainable harvesting techniques.

UNDP also helped to set up cooperatives at the commune level comprised of the women involved in harvesting activities. These cooperatives oversee the collection of medicinal plants, ensure environmental sustainability and product-quality control, and ensure that profits are distributed fairly to beneficiary households.

For local Dao women, who are dependent on forests for their income, these partnerships have had a significant positive impact on their livelihoods by increasing their incomes and securing a viable future for both their traditional knowledge and the sustainable use of the forest.

Other examples of successful interventions include the creation of businesses in the mushroom chain in Mexico,²⁴⁵ honey in Rwanda,²⁴⁶ shea in Mali,²⁴⁷ and non-timber forest-product chains in Africa.²⁴⁸

Women producers may also be organized into groups and connected to traders, as was done in the *sabai* grass (*Eulaliopsis binata*) chain in India²⁴⁹ and the shea chain in Senegal.²⁵⁰

Group-based lending has enabled some women to overcome requirements for collateral, although, in many regions, formal financial institutions still require official land titles.²⁵¹

Efficiency as well as equity may also be enhanced through:

- Inclusive market-oriented activities such as quality-improvement campaigns and greater recognition of informal markets
- Support for collective action where this can provide women with greater voice, negotiating power, and help with economies of scale
- Targeted training that address areas identified by women as important
- Time-saving technologies
- Support systems such as childcare
- Creating greater gender awareness amongst stakeholders.^{252, 253}

The importance of income-generating activities and microfinance in land restoration is also well demonstrated by the Swedish International Development Cooperation Agency program in the **Sahel** region (Burkina Faso, Niger and Senegal). In collaboration with the secretariat of the United Nations Office to Combat Desertification, the program promoted local land management that included resource-management training, income-generating activities, and microfinance for women. This improved women's participation in restoration efforts and showed that restoration should incorporate local land-users' needs, including both women and men.²⁵⁴

The **Vietnam** case study (Box 8 and Appendix 3, Case 6) strengthened women's land rights and value chains. Although Vietnamese land law does not allow discrimination against women in decisions about land, women in rural areas still have limited involvement in managing land and forests. The project team addressed this by working with the government and women's groups to develop a REDD+ Action Plan which improved women's participation in land restoration.

Empowered by a special provincial decision, the Lam Dong Forest Protection Department joined forces with the Women's Union to develop joint work-planning activities, raise awareness, and promote women's inclusion in forest management.

The case also illustrates how traditional knowledge of women and ethnic minorities can be leveraged in the stewardship of forests, REDD+ action, and economic development. This has the potential to operate at a larger scale.

The case shows how a country can promote the equitable inclusion and empowerment of women across the complex landscape of REDD+ and forest governance. This may not only preserve women's traditional forest knowledge and ensure they benefit from forest programs, but also promote the sustainable, long-term success of forest restoration and REDD+.

The case also illustrates the importance of incorporating women and men in project planning. When women were ignored in the development of action plans, women's participation in forest restoration was limited. When the plan was revised with significant input from women, their participation in forest-resource governance and restoration was greatly improved, thereby improving resource restoration.

Consideration and support for value chains are especially important in land restoration, as demonstrated in the **Ghana** case (Box 6). Engagement in small businesses provided additional income for food, school fees and clothing. Drinking water systems and training improved hygiene and health. Women's self-esteem and social position improved due to their entrepreneurial success.

Another project that increased access to credit and resources for women is SUFORD-SU in **Lao PDR** (Box 7). Where when credit schemes were missing, the village authorities on their own initiative converted the grants they received into revolving credits, benefiting more people than was originally planned.

Key messages

- Land restoration should begin with a comprehensive gender analysis, examining gaps, progress and room for improvement from the national to local levels. The information can then be used to develop gender strategies that address and improve women's participation in land restoration.
- Even when laws exist that prevent discrimination against women, in many rural communities women continue to have limited access to land and forest resources. Without carefully taking gender into consideration, there are likely to be inequalities in the way that women and men are involved in and benefit from land restoration.
- Gender sensitivity in project planning can help communities restore their land, while also supporting income-generating activities, food security and livelihoods. Associating economic activities with land-restoration efforts encourages rural women and men to take an interest in environmentally sound activities.
- Interventions that strengthen equitable access to value chains in natural resources for women and other traditionally less empowered groups are more likely to be sustainable and successful. Efficiency as well as equity in land restoration may be enhanced through the creation of inclusive market-oriented activities.

- Increasing awareness among government agencies and NGOs of the roles that women play and targeted interventions, particularly in training and collective action, would enable women to benefit more from their current activities and perhaps from expanding into new areas of value chains.
- Indigenous knowledge and culture traits should be incorporated into land-restoration efforts. However, care is needed to ensure that this does not widen gender gaps. Knowledge, values, attitudes and behavior patterns should be in harmony with more sustainable forms of development.

5.7 Raising Awareness, Training and Capacity Building

Capacity building, project-specific training, peer exchange and lateral learning on gender mainstreaming are essential to promote gender equality in land restoration. Leadership and technical trainings targeted at women are important for enhanced and more sustainable management of land and forests.

Women's skills and knowledge can be improved through targeted actions such as custom-tailored trainings on technology transfer, business development, and skills in leadership, negotiation and using market information, as well as approaches that integrate women's and men's traditional knowledge in restoration.^{255, 256} Training women and youth in harvesting and processing technologies for forest products such as grasses, herbs, cosmetics, medicinal plants, and honey are important for sustainable use of restored resources.²⁵⁷ In **Brazil's** Bolsa Floresta Program (Box 4), over 190 groups were set up to receive training in group work; 15 groups were created by and are made up of women. Over 7,300 participants (32% of them women) attended 539 courses on rural organization and the management of associations. By the end of the project, women's participation reached 43% in environmental training courses; this figure demonstrates the interest of women in this issue.²⁵⁸ The training and public awareness were also targeted to government officials, NGOs, CSOs and other groups within the community. This ensured that various stakeholders understood the importance of gender in their work and did not target only men in their interventions.

The **Jordan** case study (Box 9, and Appendix 3, Case 7) demonstrates the importance of capacity building and training in land restoration and improvement of livelihoods. Capacity building at both national and local levels ensured that sustainable land-management practices were inculcated in government plans and budgets.

Community empowerment for local farmers raised awareness on the importance of environmental conservation and highlighted the role of local participation in conservation efforts. The project also included sustainable agriculture and sustainable animal grazing, the rehabilitation and protection of water springs, and drip irrigation for small- and medium-scale farmers. The project focused on building local and national capacities in literacy, livelihoods, agriculture, and income-generating enterprises. It strengthened the capacity of the Ministry of Agriculture's Gender Division, enabling policymakers and practitioners at the national and subnational levels to build awareness and assume ownership of initiatives. The project included a range of activities targeting women, including life-skills and technical training, savings-and-credit groups and microfinance, and support to establish microenterprises. These are among the more successful and appreciated activities of the project. Women showed great interest in training and capacity-building exercises, and even attended classes such as engineering that were normally mainly taken by men. Furthermore, women were given opportunities to lead some of the training sessions. This empowered them to participate actively in the restoration project and to influence decision making within their communities.

The case study also illustrates that a comprehensive approach to awareness can help address the low sense of ownership in communities in the restoration processes, and resolve misunderstandings related to that land restoration. Capacity building was also availed for stakeholders outside of the project communities, for example, the Ministry of Agriculture's Gender Division. An independent project evaluation found the project as a success in restoration and rehabilitation, with critical uptake of agro-ecosystem restoration and reduced erosion practices, which in tandem enabled climate-change adaptation and mitigation, and improved biodiversity.

Similar projects to improve capacity were carried out by IUCN in Malawi and by UN Women in Kyrgyzstan and Tajikistan. These included extensive training for government staff and civil society groups with an aim of improving gender sensitivity in land restoration. In Kyrgyzstan and Tajikistan, village- and district-level land specialists were trained on gender-sensitive data collection to ensure that data collected reflect rural communities' concerns and provide information to inform policy and implementation of land restoration.²⁵⁹

BOX 9

Jordan: Agricultural Resource Management Project Phase II (ARMP II)

The ARMP-II was aimed at improving food and water security and income levels of 22,300 households (134,000 people) including 13,500 small and medium farmers, 2,700 rural landless and 6,100 other disadvantaged households in Jordan. The project consisted of seven components:

- Community development
- Resource management
- Sustainable land management
- Agricultural development
- Rural roads
- Rural financial services
- Project coordination and management.

Most of the project financing was dedicated to improving natural resource management: for example, investment in soil and water conservation, rainwater harvesting, afforestation, watershed development, more efficient irrigation, and reduced water loss. Activities included stone terracing, contour bunding, building stone basins for trees and rainwater-harvesting cisterns, fencing, tree planting, and orchard establishment. Water technologies such as the restoration and protection of springs, on-farm water storage, and drip irrigation, increased water supply, thus improving the productivity of the land.

Increasing women's participation in community development and economic activity was one of ARMP II's priorities. The focus was on including women in project activities; this was important because mixed-gender groups are not common in rural Jordan. Women were especially targeted to increase their participation in community-level planning, soil and water conservation, rainwater harvesting, afforestation, watershed development, improved efficiency of irrigation systems and reduced water loss. Women were also integrated into the project's overall participatory process through activities such as training programs focused on literacy, livelihoods, agriculture, support to establish small income-generating enterprises and strengthening and expanding the capacity of the Ministry of Agriculture's Gender Division.

The project provided training to more than 9,000 women on dairy processing, fruit and vegetable processing, mushroom cultivation, poultry raising and home gardens. This significantly improved the orchard and agricultural land productivity and reduced women's workload for fetching water. As of 2013, women had established 400 microenterprises. Woman-to-woman training in grey-water management had a 100% success rate, compared to just a 20% rate for men. The courses offered were also gender sensitive: one course was offered on "involving rural women in agriculture". Further, more women were assigned the role of course advisers.

The Dana Women's Association rebuilt a spring source at the upper end of the Dana Biosphere Reserve and reinstated olive trees and orchards in the locality. These activities improved water supply to 150 families who are now able to get three times as much water as before. The rehabilitated olive trees improved in yield, and the water supplied was used to grow more figs, grapes, apricots and pomegranates. These fruits are sold by the association making women more empowered economically.

Key messages

- Training and capacity building for women, men and at different levels, including government officials, is a critical component of land restoration. More effort is needed to specifically address women's concerns when designing training packages, as this is an easy entry point to enhancing their roles and benefits from land restoration.
- It is important to understand the different roles, rights, and responsibilities of men and women for efficient and effective land restoration. Capacity-building exercises may improve women's ability to participate actively in land restoration.

- Training on gender-sensitive data collection is important to ensure that data collected is sex-disaggregated and to provide gender-sensitive information to inform land restoration and other relevant policies and frameworks. The training should include women as well as other stakeholders at different governance levels.
- A participatory approach can improve the identification of gender gaps to address in land-restoration projects. Involving local communities in the identification of needs and challenges and giving them an opportunity to suggest solutions should be done during the planning stage.

5.8 Supporting Inclusive Institutions and Creating Partnerships, Groups and Alliances

Successful land restoration requires collective action and strong multi-level governance approach and collaboration with institutions, partnerships, alliances and networks. This is because the institutions and structures hindering women's participation and gender equality can be found at various levels of governance. Without strong and supportive institutions in place, women's participation in land restoration is vulnerable to gender-exclusive social norms, low social status, and other behavioral barriers.

Creation of partnerships, groups and alliances with NGOs, civil-society actors, community organizations, extension-service providers, gender ministries, local councils, cooperatives, and the private sector may open up key decision-making arenas to women.²⁶⁰

Measures to support women's participation include putting in place rules and regulations. The rules may be as simple as helping women form groups and lead restoration efforts or asking communal leaders to help women speak out in meetings and become more confident. Setting aside dedicated spaces such as schools or fields where women can meet and discuss their concerns about the restoration initiatives or community issues may be a starting point for improving their participation. More complex measures may involve formulating specific frameworks or strategies for mainstreaming gender in land restoration.

Groups and networks that link up and empower women in land restoration are increasingly being recognized as offering innovative investment opportunities.²⁶¹ For example, in Senegal, through the Feed the Future project, women were allocated parcels of degraded, abandoned land.

They organized themselves and used innovative conservation-agriculture techniques to make the land more productive and resilient and to sustain low maintenance, micro-nutrient-rich crops.²⁶²

The Green Belt Movement in **Kenya** (Box 10, and Appendix 3, Case 8) started with a small group of women in response to increasing drought. It grew to support many women across the country to participate in land restoration. This case study shows that when women organize, when they form into groups and connect with each other, they are better able to make changes in their own lives, their communities, legislation, and restrictive social norms. The creation of local institutions that address gender issues can result in successful land-restoration efforts. The Green Belt Movement focused on women as key players in protecting the environment, which led to improved living conditions for families whose women were initially marginalized due to culture and lack of empowerment. Small-scale nurseries were set up as one of the main project activities. Of these nurseries, 70% were managed by women, and the remaining 30% were managed by mixed groups of men and women. The case also shows the importance of engaging men and creating a space for their involvement in the project.

Other examples include the following:²⁶³

- The sustainable land-management initiative in **Dominica** involved the National Council of Women in providing technical support for gender mainstreaming.
- The sustainable land-management project in **Albania** designated the Kolonja Women's Association to lead the development of baseline gender analysis and used quotas to enlist women's participation in training activities.
- The community-based Sustainable Dryland Forest Management project in The **Gambia** used the expertise of the Agency for the Development of Women and Children to coordinate participatory gender-based activities in forest conservation.

Key messages

- Organizing women into groups can result in effective collective action. This can help women overcome their reluctance to speak out, act or participate in land restoration. This may also be helpful when it comes to addressing labor challenges and accessing resources and support services. It can also enable women to have voice and agency when it comes to advocacy on land restoration issues.

BOX 10

Kenya: Green Belt Movement

The Green Belt Movement was founded by Wangari Maathai in 1977 to respond to the needs of rural Kenyan women who said that their streams were drying up, their food supply was becoming less secure, and they had to walk further and further to get wood for fuel and fencing.

The movement combines a grassroots approach with international advocacy. At the grassroots level, the goal is to create climate-resilient communities by restoring and protecting forest watersheds, and to create sustainable livelihoods for communities in Kenya and across Africa. At the international level, the movement advocates for environmental policy that ensures the protection of natural forests and community rights, especially communities living close to and in forest ecosystems in the Congo basin and elsewhere in sub-Saharan Africa.

The Green Belt Movement empowers women's groups to plant trees for watershed protection, food security, livelihoods and biodiversity. While the target stakeholders were women, the movement later also included men and young people in various activities. It has created networks and alliances to advocate for land and forest issues at the national level. It runs community empowerment and education workshops to educate communities on their civic rights and sustainable environmental management. It advocates for more democratic space and more accountability from policymakers and seeks for grabbed land to be returned and forests to be protected and restored in various parts of the country. The main activities include:

- Tree planting and water harvesting
- Mainstream advocacy
- Climate change program
- Gender, livelihood and advocacy.

The movement empowers women through conservation activities and gives them alternatives to improve their livelihoods – using tree planting as an entry point. When women are working together in tree-nursery groups, they support each other, discuss issues of importance, prioritize issues and tackle them.

In its over 40 years of operation, the movement has developed a network of over 4,900 community groups using the watershed-based approach; most of the members are women. Communities help protect the country's "water towers." As part of the water-based approach, the movement initiated a campaign dubbed "#ChangeTheStory" with the aim of planting 30 million trees in the watersheds.

In addition, it has carried out advocacy for improved land and forest governance. These have resulted in 151 titles being revoked by the National Land Commission, with over 2,000 acres of previously sold land reverting to the Kenya Forest Service.

- Supporting inclusive institutions and creating partnerships, groups and alliances may enable women to participate more actively in land restoration. When women organize, when they form into groups and connect with each other in larger groups, they can make changes in their own lives, their communities, legislation, and social norms.
- Land-restoration initiatives need to address specific environmental and developmental challenges and provide solutions that best suit women and men's needs and aspirations. In this way, women and men have incentives to participate in land restoration and ensure that it is sustainable.
- Civic education to the communities and improving their awareness can result in successful advocacy for more democratic space for women, more accountability from policymakers, and the return and restoration of grabbed lands.

6. CONCLUSIONS

This paper has reviewed the literature and a wide range of land-restoration projects and programs in eight countries to showcase how to mainstream gender in land-restoration initiatives, investments, project activities, and actions across a range of different environments. Several lessons can be discerned (summarized in Table 2). While some of these lessons may not work in some countries and require context-specific analysis, they can be taken up by practitioners and policymakers in land-restoration efforts.

The paper argues that **gender considerations must be central in land restoration** to avoid perpetuating gender inequalities, to encourage women and men to contribute to restoration efforts, and to provide greater opportunities and enhanced wellbeing for women and men alike. All the case studies demonstrate the merits of carefully taking gender issues into consideration. Women and all vulnerable groups need to be involved early on and be fully recognized as beneficiaries and active participants. Embedding gender into land-restoration activities provides opportunities for leveraging synergies between restoration commitments, local environmental and development needs, and global commitments to sustainable development. Doing so empowers women to play more meaningful roles in land restoration and their communities.

Land-restoration programs or initiatives should not be assumed to be gender neutral. Programs or initiatives should, whether new or old, be screened for possible gender-differentiated impacts to understand the differing needs, roles, responsibilities, and knowledge in managing land and natural resources that exist between men and women. This should be done before the initiative is designed or implemented. Gender analysis and collecting sex-disaggregated data are important for providing insights into the roles, responsibilities, uses, rights and practices that affect the way that women and men from various socio-economic and cultural groups in the target areas use and manage natural resources. As demonstrated by the Ghana,

Jordan, Lao PDR, Malawi, and Vietnam cases, involving local communities, especially women, in assessments and at the design stage of a project ensures that gender needs are better considered. It is especially important to work with both men and women in the assessments as their needs and preferences are different.

Supporting or putting in place an enabling environment. A suitable legal, regulatory, and institutional framework to support all groups in the communities to participate in land restoration is important. All the case studies highlight the importance of recognizing the participatory aspects of the gender dimension. In all case studies, women (and women's groups) are active participants in restoration initiatives. In addition, the cases provide examples of how to ensure full and effective participation in restoration projects and point out the possible barriers for women's involvement. The policies and implementation programs and projects in Brazil, Ethiopia, Malawi, and Vietnam demonstrate gender-responsive policies, strategies and frameworks can support land use, forest conservation and sustainable land restoration. Where laws exist but are not implemented properly due to customary norms and belief, as in the Lao PDR and Ghana case studies, support for their effective implementation, including addressing the political, legal and cultural barriers to their realization, would be important.

Strengthening women's land rights and tenure security is critical for successful land restoration. All the case studies and the literature review affirm the argument that women's land rights and tenure security are fundamental for successful land restoration. Given how important land rights are for land restoration, addressing and improving women's land rights and tenure security should be at the forefront of all land-restoration initiatives.

Interventions to meet local needs and enabling women and other vulnerable groups access to financial resources and other assets should be part and parcel of all land-restoration initiatives.

This enables them to meet their household and community needs and improve their livelihoods, so reducing conflicts with the objectives of the restoration initiatives. Land restoration should not increase women's or poor people's burdens. The cases illustrate the importance of including supportive services and income-generating activities such as development of business opportunities, credit facilities, social services, loans, cash transfers, and credit-driven activities. For example, Brazil's cash payments to women, Lao PDR's revolving credit schemes, Vietnam's women's cooperatives, and Kenya's financial compensation to nursery groups for every tree seedling that is planted and survives, improved women and household well-being through impacts on health, purchasing power, household productivity and resource allocation, asset consolidation, and reduction of inequality.

Targeted actions to strengthen women's participation and rights and access to land and other natural resources should be incorporated in all land-restoration initiatives. All case studies show that the active involvement of both men and women at various levels in restoration efforts should not be taken for granted. In many cases women's participation needs to be encouraged and supported. The case studies also highlight the importance of understanding the local norms and beliefs that may determine the different roles and responsibilities of men and women. The Ghana project ensured that all female workers are part of the timber and wood workers union of Ghana. In the Brazil, Ghana, and Lao PDR cases, women

were encouraged to participate in non-traditional activities, resulting in spillover benefits for women, the community and the environment.

Addressing gendered access to, use and control of restored land, and interventions for new technology, information and training related to land and ecosystems restoration are critical. Training and capacity-building can equip local communities (especially women), policymakers and project implementors with technical know-how on the nexus of gender and land restoration, as well as with the skills and capacity to participate and engage in sustainable land management and land restoration. All the case studies had some aspects of capacity building. In the Ghana, Jordan, Kenya, Lao PDR, Malawi, and Vietnam cases, gender-based constraints were identified and strategies designed to tackle gender issues via training, capacity building and public awareness for women and men.

Successful land restoration requires collective action and strong multi-level governance approach via institutions, partnerships, alliances and networks. Institutions hindering women's participation and gender inequality can be found at different levels of governance. All the projects in the cases involved many partners. The Brazil, Ghana, Kenya, Lao PDR, and Malawi cases show the importance of strategic partnerships, networks, and groups. Strong and active links to national and regional networks of women's and local organizations gave shape to the projects' concepts and supported their implementation.

TABLE 2
Promising gender mainstreaming approaches and practices in land restoration

Approach	Practices
Gender analyses using sex-disaggregated data	Assessments to understand environmental, social and gender issues in the proposed land-restoration project are critical and should be done before the design of land-restoration projects. The information obtained may then be used to inform and improve land-restoration initiatives. Mainstreaming gender in land restoration should start right from the design stage to implementation phase. Comprehensive gender analyses not only to ensure women's involvement but also uncover existing social and gender inequalities. Frameworks such as Restoration Opportunities Assessment Methodology can improve mainstreaming. Facts pertinent to the project should be communicated to all stakeholders, and all must have opportunity to voice their concerns. Gender analyses at the beginning of land restoration and the utilization of sex-disaggregated data at national and local levels facilitate the identification of gender issues and can help provide information for targeted interventions to meet local needs and address gender gaps. Continuous assessment of progress and success should be used to inform changes in the project approach. Gender-inclusive participation in assessments and planning by local communities in land restoration and at the beginning of the project plays an important role in mainstreaming gender and ensuring that land-restoration projects are reflective of community needs, roles and challenges faced by each gender.

TABLE 2
Promising gender mainstreaming approaches and practices in land restoration (*continued*)

Approach	Practices
Equalizing access to use and control over productive and natural resources, and benefits and income from land restoration	Targeted interventions to women are important for promotion of equitable land restoration outcomes. Women's access, use and control of restored resources may be enhanced through greater recognition of informal markets, the opportunities and constraints associated with them, and their position relative to markets. This can then act as an incentive for their involvement in the restoration initiatives and for protecting the restored land. Interventions that strengthen equitable access to value chains in natural resources for women and other less-empowered groups are more likely to be sustainable and successful. Efficiency and equity may be enhanced through the creation of inclusive market-oriented activities.
Strengthening women's land rights and tenure security	Insecure land tenure reduces people's incentives to make long-term investments in land restoration because they have no long-term or permanent rights to the land. Because women have even less access to (and control over) land than men, targeted interventions that improve women's rights to land and resources from restoration may need to be put in place for successful land restoration. Where customary practices and laws that limit women's right to land exist and prevail over legislation that guarantees women's rights, project planners need to improve the awareness of various stakeholders in the communities of the important role of secure land rights for women and other minority groups. Gender analyses at the beginning of land restoration facilitate better understanding of land rights in the community in which land restoration is to take place. Understanding local customs and social norms and how they influence land rights will give project planners a realistic view of what the project will need to address — what rights men and women in the communities have, the hindrances women face in accessing land, whether there is a desire for change by either men or women, what is the potential benefit or harm of change and to whom — and build on existing institutions. Sustaining outreach and improving women's and communities' legal literacy about land rights, and ensuring that rural and indigenous women are equipped with skills and new technologies to conserve and manage their land and related resources, are important in land restoration.
Empowering women and ensuring their equal and meaningful participation	If land restoration is to succeed, it must be participatory, with all players especially women given fair and ample opportunity to take part in and benefit from the restoration programs. Sometimes quotas may need to be set to ensure women's representation and the active participation in land restoration. The involvement of both women and men is an important prerequisite for equitable and successful land restoration. The involvement of different stakeholders in project implementation may increase the likelihood of success in land-restoration initiatives. Understanding women's time and mobility constraints and divisions of labor, and building opportunities around these, may improve their participation in land restoration. Time away from home can hinder women's involvement. The opportunity-costs of time away from household responsibilities and the security concerns related to their engagement in a field that is culturally set aside for men should be taken into consideration. Simple solutions to free women's time, such as facilitating child-care services, can improve their participation. The inclusion of female facilitators with local language skills as part of project extension and livelihood teams, especially in minority ethnic communities, is important.
Developing and/or supporting gender-responsive policies regulation and interventions for land restoration at the subnational and national levels	Supportive frameworks such as national land and forestry strategies and community engagement provide an enabling environment for gender-responsive land restoration. Such frameworks articulate the processes for engaging with local communities, women, and men. Even when laws exist that prevent discrimination against women in decisions about land, women in many rural communities still have limited access to land and natural resources. Without taking gender into consideration, there will likely be gender inequalities in the way that women and men are involved in and benefit from land restoration. Participatory assessments and involvement of local stakeholders in planning, monitoring and evaluation should be core elements of land restoration. The information can be used to improve frameworks, strategies, policies, and plans, or to create new ones that would improve the participation of women and men.

TABLE 2
Promising gender mainstreaming approaches and practices in land restoration (*continued*)

Approach	Practices
Strengthening women's access to credit and value chains for natural resources	Land-restoration projects and programs need to address specific environmental and developmental challenges and provide solutions that best suit women and men's needs and aspirations. In this way, women and men have incentives to participate in land restoration and ensure that it is sustainable. Gender sensitivity in project planning can help communities restore their land, while also supporting income-generating activities, food security and livelihoods. Associating economic activities with land-restoration efforts encourages rural women and men to take an interest in environmentally sound activities. Community consultation, including explicit consultation with women and recognition of gender differences and needs, is essential for active participation of women in land restoration and to support sustainable land restoration and livelihoods.
Raising awareness, training and capacity building	Training and capacity-building for women, men and at different levels, including government officials, is a critical component of land restoration. More effort is needed to address women's concerns when designing training packages, as this is an easy entry point to enhancing their roles and benefits from land restoration. Public-awareness exercises on gender and land restoration are important for buy-in for land-restoration projects and to garner support for women's participation in roles that are culturally set aside for men. Indigenous knowledge and culture traits should be incorporated into land-restoration efforts. However, care is needed to ensure that this does not widen gender gaps. Knowledge, values, attitudes and behavior patterns should be in harmony with more sustainable forms of development. Training on gender-sensitive data collection is important to ensure that data collected is sex-disaggregated and to inform land restoration and other relevant policies and frameworks. The training should include women as well as other stakeholders at different governance levels. Capacity-building exercises may improve women's ability to participate actively in land restoration. Offering a platform for women to practice their new skills can enhance women's participation in land-restoration activities. Increased awareness among government units and NGOs of the roles that women play in land restoration and resultant targeted interventions, particularly in training and collective action, could enable women to benefit more from their current activities and perhaps expand into new areas of value chains.
Supporting inclusive institutions and creating partnerships, groups and alliances	Supporting inclusive institutions and creating partnerships, groups and alliances may enable women to participate more actively in land restoration. When women organize and connect with each other in larger groups, they can make changes in their own lives, their communities, legislation, and restrictive social norms. Organizing women into groups can help them overcome their reluctance to speak out, act or participate in land restoration. This may be helpful when it comes to addressing labor challenges and accessing resources and support services. It can also enable women to have voice and agency when it comes to advocacy on land-restoration issues.

APPENDIX 1

Global land-restoration frameworks and initiatives

Agreement or initiative	Goals or objectives
Multilateral	
Paris Agreement (UNFCCC)	Reporting on mitigation activities including agriculture, forestry and other land use (AFOLU) (Article 4; NDCs), conserve and enhance forest carbon stocks through sustainable management of forests (Article 5; REDD+) and enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change (Article 7.1; climate adaptation).
Aichi Biodiversity Targets (CBD)	Halve the rate of loss of forests, ensure at least 17% of terrestrial areas are conserved through effectively and equitably managed protected areas or comparable approaches, restore at least 15% of degraded ecosystems, enhance resilience and contribution of biodiversity to carbon stocks, sustainably manage productive areas to also conserve biodiversity, and conserve and restore ecosystem services. Targets 2, 5, 7, 11, 14 and 15 primarily, though there are others that link more indirectly.
Achieving Land Degradation Neutrality (LDN) (UNCCD)	By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and flooding, and strive to achieve a land degradation-neutral world. Aligns with SDG target 15.3, using the indicator "Proportion of land that is degraded over total land area." Gender is mainstreamed throughout the LDN framework, guiding gender-responsive measures to LDN.
Sustainable Development Goals (SDGs)	SDG Targets 2.4, 6.6, 13.1, 15.1, 15.2, 15.3, 15.4, 15.5, 15.7. Covering: conservation and restoration of ecosystems, land degradation neutrality, halting loss of biodiversity, sustainable land management, resilience and climate adaptation, and sustainable management of natural resources. SDG 5 and its target on gender equality: End all forms of discrimination against all women and girls everywhere Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.
UN strategic plan for forests 2030 (UNFF)	Six Global Forest Goals including sustainable forest management, halt deforestation and forest degradation, including a 3% increase (120 million hectares) in forest area worldwide, by 2030.
Ramsar Convention on Wetlands	Four goals, addressing drivers of degradation and loss of wetlands; effectively conserving and wisely using wetlands.
Sendai Framework for Disaster Risk Reduction	Seven global targets that aim to substantially reduce disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries, for example through ecosystem-based adaptation.
Multi-actor, international	
Bonn Challenge	Restore 150 million hectares of the world's deforested and degraded lands by 2020.
New York Declaration on Forests	Reducing and halting deforestation by 2030, restoring degraded landscapes and forest lands, adding 200 million hectares by 2030 to the initial 150 million hectares of Bonn Challenge goal (see above), reducing emissions from deforestation and degradation and strengthening forest governance.
1 Trillion Trees Campaign	Restore and conserve 1 trillion trees globally, by 2030, to restore biodiversity and address climate change.

Agreement or initiative	Goals or objectives
Ark 2030	Restore and regenerate 500 million hectares of land across five critical landscapes, worldwide.
4 for 1,000	Increase soil carbon stocks by 0.4% per year in the first 30–40 cm of soil, up to 2050.
1,000 landscapes	Achieve regenerative landscape and livelihood ambitions in 1,000 landscapes for 1 billion people by linking currently fragmented efforts, building capacities and unlocking investment finance, by 2030.
Multi-actor, regional	
AFR100	Bring 100 million hectares of degraded and deforested land in Africa into restoration, by 2030.
Great Green Wall	By 2030, restore 100 million hectares of currently degraded land, sequester 250 million tons of carbon and create 10 million jobs in rural areas in the Sahel region.
ECCA 30	Building on the Astana Resolution (2018) to bring 30 million hectares of degraded and deforested land in Europe, the Caucasus and Central Asia into restoration, by 2030.
Initiative 20x20	Restoration initiative in Latin America and the Caribbean to bring 20 million hectares of deforested and degraded land into restoration, by 2020.
Agadir Declaration	Restoration initiative in the Mediterranean region by Silva Mediterranean to restore 8 million ha of degraded and deforested land, by 2030, endorsed by 10 countries.
Regreening Africa	Reverse land degradation among 500,000 households on 1 million hectares, by 2022, in eight countries in sub-Saharan Africa: Ethiopia, Ghana, Kenya, Mali, Niger, Rwanda, Senegal and Somalia.

APPENDIX 2

International frameworks with links to women's land rights

Universal Declaration of Human Rights 1948

Recognizes the right to property (Art. 2).

International Covenant on Civil and Political Rights 1976

Guarantees equality between women and men (Art. 3).

International Covenant on Economic, Social and Cultural Rights 1976

Calls on State parties to “undertake to ensure the equal right of men and women to the enjoyment of all economic, social and cultural rights” (Art.3).

Convention on the Elimination of All Forms of Discrimination against Women 1979

“State parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women, that they participate in and benefit from rural development” (Art. 14.2).

Convention concerning Indigenous and Tribal Peoples in Independent Countries No. 169 of the International Labour Organization (ILO), 1989

“The rights of ownership and possession of the peoples concerned over the lands which they traditionally occupy shall be recognized” (Art. 14.1)

Beijing Platform for Action 1995

Calls for governments to:

- Enable women to obtain affordable housing and access to land by, among other things, removing all obstacles to access, with special emphasis on meeting the needs of women, especially those living in poverty and female heads of household
- Formulate and implement policies and programs that enhance the access of women agricultural and fisheries producers (including subsistence farmers and producers, especially in rural areas) to financial, technical, extension and marketing services
- Provide access to and control of land, appropriate infrastructure and technology in order to increase women's incomes and promote household food security, especially in rural areas.

Istanbul Declaration on Human Settlement and Habitat Agenda 1996

These two documents include obligations related to women's housing and inheritance rights. Under the Habitat Agenda, States commit themselves to “provide legal security of tenure and equal access to land to all people, including women and those living in poverty; and undertaking legislative and administrative reforms to give women full and equal access to economic resources, including the right to inheritance and to ownership of land and other property, credit, natural resources and appropriate technologies” (Sec. 40b).

United Nations Commission on Human Rights

Resolutions on Women's equal ownership of, access to and control over land and the equal rights to own property and to adequate housing (56th, 57th, 59th and 61st sessions)

All four resolutions are relevant. The first resolution (2000/13) affirms that discrimination in law against women with respect to acquiring and securing land, property and housing, as well as financing for land, property and housing, constitutes a violation of women's human right to protection against discrimination. It encourages governments to support the transformation of customs and traditions that discriminate against women and deny women security of tenure and equal ownership of, access to, and control over land and equal rights to own property and to adequate housing and to ensure the right of women to equal treatment in land and agrarian reform as well as in land resettlement schemes and in ownership of property and in adequate housing and to take other measures to increase land and housing availability to women living in poverty, particularly female heads of households.

African Union

Maputo protocol to the African Charter on Human and Peoples Rights (ACHPR) on the Rights of Women in Africa, 2003

Solemn Declaration on Gender Equality in Africa, 2004

Both call for action to address gender inequalities, including women's unequal access to land.

African Charter on Human and People's Rights on the Rights of Women in Africa

African Union, 2005

This addition to the African Charter on Human and Peoples' Rights explicitly protects women against discrimination and stipulates that women have the right to inherit equitable shares from their parents and from their husband as well as the right to buy and manage their own land.

Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security

2011

Outline principles and practices that governments and other actors can refer to when defining policies, making laws and administering tenure rights to land, fisheries and forests. The Guidelines promote secure tenure rights and equitable access to land, fisheries and forests as a means of eradicating hunger and poverty, supporting sustainable development and enhancing the environment. One of the Guidelines' 10 principles of implementation pertain to gender equality, stating that "States should ensure that women and girls have equal tenure rights and access to land, fisheries and forests independent of their civil and marital status."

Sustainable Development Goals

2015

Recognizes women's secure access to land as a key pillar of women's economic empowerment. The international community has committed to secure, enforce and monitor progress on women's land rights in order to achieve the 2030 Agenda by including land-specific indicators for the goals (1.4.2, 5.a.1, 15.3.1).

New Urban Agenda

2016

Represents a shared vision for a better and more sustainable future – one in which all people have equal rights and access to the benefits and opportunities that cities can offer. It calls for reduction of inequalities; promotion of sustained, inclusive sustainable economic growth and gender equality and the empowerment of all women and girls in order to fully harness their vital contribution to sustainable development; improve human health and wellbeing; foster resilience; and protect the environment.

UNCCD Gender Action Plan

2017

Emphasizes that building effective responses to combat desertification and land degradation requires "to address the gender inequalities that disproportionately undermine women's effectiveness as agents of change" in the implementation of the UN Convention to Combat Desertification.

APPENDIX 3

Detailed case studies

CASE STUDY 1

Malawi: National forest landscape restoration in Malawi

Malawi is a small landlocked country in Southern Africa covering a total land area of 9.4 million hectares. The country has a population of 17.2 million with approximately 85% of the people living in rural areas and depending on agriculture as the main economic activity.²⁶⁴ It is estimated that between 1972 and 1992, Malawi lost about 57% of its forests. Moreover, the country has experienced severe climatic conditions over time; for instance, in 2014 and 2015, Malawi experienced drought in most parts of the country with other areas experiencing flooding which led to severe food shortages and loss of property.²⁶⁵ Subsequently, between 2015 and 2016, Malawi suffered severe El Nino- related drought which affected most parts of the country; and by late 2016, an approximate 6.5 million people required food aid across the country.²⁶⁶ These droughts have over the years reduced crop yields to 34% below the average yields between 2010 and 2016 (AFR100, 2016). About 8 million hectares of land has been degraded over the years; representing 80% of the country's total land area (Republic of Malawi: Ministry of Natural Resources, Energy and Mining, 2016).²⁶⁷ The main causes of land degradation were agriculture and cutting of wood for fuel consumption. It has been estimated that over 90% of the population is engaged in these activities.²⁶⁸

The project

Efforts to restore degraded lands began in a pilot project in Machinga District (AFR100). Thereafter, Malawi committed to restore 4.5 million hectares of its degraded land by 2030 as part of the African Forest Landscape Restoration Initiative (AFR100) and Bonn Challenge in 2016.²⁶⁹ The restoration started after the National Forest Landscape Restoration Assessment which was launched in February 2016; and by 2017, the project had collected and validated data in 27 of Malawi's 28 districts.²⁷⁰ The target stakeholders in this project were local communities who practiced small-scale agriculture and wood cutting for fuel. Malawi has been lauded as being one of the countries that developed a strategy to tackle forest landscape restoration while taking into account gender matters.²⁷¹

The 2017 National Forest Landscape Restoration Strategy (NFLRS) outlined activities targeted towards achievement of the goal.²⁷² The activities included: 1) increasing agricultural productivity and food security; enhance community resilience to climate change; 2) addressing water scarcity for household consumption, irrigated agriculture and hydropower generation; 3) and enhancing the availability and sustainability of biomass energy, and other forest products. The project budget was mainly funded by USAID, UKAID and the Government of Germany. The project implementers are IUCN, World Resources Initiative (WRI) and Protecting Ecosystems and Restoring Forests in Malawi (PERFORM) project.²⁷³

The Restoration Opportunities Assessment Methodology (ROAM) was used in all its districts to identify areas that required urgent intervention due to severe degradation. At the beginning of the study, a multi-sector national task force was organized to guide and facilitate the national assessment process. The task force was supported by three technical working groups organized to oversee:

- stocktaking and mapping activities
- policy and institutional analysis, and
- economic and financial analysis.

Given the differences in local objectives and situation, national-level assessment processes were different and intended to address context-specific economic, environmental and social issues including gender.

Gender considerations

The project was intentionally gender inclusive and intended to address gender challenges in forested land restoration because women make about 52% of the total population in Malawi²⁷⁴. In order to ensure that gender was mainstreamed in the restoration efforts in Malawi, the Government first developed the NFLRS that laid down strategies in ensuring gender inclusiveness and responsiveness.

Restoration started with a preliminary policy and institutional background research on gender equality. The government engaged FLR experts from IUCN's Global Gender Office (GGO) and Global Forest and Climate Change Programme (GFCCP) to engage with the women and select tree species that women wanted to plant. Findings showed that most women preferred fruit and medicinal trees that would help enhance food security and improve the health conditions of communities.²⁷⁵

Furthermore, there was stocktaking of relevant FLR activities during field visits through stakeholder dialogues, including separate women's and men's discussion groups on preferences, income-generation, and co-benefits. This provided an idea of what level of understanding and commitment for gender existed. Additionally, sex-disaggregated data at the national level on anything from access to primary education to average marrying age, to data on cell-phone ownership to existence of bank accounts was carried out facilitating an overview of how gender equality is advancing on the ground in a country, beyond the policies and rhetoric that may boast gender equality.

During the identification of stakeholders, women equally participated just like men in the identification of challenges, opportunities and interventions in restoring land. Further, the project ensured that both men and women shared the benefits of the restoration in an equitable way (Ministry of Natural Resources, Energy and Mining- Malawi, 2017). Data indicated that in 14 of the 28 districts, both men and women carried out agroforestry and agriculture aimed at conserving the environment and noted increased productivity for both. Women were more interested in working on the farms as opposed to men who were more inclined towards livestock activities. In addition, women participated in committees on forest restoration which enabled them to discuss their challenges and needs. Committees like the VNRMS and VDCs were predominantly filled by women and most village elders in the communities are women.

The gender-responsive ROAM provided information on women, women's organizations, and gender experts at the national and sub-national level. The data collected was then used to design a pre-inception workshop for gender specialists and technical working group including gender experts from the MoGCCD, gender focal points from environmental ministries (including Agriculture, Water, Land, and others), and representatives from the Department of Forestry.

The pre-inception workshop focused on building the capacity of this gender group on FLR and the ROAM processes and provided information on the linkages between gender and FLR, including issues with climate change, forests, land, water, etc. Information from the workshop was used to mainstream gender issues into the design and elaboration of a Gender Plan of Action (GPA) for the NFLRA.

The GPA guided the three technical working groups of the NFLRA and implementing partners to ensure a gender-responsive ROAM process in Malawi in all the various aspects. To ensure the technical working groups' understanding, consideration and use of the GPA, at least two representatives from the gender group were added to each technical working group during the NFLRA inception workshop, and also a permanent representative added for the continuing elements of the NFLRA process. The induction of the technical working groups on gender issues in FLR, as well as the participation of the gender specialists with each of the technical working groups, provided the opportunity for enhanced collaboration on gender to inform the assessment phase and implementation of specific initiatives.

A priority action of the project was to conduct a gender analysis using IUCN's Gender-Responsive FLR Analysis Framework as a guide. This framework was used to design a questionnaire specific to the gender issues identified during the pre-inception and inception workshops. Once the questionnaire was designed gender officials from the 28 districts in Malawi were invited to a regional workshop where the questionnaire – and methodology for collecting evidence in a gender-sensitive manner – was shared so that each official could complete the questionnaire for their district providing a more local evaluation complete with sex-disaggregated data. While only half of the districts returned gender questionnaires, they provided enough information on gender issues in the context of FLR-relevant sectors at the sub-national level. The data gathered was analyzed by the gender specialist group along with the stocktaking and mapping technical working group, and then moved to a validation workshop for approval of all groups and stakeholders of the NFLRA process.

The qualitative and quantitative information from the questionnaires was used to develop spatial data that takes into consideration the social and economic issues affecting natural resources and landscapes. The resulting multi-criteria map was then used to highlight areas for prioritizing food security interventions, including areas where women could be specifically targeted for enhanced impact – drawing recommendations for gender-responsive landscape restoration strategies. The information from the gender analysis also supports the overall restoration opportunities assessment by feeding into the drafting of Malawi's NFLRA Report and the National Strategy and Action Plan. The report provided recommendations for a gender-responsive approach in FLR policy, programming and measures, to enhance gender equality in Malawi.

Local communities formed savings and loans association which are dominated by women, for instance, about 75% of the members of these financial institutions are women. The government also embarked on promoting use of clean energy in cooking like clean cook stoves to reduce the cutting down of trees. The clean stoves improved environmental pollution and enhanced the income levels of women as they were able to tend to their farms due to reduced number of hours required to collect firewood.

Designated funding for gender-responsive planning and activities, as well as a facilitation team promoted a comprehensive gender-responsive approach throughout the Malawi NFLRA process. Furthermore, the continued facilitation and participation of the members of the gender specialist group – as stipulated in the GPA will ensure a gender-responsive approach is integrated throughout the FLR processes in the country.

CASE STUDY 2

Brazil: Bolsa Floresta Program's incentive-based forest conservation initiative

Although Brazil has had legislation in place to protect forests since 1934, over the years the pressure on native habitats has increased, as a result of agricultural modernization. It is estimated that in the 80s the Amazon lost more than 700,000 square kilometres, while the Cerrado lost approximately 1 million square kilometres. In the 1990s, the national and international pressure made deforestation a priority for the country which resulted in decreased deforestation rates. Despite the reduction in deforestation in the Amazon, recent data indicate the need for maintaining the efforts. According to the official Brazilian deforestation monitoring system PRODES, future forest loss is predicted to affect as much as 62% of the reserves forest area until 2050.

The program

The Bolsa Floresta Program (BFP) is an incentive-based forest conservation initiative of the State of Amazonas (Brazil). The program established in 2007, is a state-level public policy aimed at improving the quality of life of traditional forest-dwelling people, while conserving the environmental services provided by the forests in which they live in. It consists of an integrated set of interventions designed to reward forest stewards who commit to zero net deforestation, the adoption of sustainable land-use practices in state-owned forest reserves of the Brazilian federal state of Amazonas, among other rules. The program's target areas are state-owned forest reserves that allow multiple sustainable land and forest use activities while the target population include local people that engage primarily in subsistence-oriented lifestyle, with a high reliance on forest and fish extraction. Cash income for the local people comes primarily from government transfers and to some extent from cassava agriculture, while little cattle were held inside the two reserves. Without support from the program, the average family in the communities live on an income that is close to Brazil's "extreme poverty" line of monthly R\$70 per capita.

The program is operated by a non-governmental organization, the Sustainable Amazonas Foundation (*Fundação Amazonas Sustentável*, FAS), and contains a financial compensation program, where households are given a small economic incentive of BRL 50 per month (US\$30) in return for their commitment to zero net deforestation. The program also includes a set of integrated conservation and development components implemented at the community or association level and aimed at improving livelihood opportunities. These include income-generating activities, social empowerment and capacity building, and social infrastructure. The program successfully combines multiple streams of funding from the public and private sector to make transfers at household and community level. The Bolsa Floresta program is funded mainly by Bradesco Bank and the Amazon Fund (The Brazilian National Development Bank BNDES/Government of Norway). Almost 80% of FAS funding is from private sources, including Coca-Cola, Samsung, Abril Media Group and Marriott International, among others. Most funding for BFP

came from donations without relationships with REDD+, except those from Marriott Hotels (US\$2 million) and the government of Norway through the Amazon Fund (BRL 19 million plus BRL 31 million), out of a total BRL 160 million invested by FAS in BFP and other associated programs (education, health, entrepreneurship and innovative solutions).

The conceptual design of BFP was led by the State Secretary of Environment in 2006–2007. The program was enacted formally in June 2007, as a part of a state law on climate change, which was Brazil's first state legislation on this theme.²⁷⁶ The design process included 13 multi-stakeholder workshops, attended by grassroots organizations, environmental NGOs, and research and government institutions from the Amazon.

In addition, the design included a community public consultation and design-thinking workshop in the Uatumã Sustainable Development Reserve, in Amazonas. A participatory approach rather than a top-down approach was chosen and perceived as a necessary condition for a model of sustainable development. Participation in the Bolsa Floresta program is voluntary. Nevertheless, some components, e.g. education and health facilities, are delivered at the community or reserve level, and therefore equally benefit nonparticipants. The program is comprised of four interrelated components:

Bolsa Floresta Renda (income component): Supports income-generating activities that are in line with the protected area's management plan. Examples are on-farm processing activities for value-added of existing products, NTFP value chains, or for alternative income sources such as ecotourism, aquaculture, small-livestock breeding and natural honey production.

Bolsa Floresta Social (social component): This component is meant to improve education, sanitation and health services, as well as communication and transportation infrastructure in the reserves. This is done in collaboration with the respective public sector institutions.

Bolsa Floresta Associação (association component): This component supports the associations of reserve dwellers. It corresponds to 10% of all the family forest allowances granted and associations may decide freely on how to allocate these funds for the benefit of their members.

Bolsa Floresta Familiar (family component): This component is a monthly transfer of BRL 50 (US\$30) to the female spouse at the household level, subject to a signed agreement that commits the household to good forest management practices, including zero net deforestation. In itself, it is not designed to be a source of income for families, but rather a reward for forest conservation.²⁷⁷

Gender considerations

The main component of *Bolsa Floresta*, *Bolsa Floresta Familiar* (BF-F), makes monthly payments of BRL 505 to households who have lived in a Protected Area for at least two years and sign a zero-deforestation commitment. To avoid "magnet effects", families could only enroll for the family component after a minimum of two years of residence in the reserve. Participating families signed an agreement that includes a number of 'good practice rules'. The payments were conditional on respecting the zero-deforestation commitment and on a few other conditions, such as enrolling children in school. They were made every month, to the female household head or wife.²⁷⁸

Gender was a major component of the program, with clear monitoring of indicators to measure progress that show how control of cash, active support to engage in economic activities, and empowerment through dialogue, all contribute to the reduction of inequality associated with gender. Specifically, BFP improved gender consideration in the project area by ensuring that: women controlled the cash resources; putting in place incentives for participation of women in planning workshops, leadership meetings and other processes of participatory management, incentivizing leadership of women in projects that generate income and enterprise, educational activities on the rights of women and supporting the creation and strengthening of clubs and associations of women. Through its social component, the BFP resulted in improved health and education service provision in many villages. When asked to assess their level of wellbeing today, compared with before BFP inception, almost a half of all respondents reported to feel better off than before 2008 with only 14% of respondents reporting that they felt worse off. A general feeling of livelihood improvement was also reported outside the BFP intervention area.²⁷⁹

The handicraft group, "Teçume da Amazônia", composed of women from the Coraci sector of the SDR Amaña, on the Solimões river, is cited as a success story. The craft was made with cocoa fiber and turned into products such as baskets, hampers, and decorative items. The women were responsible for creating the products, and also the financial management and marketing and group organization as well. The group currently sells its products to local communities and at large handicraft markets in Brazil. Because of their

involvement with the handicraft, the women were strengthened economically, and also gained a leading role in political representation in their communities. The women also frequently participated in meetings. According to the quantitative survey, 83% of respondents believe that the women of their communities are more involved in the decision-making process than before. In the evaluation of the project, when questioned if the program changed the role of women in the community they belong to in any way, 88% responded yes, and that the change was positive. The culturally established role of the female gender in Amazonian conservation units is still very much tied to the homemaker role and to natural resources linked to food security and health. The participation of women in leadership roles is still unbalanced compared to male participation. In this context, projects such as Bolsa Floresta have the potential to contribute to the promotion of gender equality, focusing on female empowerment, and to reflect on the relationship between men and women, and how to make them fairer.

CASE STUDY 3

Ethiopia: Use of area exclosures in Alaba district for rehabilitation of degraded land

Ethiopia is the largest country in landmass in the Horn of Africa with a population of about 104 million people covering a land area of approximately 1,120,000 square kilometers. Given the terrain of the country, land degradation is not a new phenomenon, especially in the highlands that have grappled with the problem in the last 3,000 years; the lowlands have experienced land degradation since the 1950s.²⁸⁰ About 31.5 million hectares of the land mass in Ethiopia covers forests and other woodlands.²⁸¹ With such huge land mass, Ethiopia has had major land degradation challenges as a result of increased grazing and high dependence on biomass energy.²⁸² Statistics indicate that between 140,000–200,000 hectares of forests were lost each year and by 2010, only 12.3 million hectares (11% of the land area) was remaining.²⁸³

Restoration of degraded land in Ethiopia gained recognition in AD 14th and 15th centuries. In the 1960s, most of the restoration projects focused on large scale plantations though this shifted to small scale plantations in 1970s that were practiced together with agricultural landscapes. Land in Ethiopia is owned by the State, and this meant that forest management was largely under the federal government. This however changed particularly after the launch of the 1991 Decentralization Policy that devolved the responsibilities of forest rehabilitation and management from the federal state to the regional states.²⁸⁴ In 1994, the country developed the Forestry Conservation, Development and Utilization Proclamation 94/1994; further, the Forest Development, Conservation, and Utilization Policy was developed in 2007 that were both aimed at rehabilitation of degraded forests.

Alaba District where the project took place is located 310 km south of Ethiopia's capital Addis Ababa. As a result of the increased agriculture (about 76% of the total land area) and over grazing in Alaba District as well as the general terrain in AD, the forest cover by 2005 was at 7% (IPMS, 2005). At the beginning of the rehabilitation in AD, the population in the area was about 210,243 people. With about 76% of the land area being used for agriculture, it meant that most of the population relied on the forests for their source of livelihoods making the environment highly susceptible to degradation.

The project

In 2009, the Management Environmental Resources to Enable Transitions (MERET) project was initiated through the support of the World Food Program (WFP), District Office of Agriculture (DOA), local administration, Energy Saving Stove Women's Association (ESWA) and community Peasant Associations (PAs) among others; to rehabilitate degraded land to enable obtaining of carbon credits. Locals contributed 30% while DOA, MERET and other NGOs contributed 70% of the project budget. At the beginning of the project, the area was severely degraded with severe cases of soil erosion.

The project focused on the use of area exclosures as a measure to restore forests. Area exclosure refers to the practice of land management whereby livestock and humans are excluded from openly accessing an area that is characterized by severe degradation. The purposes of exclusion of animals and humans are to prevent further degradation of the ecosystems, advance revegetation/forest regeneration, and restore the overall ecological conditions of the areas. Area exclosure is a passive form of restoration/rehabilitation, i.e. it is primarily a natural process and human inputs are limited to offering protection against interference. For this reason, some call it a zero-management strategy for rehabilitation. The zero management makes it also the cheapest method for rehabilitation of degraded areas. Nonetheless, in a few cases, exclosures are

supplemented with enrichment plantings of native and/or exotic species as well as soil and water conservation measures to speed up the recovery processes. The target stakeholders in this case were the Alada State Government and local communities that were divided into 73 PAs. The state would benefit from the carbon credits obtained while the local communities would benefit through improved environmental management and improved livelihoods. The project also targeted the Federal State to achieve its goals of rehabilitating 22 million hectares of degraded forests in Ethiopia as per the 2011 Bonn Challenge commitment.

The initial step in the rehabilitation of denuded and degraded lands in AD was the establishment in 2009 of area exclosures on communal land by the Managing Environmental Resources to Enable Transitions (MERET) project funded by the World Food Program (WFP) and the District Office of Agriculture (DOA). The main objective of the exclosures was initially to rehabilitate/restore degraded lands previously covered by woodlands or forests for the purpose of obtaining carbon credits. WFP promised to support the endeavour financially but later withdrew from the project. Nevertheless, the DOA pursued the task in collaboration with the district administration, surrounding Peasant Associations (PAs), local associations, particularly Energy Saving Stove Women's Association (ESWA), MERET, and some other NGOs (e.g. People in Needs, Live Voluntary International, LVI; Food for the Hungry International, FHI; and the Government Safety Net Project funded by WFP). The District Administration coordinated and mobilized the community through awareness-raising campaigns and discussions with elders and PA representatives, and it also identified households immediately surrounding the degraded sites. The DOA provided tree seedlings and grass tufts, technical advice, supervision, and networking, and it facilitated activities in the exclosures. MERET provided some incentives, for instance, wheat, as part of the food-for-work program for constructing soil and water conservation structures to reduce run-off (e.g. stone bunds, micro catchments, and tied ridges), and tree planting. The exclosure sites were first selected by the DOA based on criteria such as extent and severity of land degradation and interest of local communities around the degraded sites. Carrying out of the restoration activities that included planting of trees, reforestation, building structures that minimize soil erosion among others.

The rehabilitation intervention had a positive impact on the livelihoods of local people. First, ESWA members were able to generate considerable income from selling of grass and fattened cattle and deposit savings in the association's bank account. Some of the deposited money was used to buy oxen for fattening and for fodder harvested from the exclosure. Second, the women were also obliged to save Ethiopian Birr (ETB) 20 (US\$1.1) per month from their monthly income earned through the food-for-work program. The ESWA members collected construction materials, thatching grass, and grass for livestock – after obtaining permission from the association committee and approval of the PA. Members of the community also benefited from harvesting of planted eucalypt trees, with wood used for construction of schools, a health post and a local administrative office.

Some of the factors that enhanced sustainable use and conservation of the exclosures in AD included the growing sense of ownership, management by a local association, benefits generated from animal fattening, provisioning of thatch grass, improvements in community infrastructure, women's empowerment, growing tradition of saving money, and increasing respect of local by-laws. In general, the benefits people derived from exclosures acted as incentives in strengthening support for rehabilitation of degraded forests and woodlands.

Gender considerations

Gender was mainstreamed in the project in that the women organization ESWA was allocated the responsibility of daily management of the exclosures; the Peasant Associations (PAs) played the oversight role. The 281 women in ESWA were from Chorko Village within the local area. ESWA developed rules and regulations for the management of the exclosures.

The association members residing close to the exclosures are allowed to harvest grass through the cut-and-carry system for their own livestock and to sell to local people at lower prices. Priority is given to members of the association to buy grass for livestock fodder at a lower price than the market price. The women (ESWA members) participated in construction and maintenance of soil and water structures, tree planting, and tending of trees and grasses planted in the exclosure. Further, the 281 members of the women association received energy saving stoves for free and were also allowed to access grass for their livestock as well as for sale at reduced prices. The stoves minimized the cutting of wood by women for fuel thus reducing air pollution and soil erosion; access to grass enabled the women sell and thus improved their livelihoods.

The women were also allowed to participate in the restoration activities including tree planting, preparation of tree nurseries, planting of grass, soil erosion and water conservation activities among others; by working 27 days per month on the sites where they were given 3 kg of wheat per day for 17 days as part of the food for work program and the remaining 10 days, they offered free labor. Their contributions included collecting stones and transporting soil and grasses from other areas for construction of soil-conservation structures. The contribution of local people was 30%, while 70% was from DOA, MERET, and NGOs. The wheat given to women provided food for their families thus less reliability on agriculture that had severely damaged the area.

The savings culture for women has also improved as they were required to save US\$1.1 per month from earnings to a local association. For the local communities, the harvested eucalyptus was used in the establishment of schools, a health center and a local administrative office called *kebele*.

The success of rehabilitation of degraded lands mainly depends on clear land tenure – well defined and secure property rights for land and trees. To overcome problems of tenure insecurity, the AD Land Administration Department, together with the DOA offered a certificates of land-use rights for members of ESWA. The project had the backup of the land certification and registration process in Ethiopia which took place in early 2000s. The land registration boosted by 20 to 30%, landowners' likelihood to invest in soil and water conservation measures. Land certification mandated the issuance of land certificates in the names of both spouses as joint holders and the consent of both as a prerequisite to selling or renting land. The local committees that defined the boundaries of common-use areas and registered individual farmers' plots included women who headed households, including widows and divorcees. Such registration and the corresponding security of tenure had a strong positive effect on conservation, maintenance and improvement of plots, which has increased agricultural productivity and contributed to reducing poverty.

By 2012, 7,600 hectares of degraded land had been restored using 17 PAs and Chorko Village alone accounted for 105 hectares of degraded land with 28kms of bunds developed and 78,000 micro catchment areas constructed. The rehabilitation interventions have resulted in dramatic biophysical changes within few years. Tree planting, coupled with the natural regeneration of native woody species from the soil seed bank and seed rain, has resulted in the formation of a young secondary forest. The open ground is fully covered by grasses and forbs. The wild fauna, such as warthog, rabbit, hyena, and various species of birds, have been observed in the enclosed area. In general, the diversity of flora and fauna has increased substantially compared to pre-rehabilitation intervention conditions. Other benefits include establishment of another secondary forest in the area, improved grass cover within the area and improved frequency of rainfall within the area among others.²⁸⁵

CASE STUDY 4

Ghana: The Ghana public private partnership for the restoration of degraded forests in Tain II, Asubima and Afrensu Brohuma forest reserves in 2016

Ghana is a tropical country with a population of about 30.3 million inhabitants; 50.83% of which are women. In 2018, Ghana ranked 89th out of 149 countries in the World Economic Forum's Global Gender Gap Index with a score of 0.688 –indicating that 68% of its gender gaps have been closed– ranking roughly midway in the comparison of Sub-Saharan African countries. Although Ghana's laws have afforded women the right to land equally to men, women still face challenges in owning and controlling land due to cultural beliefs, lack of equal access to capital among others.²⁸⁶ Statistics show that men own 3.2 times more of total farms than women and 8.1 times more of the medium to large farms. At the same time, customary law in Ghana controls 80% of the country's land meaning that most community level land governing bodies are led by men; making it difficult for women to have a say in land matters. In Ghana, forestry accounts for 4% of the country's Gross Domestic Product (GDP); and an approximate 3.6 million people earn the living from forests. This shows the importance of forests for the economy of Ghana. A report by FAO indicates that a majority of rural women depend on forests for food, income, water supply and medicine. Land degradation of forests results in loss of income, reduction in food supplies, medicine among other forest products. This is especially true for the Ashanti and Bono Ahafo areas.

The project

The Ghana Public Private Partnership for the Restoration of Degraded Forests in Tain II, Asubima and Afrensu Brohuma Forest Reserves. The project was a Public Private Partnership between the Government of Ghana and Form Ghana Ltd.; with funding received from African Development Bank (AfDB), Climate Investment Fund's (CIF) and Forest Investment Program (FIP). The project was implemented in Tain II Forest Reserve in Berekum, and Asubima and Afrensu Brohuma Forest Reserves in Akumadam.

The objective of the program was "restoration of degraded forest reserves by establishing a large-scale sustainable commercial forest plantation in collaboration with the Government of Ghana (GoG) through its Forestry Commission (FC).²⁸⁷ The aim was to establish 11,700 ha of plantation with 10% of the land to have local species and 90% for teak. The GoG signed a 50-year lease and a Benefit Sharing Agreement (BSA) with the locals and Form Ghana Ltd. for the 14,000 ha of forest land that had been degraded. The project cost was about US\$46.4 million which was financed as follows: – 42% equity, 52% debt and 6% cash from operations. The project was also aimed at mainstreaming gender in restoration of the forests to reduce gender gaps and recognize gender roles in forest restoration.²⁸⁸ The project aligns with the 2012–2016 Ghana Strategy Paper, Ghana Forest and Wildlife Policy (2012) and Forest Plantation Strategy (2015–2040); all of which are aimed at reforestation and mainstreaming environment and climate change initiatives for sustainable development.²⁸⁹ Before the project was implemented, there were big gender inequalities in terms of how women and men in the project areas accessed land and forest resources within the reserve. Customary law governs 80% of Ghana's land and in many customary land tenure systems, community-level governance bodies are made of traditional leaders and family heads most of whom are men. Although the country has patrilineal and matrilineal systems for land access and inheritance, both systems consider land to belong in the lineage. Male heads of households typically retain permanent use rights to land and women access land through male relatives. In Ashanti and Brong Ahafo regions land tenure outside of the forest reserve is managed by the traditional council. Most farmers in the regions cultivate their own land, but they also do it in the forest reserve land. The farmers inside the reserve are mainly migrants from the northern part of the country.

The project targeted the local communities and local farmers within Tain II Forest Reserve and Asubima and Afrensu Brohuma Forest Reserves to address the severe land degradation within the forest reserves by establishing and maintaining 11,200 Ha of commercial plantation.

Gender considerations

Gender mainstreaming was one of the most important goals of the project. The goal right from the start of the project was to address gender gaps and to strengthen the integration of gender considerations throughout the project.

An Environmental and Social Impact Assessment (ESIA) for the Afrensu Brohuma and Asubima forest reserve was carried out in 2016 which provided information about the living condition for people in the communities. Although the ESIA does not present all the information in a sex-disaggregated manner, it contains relevant social information about the locality of the project, including levels of education, illiteracy, migration patterns, crops cultivated, and in some cases, aspects of cultural analysis. In accordance with the procedures of the lending banks, a participatory consultation process was conducted with the communities to explain the project idea, possible activities and identify differentiated needs of women and men. The Chiefs, Queen Mothers, elders, women and men of the Akroforo and Joe Nkwanta communities attended consultation meetings.

In addition, a socio-environmental impact mitigation action plan (SEIMAP/RAP) 43 was created in 2015. The SEIMAP presented sex-disaggregated data in relation to household characteristics and composition, population, age, occupation, health conditions, and female-headed households, and identified that men are more involved in livestock activities than women in the region. The SEIMAP further identified a specific package for livelihood support and assistance to the people affected by the project which was offered to female-headed households, cattle herder households, settler and farmer households. This greatly improved the purchasing power of the women as the compensation increased their disposable income. It was also during the design phase that a benefit sharing agreement was reached, which ensured that all stakeholders around the local communities shared in the proceeds fairly, including women.

Based on the findings from the ESIA, the SEIMAP/RAP and the public consultation processes, a series of gender considerations were identified in the project document to guide its implementation. Some of the specific project activities aimed at mainstreaming gender included: 1) Encouraging women to apply for jobs; 2) Establishing affirmative actions in recruitment processes; 3) Providing training and capacity building

opportunities to female employees with potential talent for leadership; 4) Supporting the women association at the company; 4) Hosting regular meetings with women and men in the communities; and 5) Developing a gender policy for the company with principles and procedures addressing equal rights, responsibilities, and opportunities for both women and men. For example, 40% of the jobs created were allocated to women as well as 25% of the land allocated to the locals for intercropping.

Before the project was implemented, women within the community were mostly engaged in family activities like taking care of young children thus did not have opportunity to engage in income generating activities. With 28% of them having been employed in the project, Form Ghana had to establish two daycare facilities to allow women employees with children under the age of three, to bring them along. Form Ghana covered 60% of the cost while the women using the facility met 40% of the cost.

On training, Form Ghana gave both women and men equal opportunities for training. Both men and women employees were trained on sustainable forest management skills, restoration of the degraded forests, carbon sequestration, skills in tree nursery management, tree planting and growing, monitoring skills, skills on teamwork and leadership, computer literacy skills among others. These trainings greatly improved the workers' capacities that helped them in carrying out the activities they were assigned to do; and also helped reduce the gender gaps experienced in accessing resources and education for locals. For instance, the women who were involved in nontraditional skills development and activities were bullied by their male counterparts at the beginning, but this has changed given the training that both men and women have undergone. Additionally, Form Ghana undertook training programs on fire prevention for both women and men.

All female workers (a quarter of all permanent workers) are part of the Timber and Woodworkers Union of Ghana Trade Union Congress (TWU/TUC); and one female is a member of the executive board of the Union. Women participating in the union means that their grievances can be heard and dealt with; moreover, having one of the women as an executive member meant representation for women. The Union's rules and regulations also promote gender equality meaning that women's interests are protected, and their voices heard. Further, Form Ghana founded a support group dubbed "The Ladies Club" in 2015 to train women in acquiring skills related to food processing, soap making and health issues, that help them develop entrepreneurship skills. This has enhanced women capacities to borrow funds for investment and enhanced their leadership skills. The Club has also given women a platform to discuss their interests and solve their problems.

Form Ghana also initiated an outreach program that local farmers to intercrop in the plantations for two years. For instance, in 2019, 42 female farmers were allowed to access approximately 80 ha for intercropping while 257 male farmers were allowed to access almost 900 ha. The females from the local community were also allowed to pick the tree tips and branches for use as firewood which in turn reduces their burden of collecting firewood. The company also produced approved round logs for both local and international markets. The logs are certified by the Forest Stewardship Council (FSC) for quality assurance. This improved the livelihoods of both men and women who worked at the company as well as local community members.

Form Ghana installed an electric water pump in Arkokrom village, and this saves women and girls the time to fetch water; and also provides clean water that prevents waterborne diseases. In Kotaa village, the company installed sanitation facilities and boreholes to improve hygiene and prevent diseases.

CASE STUDY 5

Lao PDR: Sustainable forestry for rural development-scaling up project (SUFORD-SU)

Lao People's Democratic Republic (Lao PDR) is a landlocked country in Southeast Asia, bordering China, Myanmar, Thailand, Cambodia and Vietnam. Approximately 67% of the population is rural and relies on natural resources for livelihoods and income generation. Although Lao PDR retains the highest proportion of forest and woodland among any other country in mainland Southeast Asia, data from the Department of Forestry indicates that the total area of forest declined dramatically from 70% of the land area or about 16.6 million ha in 1940 to only cover a total of 13.7 million ha in 2010 (58% of the country's surface).²⁹⁰ Almost 10 million hectares of forest are subject to degradation annually which causes emissions of approximately 23.3 million tCO₂e. Shifting cultivation and logging are the main drivers of degradation, and

especially illegal logging and unmanaged conversion logging are causing degradation. Besides causing greenhouse gas emissions, these activities also undermine the possibilities for sustainable forest management and benefit sharing from natural resources, which would be essential in improving the livelihoods of rural Lao people.²⁹¹ Lao PDR embarked on an ambitious reform agenda for the forestry sector to achieve more economic growth that is more sustainable, more resilient, and more inclusive than has been possible under business as usual. The National Forestry Strategy to the Year 2020 highlights the need to enhance “village-based natural resource management for poverty eradication” as a key policy direction. Achieving this goal, according to the strategy, requires the establishment of “a clear legal framework covering village land and forest resources that enable effective community based natural resource management including participatory land use planning at village level reflecting actual land and forest use.” To support this reform process and raise complementary public and credible private investment in forestry, the Government of Lao PDR and World Bank Group worked together to enhance the understanding and implementation of SFM. This engagement process involved dialogue among the government, WBG, private sector actors and other stakeholders to support ongoing forest policy, legal and regulatory reforms, to identify investment opportunities, and to strengthen partnerships, including PPPs. Other development partners such as the Australian Centre for International Agricultural Research (ACIAR), the Food and Agriculture Organization of the United Nations (FAO), Deutsche Gesellschaft für Internationale Zusammenarbeit and Japan International Cooperation Agency (JICA) and others have aligned in support of the government’s forest reforms.

The project

The aim of the Lao PDR Forest Investment Plan (Lao FIP) is to promote participatory sustainable forest management (PSFM) of all types of forests, to reduce greenhouse gas (GHG) emissions from deforestation and forest degradation through sustainable management of forests and conservation and enhancement of forest carbon stocks by promoting climate resilient development, particularly in terms of reduced poverty and biodiversity loss in forest ecosystems.

SUFORD-SU is the fourth in a number of projects promoting participatory sustainable forest management. The current project covers 13 provinces, 41 of the country’s 51 PFAs, comprising 2.3 million ha and more than 1,000 villages. SUFORD-SU targets 2,925,000 ha to come under management plans supported by the project. In 2017 alone, over 2,600,000 ha were achieved, bringing the cumulative total to 3,626,699 ha covered by management plans. FIP SUFORD-SU has promoted a variety of livelihoods activities, including agriculture, livestock and small village grants managed through Village Livelihood Development Committees. The project was designed under the leadership of the government in coordination with the Asian Development Bank (ADB), the World Bank Group (IDA, IFC), other development partners, and key Lao stakeholders.²⁹²

The objectives of the SUFORD were (i) to sustainably manage production forest, and (ii) to alleviate rural poverty. Furthermore, the project sought to improve the policy, legal, and incentive framework enabling the expansion of “participatory sustainable forestry management” in priority production forest areas (PFAs). It attempted to improve villagers’ well-being and livelihoods by harnessing the benefits from sustainable timber harvesting and extraction of other forest products. The benefits of the project include mainstreaming gender and ensuring ethnic minority informed efforts to reduce poverty. In addition, there was increased household income, improved health and education in local communities, and inclusion of civil society and diverse ethnic groups in forest governance.²⁹³

The project design involved participatory process of natural forest management. The design was logically sequenced and followed steps laid out in the project implementation manual.²⁹⁴ With guidance from forestry officers, villagers and Village Forest Associations were actively involved in forest inventory, forest management plan preparation discussions (particularly socio-economic and fauna and flora species data) and implementation of pre-harvest inventory, harvesting, postharvest assessment, restoration, monitoring and evaluation.

Project-level monitoring and evaluation were the responsibility of the National Project Management Office, with support from the Finnish technical assistance team. The former provided regular quarterly updates on project activities and deliveries against an agreed work plan and timeline for completion. Several studies were produced, including attempts to assess the impact of village development funds and controls over logging. Remote sensing surveys were used to assess changes in forest cover, though this was an imperfect way to assess change in stocking density. The project set up village development funds that were used to finance forest management procedures, infrastructure, and income-generating activities.

An important part of intervention and ongoing policy dialogue is on land tenure. In Lao PDR many smallholder farmers do not own the title of the land and making it difficult to set up plantations and out-grower schemes avoiding conflicts. The private sector continues to play a central role in the growth of supply chains involving smallholders as active participants. FIP's funding principles is to help address drivers of deforestation, which often occur outside of the forest sector and are directly or indirectly caused by private entities. FIP has created jobs and partnerships at village level through reducing emissions.

Gender considerations

In the project, the World Bank, as the implementing agency put in place safeguards that were reinforced by Finnish Development Policies (technical assistance partner); REDD+ Safeguards completed the safeguards framework as a mandatory inclusion in FIP. As a result of this a Community Engagement Framework was developed which outlined processes for engaging with ethnic communities, women and men, as well as how to include free prior and informed consent and cover preparation of both Forest Management Plans and Community Action Plans. The framework also established procedures for assisting those facing temporary or permanent loss of access to resources, resettlement and grievance mechanisms through the Lao PDR national system. All interviewed villagers claimed that they had been consulted, including women, ethnic groups and the poor.

Social inclusiveness in decision making was ensured in prioritizing Community Action Plans and accessing project benefits through validating the Village Livelihoods Development Grants (VLDG). Beneficiaries of the VLDG was to be under a certain livelihood threshold. A dedicated team was established to implement the Village Livelihoods Development to ensure that all project beneficiaries, regardless of their ethnic group or social status are engaged in a culturally relevant way, aiming at establishing broad based and sustainable community support for the project. The composition of the team included members from the four main broad ethnic groups: Hmong-iu Mien, Lao-Tai, MonKhmer and Sino-Tibetan which include a total of 16 sub-ethnicities. Out of 295 team members, 81% belongs to the Lao-Tai family groups, while 19% is composed of ethnic staff. 38% of the total staff are women, and 89% of the 73 field teams has at least one female staff.

Villagers helped to plan, implement, monitor, and evaluate their own development projects, financed initially through project support and subsequently from the returns to sustainable forest management. This included development of village forestry committees and funded investments in village development supplemented by villagers' contributions of labor and materials. This promoted inclusion of women and ethnic groups. The SUFORD-SU project helped households improve their welfare although it is hard to attribute this effect solely to the program.

Experience from SUFORD-SU restoration in Savannakhet province shows that working with large parcels of land can result in efficient outcomes. With an allocation of US\$1,000 villagers have restored 100 ha of degraded forest, demonstrating high commitment to apply new skills learned, and abide by the maintenance plan that they themselves designed and agreed to beforehand. Villagers organized and decided to share techniques and strategy with neighboring communities resulting in a regeneration of 25 ha per village. While it is too early to assess the impact of the village livelihood grants, the assessment on the impact of the village livelihood grants provided in the previous phase of the project showed that they accelerate poverty reduction. Most of the beneficiaries have affirmed that income, food security and education have increased because of the project.

On governance, an assessment was conducted showing that the implementation of social safeguards is adequate, and that women and vulnerable groups had been adequately consulted. The project involved and engaged with marginalized or vulnerable groups through focus group discussions, encouraging women participation. Although SUFORD-SU envisaged the use of the funds as grants, on their own initiative village authorities converted them into revolving credits. The grants were initially distributed to 169 households; once revolved, they ended up benefiting 411 households.

CASE STUDY 6

Vietnam: Unlocking the entrepreneurial power of indigenous women to protect forests

Vietnam has a total area of 331,123 km² and an elongated S-like shape. The country is characterized by two main basic topographies. The coastal plains of the Red River delta and the Mekong delta are connected by a strip of coastal plain along the remainder of the country. Nearly three-quarters of the country's total territory is hilly, highland or high mountains that reach a maximum altitude of 3,000 m in the Hoang Lien Son mountain range in the northwest. Because of its geography, only 15% of Vietnam's area is farm land. An estimated 25 million Vietnamese people are living in or near forests and depend for some part of their subsistence on forest resources. According to official statistics, Vietnam's forest-dependent people depend on forest resources for an average 20% of their total (monetary and non-monetary) income. In 1943 Vietnam had about 14.3 million hectares of forests that comprised 43% of the country's natural land area. By the beginning of 1999, however, the total area of forested land dropped to only 9.6 million hectares (28.8% of total country's area), of which natural forest was estimated at 8.2 million hectares and forest plantation at 1.4 million hectares. This resulted from the continuous clearance of and the unplanned over-logging of natural forests in times past in Vietnam. Most of the virgin forest and forest with rich standing volume had been cleared or degraded to a secondary or poor crop.

The Government of Vietnam (GoV) introduced policies and investment programs that severely restricted the logging of natural forests, investing in the protection of natural forests and the expansion of forest plantations. This approach has partly succeeded in controlling deforestation. In 2004, Vietnam had a total forest area of 12.9 million ha, recovering or planting 3.3 million ha. in a relatively short period of time. While not suffering from the same extreme levels of deforestation seen in some other Southeast Asian countries, deforestation is locally significant in Viet Nam, especially in the Central Highlands. Forest degradation is also significant in natural forests: in 2004 over two-thirds of the country's natural forests were classed as "poor" or "regenerating" while species rich, closed-canopy stands constituted less than 5% of total forested area. The main indirect causes of deforestation that have been identified include growing demand for forest products and agricultural land driven by population growth and migration, economic growth and increasing demand for wood for the pulp and paper industry, construction, and fuel.²⁹⁵ To address deforestation, the government has implemented several reforestation programs.

Currently, the forest cover in Vietnam has recovered to its pre-1940s level and the country is no longer experiencing net deforestation. The significant increase in forest cover since the 1990s was achieved through a number of national FLR programs that included replanting with fast growing exotic species. Nevertheless, forest cover recovery has resulted into a new set of challenges related to continued loss of natural forest, declining biodiversity, and expansion of monoculture plantations, all of which are a big threat to important ecosystem services and increase vulnerability to climate change.²⁹⁶

Vietnam first formally expressed its commitment to forest rehabilitation in the 1984 National Conservation Strategy. The strategy aims, among other things, to increase national forest cover, improve soils, protect water resources and control floods. This commitment reflects an awareness of how watershed forest losses threaten economic development in the plain and coastal areas. The policy and legislation in Vietnam has, compared to other countries, been highly conducive to forest rehabilitation. The GoV has made forest rehabilitation a priority since the mid-1950s, and this commitment has been boosted since the early 1990s. The policy of forest rehabilitation has been clearly reflected through the projects carried out at the national scale. Various projects and programs in the field of forest rehabilitation have been implemented consecutively over many years.²⁹⁷

In Vietnam, women and ethnic minorities have close relationship with forests. However, this important co-relation has not always received the attention it deserves and women's inclusion in REDD+ continues to face many institutional and cultural barriers. A particular concern is poor women's limited access to markets for NTFPs, especially as returns to labor increase, technologies become more sophisticated and processing facilities become more centralized.²⁹⁸ For example, although women outnumber men in the production of agroforestry products, forestry institutions continue be gender-biased at local level. Women's representation in decision-making is limited due to a combination of factors, including cultural norms regarding social behavior. In addition, officials who oversee forest programs do not have a good understanding of gender issues which has resulted in challenge such as failure to plan consultations around women's work and household schedules. Furthermore, there is also a general tendency to measure gender inclusion by a simple count of whether women were present in consultations, rather than the quality

of their inclusion. Therefore, women are often not fully included, and their perspectives are not taken into consideration in forest management decisions. Women are also disadvantaged when it comes to forest land ownership and access rights.

The Vietnamese land law does not allow women to be discriminated against in decisions about land.²⁹⁹ Any decision taken on customary land that denies women ownership, occupation or use of land is illegal. Both spouses —husbands and wives— have the right to use and live on family land for as long as the parties are both still married to each other. Family land is defined as: 1) Land where a family home is situated; 2) Land that helps sustain a family, such as farmland (for crops, cattle), or land from which the family earns an income; 3) Land considered family land, according to the family's norms, custom, or tradition. Land is granted to households for the common ownership of all members of the household. The determination of who has land use rights is based on the household registration book at the time of the State land allocation, land lease, recognition of land use rights, or transfer of land use rights. Disposal of land must be agreed upon by the majority of members aged full fifteen years or older. A spouse —husband or wife— first has to get the approval or consent of the other spouse before either of them can carry out any transaction on family land. Such transactions include sale, exchange, mortgage, or lease. A husband's or wife's permission to sell, lease, exchange, transfer, or mortgage family land must be given personally in writing to the commune land administration center. A woman has the right to appeal a decision on a land dispute if she is not satisfied with it.³⁰⁰ Despite laws that provide equal land rights to women and men, several issues — from local attitudes on gender and lineage practices, to access to legal services and inadequate institutions and practices — mean that in effect women hold only 20% of Land Use certificates. This means that, without special attention or targeted forest conservation related programs, such as REDD+, that integrate gender considerations, there will likely be gender inequalities in the way that women and men are involved in and benefit from them.

The project/program

The United Nations collaborative initiative on Reducing Emissions from Deforestation and forest Degradation (UN-REDD) in developing countries was launched in 2008. Under UN-REDD, the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP) jointly support national level processes called “REDD+” (signifying “REDD plus with the addition of the goals of ‘sustainable forest management’, ‘conservation’ and ‘increasing forest carbon stocks’”).³⁰¹ REDD+ has been mainstreamed in three major forestry policies in Vietnam: the National Forest Development Strategy 2006–2020; the National Forest Development and Protection Plan; and the Vietnam National REDD+ Strategy. The common aim of these policies is to modernize the forestry sector so that it can contribute to environmental protection and poverty reduction. REDD+ activities incorporated into the strategies are expected to provide financial incentives for environmental protection and to ensure co-benefits, such as poverty reduction, when combined with other PES schemes.³⁰²

Vietnam's REDD+ objectives focus on areas that have experienced forest degradation and are at risk of deforestation. The stated priorities are reforestation, to ensure biodiversity conservation of the tropical forest, to increase forest carbon stocks and to implement sustainable forest management. Importantly, the focus areas are inhabited mostly by ethnic minority groups. The REDD+ program recognizes the importance of involving ethnic minority groups, poor communities and women in REDD+, which includes prioritizing their participation.³⁰³ Viet Nam's UN-REDD program has aimed to address these issues through capacity building at national and local levels. At the national level, it has attempted to develop the capacities needed to coordinate and manage the establishment of those tools needed to implement a REDD program that can: 1) effectively demonstrate real and measurable reductions in Carbon emissions from deforestation and forest degradation; and 2) ensure effective, transparent and equitable transfer of international payments for carbon conservation to local stakeholders, tied to performance standards.

Gender considerations

Acknowledging these challenges, UNDP, under the UN-REDD Program, actively worked with the Government and local stakeholders to help ensure REDD+ action plan includes strong gender perspectives. This was to ensure that women and men, across all stakeholder groups, not only benefitted from REDD+ action but were also actively engaged in its implementation as well as decision-making processes.

The support first began with a comprehensive gender analysis of REDD+ in the country, examining progress and room for improvement from the national to local levels. This revealed that the gender strategies designed to address the lack of women's participation in REDD+ included (i) capacity building on gender

and REDD+ with provincial level staff, (ii) the creation of provincial gender focal points and (iii) a gender-specific overhaul of Lam Dong's Provincial REDD+ Action Plan. However, the initial Action Plan had largely failed to consider gender equality and women's empowerment. Few women or women's rights organizations had been included in its development. Important groups such as the Women's Union, a major civil society body advancing women's rights at all levels, were not assigned a clear role or financial resources. Steps were taken to address these concerns and the revised Provincial REDD+ Action Plan included greater consideration of civil society groups working on gender issues in ethnic minority communities.³⁰⁴ This resulted in more innovative collaborations between the government and women's groups. For instance, empowered by a special provincial decision, the Lam Dong Forest Protection Department has joined forces with the Women's Union, developing joint work planning activities to raise awareness and promote women's inclusion in forest management activities.

At the local level, UNDP worked actively with the Government to develop markets and partnerships for natural forest-based economic models which support the active participation of women. In Lao Cai province, public-private partnerships are being piloted between the provincial government and ethnic minority communities and businesses focusing on traditional medicines. Most of the population use traditional medicines in Viet Nam and 90% of their active ingredients are sourced from forests. Nearly 4,000 species of plants in Viet Nam can be used for medicine. Yet only 5% of these plants are being commercialized. With domestic revenues estimated at US\$1.5 billion, Viet Nam still imports US\$1.7 billion annually of medicinal plants that could be derived from rich local sources that would channel some of this money to local communities.³⁰⁵

Through this initiative, traditional medicines managed and harvested according to indigenous knowledge and practices are being sold by local women to partner companies that provide the market access that the women previously lacked. UNDP worked with the women to complement their ancestral knowledge with training on sustainable harvesting techniques. UNDP also helped to set up cooperatives at the commune-level comprised of the women involved in harvesting activities. These cooperatives oversee the collection of medicinal plants, ensuring environmental sustainability and product quality control, and ensuring that profits are distributed fairly to beneficiary households.

For local Dao women, who are dependent on forests for their income, these partnerships have had a significant positive impact on their livelihoods through increasing their incomes and securing a viable future for both their traditional knowledge and the sustainable use of the forest. These practices brought wealth to the family level, benefiting men and children in participating households. Becoming part of a cooperative, an institution set up through this initiative, has allowed women to negotiate higher prices as a collective where lone sellers would have struggled.³⁰⁶

CASE STUDY 7

Jordan: Agricultural Resource Management Project phase II (ARMP-II)

The Hashemite Kingdom of Jordan is located in Middle East and covers a land area of 89,342 km². Jordan is classified among the countries in the world with very minimal water resources, as 93.3% of the country is covered in arid and semi-arid rangelands and steppes; and only 5% of its land is arable. Land degradation is severe in Jordan with the major causes including overgrazing, cultivation, increasing salinity due to water overuse and deforestation. World Bank (2014) indicated that 3.1% of Jordan's Gross Domestic Product (GDP) (about US\$300 million) is lost yearly due to land degradation. To combat land degradation, the government of Jordan has developed several policies and regulatory frameworks including the 2006 National Strategy and Action Plan to Combat Desertification (NAP). Jordan is also a signatory to some of the conventions aimed at combatting desertification like CBD, the United Nations Convention to Combat Desertification (UNCCD) and UNFCCC (ELD, 2014). Further, Jordan established the "Hima System" that has over the years proved successful in restoring degraded lands and rangelands.

The project

The ARMP-II constitutes a USD 42 million investment in rural development financed by Government, three external financiers (IFAD, OFID, GEF), and beneficiaries. It aims to improve food and water security and income levels of 22,300 households (134 000 people) including 13,500 small and medium farmers, 2,700 rural landless and 6,100 other disadvantaged households in the Governorates of Karak and Tafilah

and the Districts of Shoubak, Wadi Musa and Ail of Ma'an Governorate. The goal of the project was to promote community development and better management of soil and water resources. The project was approved in December 2004, became effective in May 2005 and was completed in December 2015. It consists of seven components including: i) community development; ii) resource management; iii) sustainable land management (GEF-SLM); iv) agricultural development; v) rural roads; vi) rural financial services; and vii) project coordination and management. A number of additional activities were introduced in 2011/12 under a Facility for Income Diversification intended to improve poverty focus and targeting.

The ARMP II was designed to improve the management of the natural resources that determine rural peoples' incomes in the project area. The project started with a stakeholder analysis carried out by project team to get information on views and perceptions of local communities. The analysis identified the needs and challenges that each region was facing, and the priority training needs for the locals. Furthermore, awareness creation to the local communities in the project area was a major component of the project. This entailed increasing awareness on the role of local communities in the land restoration well as ensuring they own the restoration efforts. The role of the locals was to develop a criterion that would be used to identify poor and disadvantaged households within the community. Participatory rural appraisals for the locals by the research teams were used in the Development of Community Action Plans (CAPs): – The CAPs were used in identifying problems that locals were facing; the local people also suggested solutions for the problems. Once this was done, the action plans allocated resources based on what was required. About 13 community action plans were developed. These CAPs proposed a strategy that would have a bottom up approach in the restoration efforts, whereby the systems adopted at the local level could be scaled up to national level. The action plans also inculcated SLM in both formal education as well as informal education systems in Jordan. Furthermore, it carried out "Project Demonstration Agro-Ecosystems" to vet and implement the pilot SLM that were identified by local communities.

The project's work on soil and water conservation and its introduction of environmentally sustainable farm management practices is said to have positively affected the environment and local natural resources. The restoration techniques included: – Capacity building at both national and local levels to ensure SLM practices are inculcated in government plans and budgets; community empowerment for the local farmers to raise awareness on the need to conserve the environment and their role in the conservation efforts; sustainable agriculture and sustainable animal grazing; Rehabilitation and protection of water springs; drip irrigation that increased water supply for the local small and medium-holder farmers. Ten Water Users Associations (WUAs) were set up to manage the water resources and deal with any conflicts that would arise; establishment of water wells in Yobeel Forest to improve water availability, installation of water irrigation systems on the sloppy landscapes; tree planting within the degraded forests; and building stone walls to prevent water erosion. The project's reforestation and forest rehabilitation efforts, run-off harvesting, cistern installations, and water retaining wall construction were also important to soil improvement and greenhouse gas capture. ARMP II also helped farmers with pest management systems that reduced economic losses and pesticide use.

Most of the project financing was dedicated to improving natural resource management: for example, investment in soil and water conservation, rainwater harvesting, afforestation, watershed development, improved efficiency of irrigation systems and reduced water loss. The natural resource management component included soil conservation measures aimed at supporting on-and off-farm measures to reduce soil erosion. On-farm measures included: technical and financial support for site specific works; beneficiary and staff training; field days; and demonstrations while off-farm measures included works to preventing gully erosion (check dams) and protect wadi-banks (gabions). Another component of natural resource management entailed increasing rainwater storage capacities and the efficiency of spring irrigation systems. On-farm measures included construction of underground rainwater harvesting cisterns consistent with farm water demand while off-farm measures included construction of mini-dams (hafirs) in water deficit areas, placement of check dams in wadis to increase groundwater recharge and rehabilitation of public springs and irrigation canals. It was also intended to provide technical assistance to improve the legal framework for Water Users Associations, promote formation of WUAs, assist water users to install on-farm drip irrigation through credit, and provide training for staff and beneficiaries.

Grey water reuse technologies were also promoted. To date these works have benefitted 3,900 households, with an average of 6.4 du. each. The work included the construction of rain water harvesting cisterns on 2,945 farms with a total capacity of 92,024 m³ against a target of 120,000 m³ (77%). The eligible activities were: stone terracing (50 cm or 75 cm high), contour bunding, stone tree basins, rainwater harvesting cisterns, fencing, tree planting, and orchard establishment. The particular combination of interventions on a particular piece of land depended on the farmer's demands and the nature of the land.

The Orchard subcomponent supported the establishment of new orchards and rehabilitation of old orchards (>30 years) through financial and technical assistance. This included planting new trees and increasing productivity of old trees through pruning, disease and pest control and grafting. Orchard plantation and rehabilitation was typically implemented on land which had been treated with soil and water conservation measures as part of a larger package of support. Species planted are mainly olives with some grapes but almonds and pistachios were also eligible. The orchard rehabilitation activity consisted of a farm survey by field staff to identify needs and then assistance including provision of fertilizer and pesticides, technical advice on pruning and assistance, and opportunities for field trips and further training.

The subcomponent on Agricultural Extension was aimed at improving the management of agricultural resources and improved productivity of field crops and livestock through training and field demonstrations. These activities were to be implemented through existing extension services of the Directorates of Agriculture. Training sessions on agriculture were also carried out for both men and women.

At the onset of the project, ten Water Users Associations (WUAs) to manage the water resources and deal with any conflicts that would arise were set up. For example, in Dana water supply to 150 families was improved with families receiving three times more water than they had before the project. The introduction of innovative water technologies like the restoration and protection of springs, on-farm water storage and drip irrigation, increased water supply thus improving the productivity of the lands within the localities. For instance, in Wadi Al Karak, the rehabilitation of existing canals and water reservoirs in five villages resulted in increased water supply to the villages by 30%.³⁰⁷

Capacity building exercises, aimed at empowering local communities and getting their support for the project were also carried out at the beginning of the project. Participatory rural appraisals were carried out and Community Action Plans (CAPs) developed that identified health, social, environmental, water, agricultural and education needs of the communities. Once these were identified, the same communities suggested the solutions to be implemented. The CAPs were also used in allocating resources to the agreed upon solutions for implementation.³⁰⁸

Gender considerations

Increasing female participation in community development and economic activity was one of ARMP II's priorities. The targeting strategy focusing on female inclusion in project activities was important because mixed gender groups are not always common in rural Jordanian contexts. The project made a number of adjustments to its community outreach and rural finance arrangements over the course of the project as the effects of the cultural context on female participation became clearer, for example introducing locally appropriate micro-finance services when it became apparent that the existing schemes were not accessible to poorer (women) groups. Targeting seems to have been successful; women were more responsive than men to opportunities presented by the project also due to the establishment of eligibility criteria that increased their participation in community-level planning and management over the course of the project.

At the onset of the project, women were most affected by water scarcity. In addition, about 70% of the landless households identified were women.³⁰⁹ The negative impacts of water scarcity for women as well as men were taken into account and effort was made to ensure that women comprised of majority of the targeted stakeholders. Special efforts to engage women in CAPs were backed up by attention to their participation in training opportunities. Women who were interested in diversifying their sources of income were also trained in courses that enabled them to create six women's savings and credit groups. Being a member of the savings and credit groups enabled the women to get credit; about 450 projects were borne out of this.

According to the RIMS 2015 data, 3,695 women (103% of appraisal target) were trained in income generating activities. The 217 (80% of target) strengthening women's development capacity sessions held benefitted 3,758 people and 186 (148% of target) technical trainings for women benefitted 5,246 people. The project provided training to more than 9,000 women on dairy processing, fruits and vegetable processing, mushroom cultivation, poultry raising and home gardens. As of 2013, women trained by the project had established 400 microenterprises, investing a total of US\$1.5 million in loans from ACC and other sources and generating JOD 35 – JOD 109 in income per month per enterprise.²⁷ The 2014 Supervision Report also found that woman-to-woman training in grey water management had a 100% success rate as compared to a 20% success rate of trainings for men.

The ARMP II has now trained 1,300 women in IGAs and 400 of these women have started small enterprises using their skills. With loans from ACC and other microfinance institutions of JD 500 – 5,000 each these women have invested around US\$1.5 million in their new enterprises, an average of JD 2,600 each or US\$3,700. Average monthly profits from these enterprises after all costs including loan repayments range from JD 35 – 109. For women who are unable to access credit from formal sources SCGs established by the project are helping them access small amounts of start-up finance.

Spring canal rehabilitation have increased flow of water per hour by up to 75% by reducing losses (65 km of canals have been installed at 115 springs), almost doubling the amount of water each farmer receives during his allotted time to receive water (normally a few hours per week). Combined with rehabilitation of olive trees this has increased olive yields by 40%. This significantly improved the orchard and agricultural land productivity and reduced women's work load as far as fetching water was concerned.

While Jordan does not have a food security problem, the project has had a positive impact on most or all of the main dimensions of food security – available, access and utilization. Soil and water conservation work increased yields of cereal crops; orchard rehabilitation is improving olive yields. The microenterprises and other activities which improved women's incomes increased access to and affordability of food. The training sessions also focused on nutrition, including for children and training in food preparation and preservation. When the CAPs were developed, the project team elected "local community committees" that included representatives from cooperatives, civil society, women and youth; and representatives of informal groups that were interested in the project. These committees mobilized communities and worked with the project team on the work plans and also monitored the actual implementation of the project activities. Women were encouraged to attend the available training opportunities after the project team noted an imbalance between men and women on training matters. By the end of the project period, 43% of the participants were women. In addition, during the training, topics thought to be for "men only" were also attended by women; for instance, in an agricultural engineering class at Karak, Tafilah and Man Directorates, 10 out of the 23 participants were women.³¹⁰

The courses offered during the training activities were also gender sensitive, for example, a course on "involving rural women in agriculture."³¹¹ Further, more women were assigned the role of course advisers, which increased the participation of women in the trainings.

Of the 10 WUAs that were established to manage the water resources and deal with any conflicts that would arise; one was a women's association called Dana Women's Association in Al Tafilah. This association agreed to rebuild a spring source at the upper end of the Dana, fix diversion pipes for three regions and reinstate olive trees and orchards in the locality. These activities improved water supply to 150 families who are now able to get water three times what they used to get before. The rehabilitated olive trees improved in yield and water supplied was used to grow more orchards of fig, grape, apricot and pomegranate fruits. These fruits are sold by the Dana Women's Association to generate income.

CASE STUDY 8

Kenya: Green Belt Movement: Restoration through women groups

Kenya mainly depends on agriculture, which is second to the service industry.³¹² Despite this, about two-thirds of the country is arid and semi-arid with only one-third of the country left for productive agriculture.³¹³ Kenya suffered long periods of drought between 1970 and 2000 which affected land and its productivity consequently reducing agricultural productivity.³¹⁴ Recent studies indicate that 64% of the country's total land area was susceptible to modest desertification while 23% was susceptible to severe and very severe desertification. As a country, Kenya ratified the United Nations Convention on Biological Diversity (CBD) and the United Nations Convention to Combat Desertification in 1994 and 1997 respectively. The country has developed both the NBSAP and NAP and is committed to implement these strategies at the national level. Kenya has a strong history of restoration. To combat land degradation, Kenya committed to restore 5.1 million hectares of degraded land by 2020 and as part of the African Forest Landscape Restoration Initiative (AFR100). The Green Belt Movement (GBM) started in 1977 by the late Professor Wangari was identified as one of the focal points for the restoration.

The project

GBM was started by the late noble laureate Professor Wangari Maathai as a response to the plight that Kenyan women were facing with regards to increasing droughts that led to drying up of streams, reduced food productivity and reduction in the supply of trees for firewood and fencing. Beside the environmental challenges that the women were facing, there was a general reduction in the will by people to protect their environment.

The target stakeholders were Kenyan women who were facing environmental challenges due to increased droughts. Later the group included men and the youth to protect their environment through various activities and has worked with farmers all over Kenya and trained them on issues of sustainable agriculture and forest land conservation. The Green Belt Movement empowers women's groups to plant trees for watershed protection, food security, livelihoods and biodiversity. In addition, it established Community Empowerment and Education workshops (CEEs) to educate communities on their civic rights and sustainable environmental management. With the civic education to the communities, GBM started to advocate for more democratic space and called on leaders to show more accountability as the women groups fought to get back land that had been grabbed and advocated for protecting forests from agricultural activities. The Green Belt Movement implements its activities under four programs:

1. Tree planting and water harvesting. This is aimed at protecting water catchment areas as well as improving the socio-economic conditions of neighboring communities. The local people are allowed to earn a living from tree planting; and so far, over 51 million trees have been planted in Mt Kenya, Mau Complex among other areas.
2. Mainstream advocacy. GBM has over the years carried out advocacy campaigns on the need to preserve and conserve public forests from deforestation; for instance, Uhuru Park, Karura Forest, and Jeevanjee Gardens.
3. Climate change. GBM initiated a Climate Change Program that empowers local communities to understand the adverse effects of climate change and take action against climate change. Some of the initiatives that GBM has participated in are: National REDD+; afforestation initiatives across the country; and putting women at the forefront of dealing with climate change.
4. Gender, livelihood and advocacy. GBM has worked through the Community Empowerment and Education program (CEE) to onboard over 4,500 community groups that participate in its activities. They have also empowered women to participate in decision making and take up leadership roles.

Gender considerations

Gender equity is the backbone of GBM. The Green Belt Movement works with women to empower them, with a primary aim to conserve the environment and give them alternatives to improve their livelihoods – using tree planting as an entry point. Although it started small with only a few women planting trees in school compounds and private farms, the group grew quickly and started advocating for the protection of public parks and forest lands. GBM now has a large membership at the grassroots levels who are mostly women and they have made tree planting an income generating activity, where Green Belt Movement gives a financial compensation to nursery groups for every tree seedling that is planted and survives. That money is used to meet their reproduction, production and community obligation.

The GBM approach is accessible and easily understood by women who may not have had formal education. Women are able to adopt the GBM approach and raise seedlings for planting on their farms, public places and gazetted forests. Through this process of taking control over their destiny, and the training that the women receive, they are empowered to think about their lives and their future differently. When women are working together as tree nursery groups, they support each other, discuss issues of importance, prioritize issues, and tackle them.

Over the years, GBM has joined global campaigns on climate change; is part of the “reduce, reuse, recycle” campaign in Kenya; and has collaborated with United Nations Environment Programme (UNEP) on the “Billion Tree Campaign”. In its over 40 years of operation, GBM has built a network of over 4,500 community groups at the grassroots level, and this has impacted on the socio-economic wellbeing of the locals. The program also dealt with the challenges that women faced in decision making and leadership, and gender inequality issues. Additionally, GBM focused on reclaiming public land.

GBM's work has spread across Kenya, in areas like Mt. Kenya and Aberdare regions, Western highlands areas, Lake Victoria catchment areas, Coastal and Nairobi regions. Through this outreach, GBM addresses the challenges faced at grassroot levels in terms of social, political and economic issues that lead to poverty and environmental degradation. From its operations, local communities have been empowered to take charge of their actions as these affect them directly, especially women. Due to improved economic situations of local people, they are now willing to protect their environment and equitably share in the benefits of restoring their environments. Local people have also been able to change their perception and attitudes towards climate change as some of them have been affected by effects of deforestation like droughts, landslides and reduced food productivity. The movement has over the years, utilized indigenous abilities, ideas and resources to protect the environment and to empower the local people in all its areas of operation.

The Green Belt Movement has developed network of over 4,900 community groups that are involved in the Watershed Based Approach: with most of these groups' members being women. Under this approach, communities are engaged in the protection of the country's water towers. As part of the Water based approach, GBM initiated a campaign dubbed "#ChangeTheStory" with the aim of planting 30 million trees in the watersheds. Some of the notable achievements under this approach is the collaboration between GBM and ECOSIA German that sought to restore degraded watershed in Mount Elgon, Cherangany Hills and Mau Complex. In the three areas, a total of 884,529 trees were planted in 2018.

In addition to restoring land, the group has carried out advocacy for improved land and forest governance. To date up to through its advocacy, 151 titles have been revoked by the National Land Commission which resulted in over 2,000 acres of land that had been sold being reverted to Kenya Forest Service. GBM also launched the Green Belt Safaris that has over 4,500 community groups that conduct community tours to restored projects by men and women (Green Belt Movement, 2017).

In 2018, GBM's Chairperson, Marion Kamau was appointed as the head of the Forest Resources Management Task Force.³¹⁵ The taskforce was established due to increasing trend in the depletion of forests resources and at a rate of 5000 Ha per annum. In 2017, GBM received funding from INBAR and establishment five bamboo seedling nurseries and demonstration sites that had the potential to produce 5,000 seedlings each. These demonstration sites were used as training venues where 21 women leaders, together with other stakeholders, were trained on environmental conservation and entrepreneurship.³¹⁶ Further, in 2016, GBM in collaboration with MacArthur Foundation trained 245 members, 184 of which were women, in the Great Lakes Region; and field training were also done to improve skills and share best practices in the environmental protection particularly in protecting watersheds. In addition, in 2015, over 200 rural women and other stakeholders within the local communities were trained who in turn trained over 20,000 locals in the management of natural resources. In 2014, GBM initiated a project in Samburu County, which is a majorly semi-arid area; to enhance sustainable agriculture, train locals on basic water harvesting alternatives among other activities. 68 community groups formed were trained that composed of 287 women and 189 men. This project has been recorded as one of the most successful community projects in changing the mindset of the locals to practice sustainable agriculture and environmental conservation. By the end of the year, 257,896 trees had been planted. Due to the semi-arid nature of the area, GBM provided six water tanks for tree growing and domestic use.³¹⁷ Overall, 438,129 trees were planted in 2014 and introduced the use renewable energy to the women.

In 2013, GBM partnered with Waterstone (Norway) in piloting the planting of native bamboo to help in conserving the environment, mitigating climate change, providing fuel and improving the socio-economic conditions of the locals in Maragua, Murang'a County. The project has so far improved the living conditions of the residents who harvest bamboo for sale; as well as reduced the time taken by women in search for firewood and feeds for their animals. The women have been able to use the bamboo in making wood cutlery that they can sell. GBM had many partnerships over the years, one such partnership was with FHI 360 between 2011 and 2013 where environmental specialists dubbed "Green Volunteers" were trained and empowered to raise awareness among women on the need for family planning methods in controlling population. The volunteers also linked communities to health facilities offering family planning services; and this improved healthcare for women.³¹⁸

Endnotes

- 1 The essence of gender-responsive forest landscape restoration (FLR) is ensuring that women and men at all levels have equal voice and influence in strategic decisions related to FLR, and that this contributes to substantive equality in outcomes for women and men.
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