Women and SDG 15 – Life on Land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification halt and reverse land degradation and halt biodiversity loss.

Women in rural societies may be significantly affected by biodiversity loss. In many developing countries, women's role in ensuring water and fuel supplies, as well as collecting wild edible and medicinal plants, makes them most sensitive to deforestation, land degradation and desertification. Lack of ownership rights and access to resources intensifies these negative effects. Women also face major challenges from biodiversity loss in indigenous and rural communities in some developed countries. At the same time, women can be agents of change, leading biodiversity protection, conservation and sustainable farming efforts. Such positive effects can be magnified by buttressing gender equality and tackling gender-based barriers.

14.1. Key findings

This chapter provides a description of the links between gender equality and conservation efforts in relation to forests and, more broadly, to ecosystems. It covers the following questions:

- Women can be significantly affected by biodiversity loss and ecosystems' degradation. Women and indigenous groups living in rural areas can be affected by soil depletion and reduced water supply, which may exacerbate poverty and hunger. Lack of access to land, forests and other natural resources is a major cause of deprivation for women. This is especially important for indigenous communities, given their dependence on shared, ancestral lands.
- Ecosystem degradation resulting from industrial farming, extractive industries and major infrastructure projects is sometimes linked to Gender-based violence (GBV) and many climate and environmental activists suffering violent attacks are women.
- Women in many developing countries are the principal users and managers of land, as farmers
 and pastoralists with primary responsibility for household food production. Their role in promoting
 sustainable land management is an opportunity to achieve the dual objective of sustainable land
 management and gender equality.
- As with other environment-related SDGs, a lack of sex- and gender-disaggregated data is a major concern. SDG 15 has no gender targets. Of the Aichi Biodiversity Targets, only Target 14 overtly addresses gender issues, calling for the needs of women, indigenous peoples and local communities, and the poor and vulnerable, to be taken into account in the restoration and safeguarding of ecosystems. Yet Aichi Target 14 does not include a specific indicator on gender equality, and existing indicators are not sex-disaggregated.
- Women can contribute to the management of "commons" such as forests, mountain resources, and rivers, but they are often excluded from decision-making, including at the local and community level. There is a need to better integrate gender considerations into National Biodiversity Strategies and Action Plans (NBSAPs).
- All countries have a major stake in ensuring that their transboundary policies (trade, investment, and development co-operation) promote the empowerment and engagement of women and indigenous groups in other countries. Business has a responsibility to address gender equality and ensure more sustainable management of natural resources.

14.2. Key interlinkages between gender equality, sustainable use of land resources and other SDGs

Protecting, restoring and promoting the sustainable use of land resources (SDG 15) has a great potential to combat global warming (SDG 13), while land degradation in all its forms (e.g. deforestation, loss of soil and freshwater etc.) is a major contributor to climate change. Forests and trees are vital to the world's clean air and water, annually absorbing one-third of CO_2 emissions from burning fossil fuels (Muller et al., $2018_{[1]}$). As shown in Figure 14.1, primary forest cover has decreased by 81 million hectares since 1990, though the rate of loss more than halved in 2010-20 compared with the previous decade (FAO, $2020_{[2]}$). This reduces human ability to combat climate change (SDG 13).

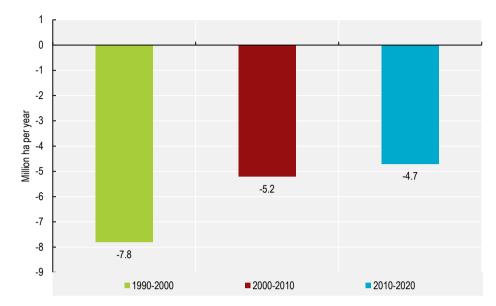


Figure 14.1. Global annual forest area net change, by decade, 1990–2020

Source: (FAO, 2020[2]).

SDG 15 is also key to food and water security (SDGs 2 and 6), health and well-being (SDG 3) and the provision of affordable energy (SDG 7). In particular, shrinking biodiversity has been linked to zoonosis, which evidence suggests may have been the root cause of the COVID-19 pandemic (OECD, 2020[3]).

A 2018 report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystems found that the benefits of land restoration are ten times higher than the cost, and that current rates of land degradation undermine the well-being of at least 3.2 billion people (Brainich et al., 2018_[4]). Biodiversity loss in Europe alone costs nearly USD 500 million per year (Carrington, 2018_[5]). Globally, among the main culprits of land degradation and biodiversity loss are unsustainable agriculture practices and high consumption lifestyles – areas in which interventions are possible and women's engagement is essential (Section 11.4).

The agriculture, forestry and fisheries sectors depend on the health of terrestrial ecosystems (e.g. tundra, forests, deserts, grasslands) and the plant and animal life that inhabit them to productively supply basic needs and inputs to society and other economic sectors (OECD, 2018_[6]). An estimated 45% of the world's population depends on these sectors for their livelihoods (CBD, 2018_[7]); one in three workers globally is employed in agriculture (FAO, 2012_[8]); (OECD, 2018_[9]). While these sectors are crucial to sustain human life and livelihoods, they also exert pressure on the environment, unless conservation and sustainable use efforts are employed (OECD, 2018_[9]).

Forests are source of food, medicine and fuel. Forests alone hold more than three-quarters of the world's terrestrial biodiversity, and the top ten most forested countries are in the developing world (FAO, 2020[10]). Protecting biodiversity is essential to advances in medicine. More than 70 000 different plant species are used to manufacture pharmaceuticals, and the majority of the world's plant biodiversity exists within the Global South (Alamgir, 2017[11]).

More sustainable farming methods are key to avoiding further deterioration to land-based ecosystems and to tackling climate change. Promoting conservation and protecting biodiversity in the agriculture, forestry and fisheries sectors are also vital to meet development objectives, including social inclusiveness and gender equality (SDG 5).

Women, especially in traditional societies, are especially affected by biodiversity loss. Lack of women's rights and access to resources intensifies these negative effects. At the same time, women can be agents of change, leading biodiversity protection, conservation and sustainable farming efforts.

Despite the clear interlinkages between SDG 5 and SDG 15 outlined in more detail below, SDG 15 has no gender targets within the SDG framework. Of the Aichi Biodiversity Targets, only Target 14 overtly addresses gender issues, calling for the needs of women, indigenous peoples and local communities, and the poor and vulnerable to be taken into account in the restoration and safeguarding of ecosystems. Yet Aichi Target 14 does not include a specific indicator on gender equality, and identified indicators are not disaggregated by sex. Only Aichi Target 18 (traditional knowledge) includes gender-relevant indicators, in respect to trends in land-use change and tenure in traditional territories of indigenous and local communities, differentiated by sex. These are the same indicators as for SDG Targets 5.a and 1.4.

Reassuringly, efforts are underway in the United Nations to make the post-2020 biodiversity framework "rights-based, gender-responsive, inclusive and participatory" (CBD, 2019[12]). In November 2018, the Conference of the Parties to the Convention on Biological Diversity (CBD) adopted decision 14/34, which states that the process of developing the framework "will be gender-responsive, by systematically integrating a gender perspective in the process and ensure appropriate representation, particularly of women and girls." The CBD was the first multilateral environmental agreement to include a Gender Plan of Action (Global Youth Biodiversity Network, 2016[13]).

14.3. The degradation of terrestrial ecosystems has more intense effects on women

The environmental degradation and shrinking biodiversity caused by large scale farming, deforestation, mining and other human activity disproportionately affect women. In developing countries and indigenous communities, women's role in the provision of water and fuel supplies, as well as in collecting wild edible and medicinal plants, makes them most sensitive to deforestation, land degradation and desertification. Environmental degradation can either spoil or reduce clean water and ecosystem services, forcing women to travel further to collect them for household use. The destruction of forests and 'marginal' land also tends to affect women and indigenous peoples most, as they play a key subsistence function (Fargione et al., 2008[14]).

Women and indigenous groups living in deprived areas are especially affected by degradation of soil and reduced water supply, which has already reduced the productivity of nearly one quarter of the global land surface, further exacerbating poverty and hunger (IPBES, 2019[15]). Heightened financial insecurity, caused by lost agricultural revenue, can worsen the plight of women and children.

Environmental degradation is linked to gender-based violence (GBV) both directly, through corrupt systems of illegal extraction and logging, and indirectly, due to climate change impacts. There are many accounts of sexual exploitation and harassment of women in the illegal logging industry, which hinges on women's informal work status, lack of land rights and historic role as environmental defenders (Castañeda Carney et al., 2020[16]). A 2016 UNICEF study in India found a correlation between a rise in abuse against women and children during droughts, including child labour and trafficking, women forced into prostitution, and femicide. Gender-based violence is related to inability to provide higher dowries to supplement lost income, or inability to conceive due to malnourishment (UNICEF, 2016[17]). In Ethopia, an increase in the number of girls sold into marriage was found in drought-affected areas (UNICEF, 2017[18]).

Women disproportionately suffer health consequences of environmental degradation because of their role in reproduction. Environmental contaminants in water, air and soil – for instance, by-products of the misuse of agricultural inputs like pesticides and fertilisers, or dumping of toxic materials – can act as endocrine

disruptors that impair women's reproductive systems, harm the developing bodies of foetuses, or cause toxins to bio-accumulate in breast milk (Stefanidou, Maravelias and Spiliopoulou, 2009[19]).

Beyond the direct environmental effects, large-scale economic activity can also be accompanied by adverse social spillovers to women living in local communities. Extractive industries, in particular, offer a clearer picture of the way in which exploitation of natural resources affect women and men differently, both in terms of opportunity and risk. Global evidence shows that benefits of higher-paying jobs primarily go to men, while women, who are usually excluded from the sector, disproportionately bear the social and environmental risks (World Bank, 2013[20]). Such risks include both negative impacts on water and land resources from extraction, and an increase in gender-based violence, as mentioned above (Macdonald, 2018[21]).

14.4. Constraints on women and indigenous groups' engagement in land, forest management and conservation efforts

Despite women's dependency on natural resources and active engagement as users and custodians (see more under Chapter 6), women in many developing countries face restricted access to productive and financial resources and are marginalised when it comes to decisions about land tenure. Women's limited ownership of land – driven in large part by discriminatory practices – reduces their capacity to change how land is used, hampering their ability to deal with environmental damage (Samandari, 2017[22]). This and informal employment limit women's participation in decision making in farming.

Women in forest-dependent communities play a central role in the management of resources, including collecting non-timber forest products, yet they too are often excluded from decision making (UN Environment, 2016[23]). Social norms, entrenched traditions and personal endowments are usually the main obstacle to greater participation of women in decision-making bodies.

Equal access to land rights could have positive effects in forestland restoration and sustainable management of ecosystems (FAO, 2018[24]). Several cases show that men and women having more equal land-tenure rights may bring about more environmentally sustainable outcomes. For example, in 2010 the Government of Rwanda launched a low-cost land tenure regularisation programme to clarify land ownership and resources following that country's civil war. The programme allowed for female land ownership and inheritance, in parallel to land-related investment. Legally married women (76% of married couples) saw an improvement in their land access rights (Hoza Ngoga, 2019[25]). An evaluation of the programme found that women-headed households largely contributed to investment and maintenance of soil conservation measures, while overall no negative effect on vulnerable groups was recorded (Ali, Deininger and Goldstein, 2014[26]); (Abbott, 2015[27]).

The SDG framework pays specific attention to the question of women's land tenure and ownership. In fact, the only gender-relevant biodiversity and conservation indicators are related to these legal issues (Box 14.1).

Box 14.1. Examples of gender-responsive SDG biodiversity and conservation indicators

- 1.4.2: Proportion of total adult population with secure tenure rights to land, with legally recognised documentation and who perceive their rights to land as secure, by sex and by type of tenure.
- 5.a.1: (a) Proportion of total agricultural population with ownership of secure rights over agricultural land, by sex, and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure.
- 5.a.2: Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control.
- 5.c.1: Proportion of countries with systems to track and make public allocation for gender equality and women's empowerment.

Source: (UNEP and IUCN, 2019[28]) (Despot-Belmonte, 2019[29]).

Yet, the OECD's Social Institutions and Gender Index (SIGI) shows that, even if a country's laws provide for equal rights between men and women to own, use, and make decisions regarding land, discriminatory social institutions ensure that rights are far from equal in reality. Preference is still given to men in terms of inheritance of land, names on land titles, and decision-making power over land tenure, including in OECD countries. Laws governing inheritance in France, Israel, Greece, Mexico, Spain, Turkey, and the United Kingdom still contain discriminatory clauses that negatively affect women (OECD, 2019[30]). Globally and across countries, depending on a woman's marital status, her rights may be even further restricted or nullified.

Achieving SDG 5 is a prerequisite for attaining sustainable land management. Studies have shown that involving women in participatory land management can reverse desertification and promote sustainable land use (Agarwal, 2009[31]); (Ray, Mukherjee and Bhattacharya, 2016[32]). Hence, sex-disaggregated data can better reflect the impacts of land degradation on women and men, as well as highlight opportunities for gender-sensitive policies. The UNDCCD Science Policy Interface is doing important work on this by mandating that all land degradation neutrality (NDL) efforts that include monitoring of indicators be sex-disaggregated, warning that findings would be incomplete otherwise (Orr et al., 2017[33]).

14.5. Women's role in conservation efforts and protecting biodiversity

Beyond their role in forest management, women-led groups have been at the forefront of campaigns to protect biodiversity and eliminate pesticides from agriculture. Including gender considerations in National Biodiversity Strategies and Action Plans (NBSAPs) is crucial in developing women's role in conservation efforts while protecting biodiversity.

14.5.1. Women's role in biodiversity conservation and sustainable forest management

There are many examples of how engaging women can strengthen conservation efforts and contribute to SDG 15. A review of 17 studies on women in local resource decision making in the forestry and fisheries sectors (in non-OECD countries) found that the participation of women has a strong positive affect on resource governance and conservation outcomes (Leisher et al., 2016[34]). In Namibia, which collects sex-disaggregated data through its Community-Based Natural Resources Management Programme, evidence from 2012 shows that 30% of conservancy management committee members were women, and that women were mainly involved in the management of indigenous plants (CBD, 2014[35]).

In northeast regions of India, where male migration affects about 15% of local families, women have a more prominent role in subsistence farming and in managing agro-biodiversity. Women in these regions have been engaging in local seed conservation initiatives, including seed exchange, in an attempt to safeguard existing knowledge, diversify agriculture and guarantee food security. In these regions more sustainable agricultural processes were supported both by men and women, who opted for ecosystem-based rather than technology-based solutions and strategies for income generation (Price, 2018[36]).

Another example is Costa Rica's Action Plan of the National Strategy on Climate Change, in which gender is being mainstreamed and women's role is recognised as critical in the restoration of forestlands and ecosystems (UNFCCC, 2015[37]). Costa Rica is introducing a gender approach to agroforestry systems, critical to boosting low-carbon production systems. By creating conservation units that unite small, womenled farms, female producers have the opportunity to strengthen their capacity while achieving lower emissions and maintaining a percentage of the plot with forest coverage.

A gender perspective is also critical for biodiversity and conservation efforts in other OECD countries. For instance, recent research has highlighted the wealth of community forest arrangements in Europe, although the specific role of women has not been addressed (Lawrence et al., 2020[38]). In general, women are underrepresented in the broader forestry management sector. For instance, in Canada, women represented 17% of people employed in the forest industry in 2016.1 In 2018, the Canadian government announced a Gender Equality in Forestry National Action Plan that will work to promote women's careers in the forestry industry.

The role of women in the management of commons requires much greater attention than has been the case up to now. The importance of this issue was at the core of the research of Elinor Ostrom, the first woman to win the Nobel Memorial Prize in Economics for her "analysis of economic governance, especially the commons" (Ostrom, 1990[39]). Ostrom researched how humans interact with ecosystems to maintain long-term sustainable resource yields, developing institutional mechanisms to share the use, management and monitoring of commons, while avoiding ecosystem collapse. Her work emphasised the multifaceted nature of human ecosystem interaction and argued against any singular solution for individual social ecological system problems. Sustainable development requires a community focus that empowers women and indigenous populations to participate and take on leadership positions (Meinzen-Dick, Kovarik and Quisumbing, 2014[40]) (Box 14.2).

Box 14.2. Women's role in managing and using community forests in Nepal

To fight the effects of illegal logging, Nepal has been a pioneer in devolving forest uses and management rights to local communities. Approximately 22 000 community forest user groups (CFUGs), involving 40% of the total population, oversee 32% of the country's forested land. Research from the Center for International Forestry Research (CIFOR) has shown that community forest agreements play a role in forest regeneration, with notable increases in forest cover, firewood and non-timber forest products. A legally recognised self-governing community-led group has also allowed individuals from lower social castes and indigenous groups to benefit from higher access to community forest resources, with positive impact on their livelihoods. In particular, CIFOR research has shown that women, as collectors of non-timber forest products, are the principal beneficiaries of CFUGs. The Chisapani Village CFGU, next to Bardiva National Park, is mostly supplied by women farmers, and women make up the majority of its staff. Following national law, profits from the harvesting of lemongrass and its transformation into essential oil are shared equally among the women.

Source: (Paudyal et al., 2017[41])

Lastly, nature-based solutions to climate problems need to be considered for their role in achieving both conservation and gender equality goals, particularly during the COVID-19 pandemic, which has had a differentiated effect on women. Nature-based projects have also been recognised for their potential to create green jobs (WWF and ILO, 2020[42]). Evidence from Brazil, Cameroon and South Africa has found that agroforestry promotes gender equality, with 40-50% of women becoming involved with agricultural activities (FAO, 2018[43]). Integrating gender considerations in the design and implementation of nature-based solutions could potentially guarantee a wider engagement of women in environment-related employment and also more sustainable solutions, due to women's – and indigenous communities' – knowledge of local land, biodiversity and natural resources.

14.5.2. Women in indigenous communities and their role in protecting ecosystems

There are more than 370 million indigenous people in the world, in some 90 countries (UNDESA, 2009[44]). Over 38 million indigenous peoples live across 12 OECD countries (OECD, 2019[45]). Indigenous communities draw much of their subsistence food, water and energy from the surrounding environment. Indigenous peoples' close links to and dependency on well-functioning ecosystems makes them highly vulnerable to environmental damage and climate change. Deforestation and pollution caused by mass farming, industrial activities and expanding urbanisation all pose grave and growing threats to the livelihoods and survival of their communities. Indigenous peoples are directly affected by the decline in biodiversity (UNEP, 2016[46]). It is estimated that while indigenous people make up 5% of the global population, they protect around 80% of global biodiversity (World Bank, 2021[47]).

Women in traditional and indigenous societies play a central role in ecosystem management, on which they have accumulated traditional knowledge and largely depend for sustenance and medicine. In many communities, men and women hold differentiated knowledge deriving from traditional segregation of responsibilities. Indigenous women have played a fundamental role in environmental conservation and protection throughout the history of their peoples. Historically, in traditional societies, indigenous women and men have often had equal access to lands, animals and resources. Many of these societies were once matriarchal, with women as managers of the household and family, and founding pillars of their societies. This has been changing as "modern" practices and legislation were introduced (UN, 2010[48]).

Addressing the vulnerabilities of women in indigenous groups in both OECD and developing countries is not only a matter of justice and fairness. Their vast wealth of traditional knowledge of the medicinal

properties of plants and other benefits that can be drawn from ecosystems, as well as sustainable management of natural resources, is fundamental for the survival of indigenous communities and their ecosystems.

As indigenous peoples increasingly interact with "modern" economies and societies, it is often indigenous men, rather than women, who participate in the decision making and planning of projects related to natural resource management. As a result, valuable knowledge of women and their attitudes towards the environment are often ignored. Furthermore, the move from collective ownership and responsibility to titled land and inheritance laws often leads to the discrimination of women, which reduces incentives to protect the environment. All these negative effects can create cycles of declining productivity and sustainability, environmental degradation and growing food insecurity.

Building on Ostrom's response to the tragedy of the commons (Ostrom, 1990[39]) a place-based approach to indigenous economic development, with the community question at its core, can place women at the centre of governance in order to secure sustainable management of finite resources (OECD, 2020[49]). In practice, national forestry plans often do not address the issue of the rights of indigenous peoples.

Some countries have implemented specific actions to better integrate indigenous communities in national forestry plans. For instance, in 2005, Australia developed a National Indigenous Forestry Strategy so that indigenous communities could participate in building competitive and ecologically sustainable forest industries. The strategy did not have a gender dimension. International organisations are also active on addressing indigenous peoples' rights. The United Nations Environment Programme is specifically supporting women in indigenous communities (Box 14.3).

Box 14.3. UNEP's dedicated focal point for indigenous peoples

In 2002, the UN Permanent Forum on Indigenous Issues (UNPFII) was established as an advisory body to the UN Economic and Social Council (ECOSOC), aimed at recognising the specific importance of indigenous peoples and their communities. Since 2004, the United Nations Environment Programme (UNEP) has had a dedicated focal point that indigenous peoples can contact at any time regarding the organisation's work programmes. In 2012, UNEP produced policy guidance on indigenous peoples which covers the role of women and the involvement of communities in UNEP sustainable development projects.

Source: (UNEP, 2012[50])

14.5.3. Women's activism to protect biodiversity

Women have traditionally been at the forefront of environmental activism and environmental justice movements, rooted in and birthed from their own experiences of social marginalisation. Researchers postulate that power dynamics orient a feminist approach to environmental activism. Men are traditionally at the helm of political and economic structures responsible for environmental damage, and thus may eschew environmental responsibility based on vested interests (Bell, 2016[51]). Women activists tend to be more collaborative, supportive of co-production of knowledge, and forge coalitions to buttress their efforts and solidify solidarity (Berila, 2006[52]). For example, environmental activism in the Central Appalachian coalfields of the United States began with women activists of all races, creeds and social standing coming together during a time of racial segregation to fight for worker's rights in the coal mines. The initial struggle has held strong and expanded to include environmental conservation (e.g. safeguarding groundwater, opposition to mountaintop removal) and shed light on and demanded a response to the social and health impacts of coal mining (black lung disease, poverty etc.).

Where women face barriers to or are kept at bay from formal decision making (i.e. local councils, parliaments), they seek a voice to initiate change through grassroots activism. Women Defenders of the Amazon, who delivered a Mandate of Amazonian Women Defenders of the Jungle of the Bases against Extractivism to Ecuador's president and ministers, or Brazil's National Association of Ancestral Indigenous Women Warriors (ANMIGA), are only two examples of such women-led social mobilisation. But this type of activity can entail great risk to women with little protection for recourse or justice (Chapter 4). Women activists – both environmentalists and environment defenders such as lawyers or journalists – are more prone to attack in that they are seen as breaking social norms by speaking out (De Cicco and Sekyiamah, 2017[53]) (Ervin, 2018[54]). Violence against female environmentalists - such as threats, intimidation, rape or torture - largely goes unnoticed (Ervin, 2018[54]). The international human rights organisation Global Witness reported 167 land and environmental defenders killed in 2018, which averages out to more than three a week (Global Witness, 2019[55]).

14.6. Integrating a gender lens into biodiversity initiatives

The 12th meeting of Conference of the Parties to the Convention on Biological Diversity (CBD COP 12) recognised the importance of gender considerations in achieving the Aichi Biodiversity Targets, introduced a 2015-20 Gender Action Plan, and called for more sex-disaggregated data and monitoring of policies. (CBD, 2014[35]). The Gender Action Plan's major objective is to integrate gender in NBSAPs and is organised in four areas of action: (i) developing a policy framework that can provide the mandate, political support and resources to ensure integration of gender considerations in implementing the Convention; (ii) addressing gender issues in underlying theory, methodology and applied research upon which CBD interventions are based; (iii) working on gender equality in staffing through institutional capacity, staff development, accountability and related equal opportunity policies; and iv) mobilising partners, building partnerships and building on existing efforts, best practices and lessons learned (CBD, 2017[56]).

The Gender Action Plan within the UN Convention to Combat Desertification 2018-2030 Strategic Framework enhances the implementation of the Convention, and therefore serves as a valuable instrument for transforming the livelihoods of millions of women and girls. The Plan recognises the importance of women in the implementation of the Convention, and identifies critical areas for their engagement: (i) awareness-raising and participation in the design and implementation of programmes; (ii) decision-making processes that men and women adopt at the local level in the governance of development, implementation and review of regional and national action programmes (RAPs and NAPs); and (iii) capacity-building, education and public awareness, particularly at local level through the support of local organizationsorganisations (UNCCD, 2018[57]).

NBSAPs are the key mechanism through which signatories to the CBD implement their goals. As such, they provide an important opportunity to integrate women's empowerment and gender considerations into biodiversity management across the agriculture, forestry and fisheries sectors. Recent research analysing the latest 174 NBSAPs finds that while 7% of countries include an objective or goal to advance gender equality, double that number (14%) include gender equality as a guiding principle, and more than double (18%) include gender equality or women's empowerment considerations as part of a key objective, target or goal (CBD, 2016[58]). Between 1993 and 2016, 56% of NBSAPs mentioned keywords such as "gender" or "women", but how women and their participation was defined differs. Around one-third of reports characterised women as "stakeholders" and/or "beneficiaries", 17% referred to women as "vulnerable", and 4% as "agents of change." Multiple countries referenced Aichi Biodiversity Target 14.

Uganda's National Gender Policy (1997) promotes the integration of gender concerns in environmental policy planning, decision making and implementation at all levels to ensure sustainable social and economic development. The country's policies pertaining to wildlife, forestry, fisheries and agriculture sectors each call for attention to gender issues. Similarly, an analysis of Mexico's National Development

Plan 2013-18 shows that inclusion of gender perspectives is a multifaceted necessity and was therefore included in their National Programme for Equality of Opportunities and Non-discrimination against Women (PROIGUALDAD, 2013-18) together with implementation of the CBD. Brazil's national plans address the need for equitable sustainable development and to promote women's land rights, with gender equality included as a cross-cutting element in national environmental policies (CBD, 2016[59]).

In order to help countries successfully integrate gender into environmental strategies and build upon the examples of Uganda, Mexico and Brazil, the CBD has developed a methodology. The initial step involves examining national policies, as well as legal and institutional frameworks for gender equality and biodiversity interaction, followed by identifying the status of women on gender issues and identifying stakeholders. The second step is establishing governance and consultation mechanisms to capture diverse voices, including those of women. The last step is identifying priorities and recommendations and submitting them to lead biodiversity institutions in order to promote change (CBD, 2016[59]).

References in NBSAPs indicate support for women, but stop short of clearly defining women's influence on biodiversity outcomes as leaders in their communities, as consumers and as entrepreneurs. Failure to mention or acknowledge women altogether is a symptom of a bigger problem: presumption that women are a part of management, decision-making processes and solutions, thus a focus on their engagement is unnecessary. Available data tells a different story, and NBSAPs will need to go beyond acknowledgement and tokenism to define more substantive action, for instance identifying what natural resources women need and why, action plans for gender balanced decision making and access to technology and inputs, and commitment of funds to implement initiatives.

Development co-operation data show that there is further potential for mainstreaming gender equality in programming related to biodiversity and conservation projects. Bilateral allocable aid commitments targeting gender equality and women's empowerment as either a significant (secondary) or principal (primary) objective have seen a significant increase from 2015 to 2019 (over USD 10 billion). However, only a small fraction of this bilateral aid is dedicated to biodiversity - that is about 1.2% annually on average for the period 2015-2019 - indicating that the link between gender equality and halting biodiversity loss needs to be strengthened in Official Development Assistance (OECD.Stat, n.d.[60]).

Infrastructure and natural resource management projects at both local and national levels often overlook gendered effects and approaches. For example, the international programme for Reducing Emissions from Deforestation and Forest Degradation (REDD+), which provides payments to developing countries in exchange for conserving their forests, in some cases excluded women in governance frameworks (e.g. Nepal, Cameroon), and resulting decisions overlooked the different needs of men and women (Larson et al., 2015[61]) (Elwell and Williams, 2016[62]).

Action is necessary not only from public authorities but also from non-governmental organisations (NGOs). The World Wide Fund for Nature (WWF) developed interesting and successful initiatives while adopting its Gender Policy in 2011 that aimed to drive stronger integration of a gender perspective in both its conservation work and its internal operations. WWF has been mainstreaming gender equality and women's empowerment in their global work by helping women in developing countries gain better access to education, health care and sustainable livelihoods, as well as to build their self-confidence (WWF, 2020[63]). An example in Nepal empowers marginalised women to actively participate in community adaptation processes by identifying their specific climate vulnerabilities and ensuring that solutions for them are included in local climate adaptation plans (WWF, 2020[63]). These sustainability improvement activities range from rainwater harvesting and improving water use efficiency to introducing climate-adapted vegetable crops in order to help women adapt to climate change while also restoring long-lasting ecosystem support.

14.7. Key actions for advancing the agenda and ongoing work

A number of actions are needed to integrate gender equality and conservation efforts:

- As with other environment-related SDGs, addressing data gaps and strengthening evidence collection and monitoring beyond the existing gender targets and indicators identified in Agenda 2030 should be a first step in correcting the general lack of gender focus in the implementation of SDG 15.
- The current list of biodiversity and conservation targets relevant to gender SDG indicators are limited in scope, and focus mainly on access to land. The SDGs are silent on both the heightened effects of environmental degradation on women (this could be included in SDG Target 15.6) and the potential of engaging women in conservation efforts. Further efforts are needed to embed gender-responsive indicators throughout the post-2020 biodiversity framework, following initial steps by the Conference of the Parties to the Convention on Biological Diversity.
- Tackling gender discrimination and women's empowerment needs to go beyond private land titles
 and agricultural production to also address the need for women to access shared resources from
 forests, mountains, rivers and other commons. This is especially important for indigenous
 communities given their dependence on shared, ancestral lands.
- Gender considerations need to be better integrated into National Biodiversity Strategies and Action Plans (NBSAPs). In particular, there is a need to ensure gender balanced decision making and access to technology and finance for women-led projects.
- All countries have a major stake in ensuring that their transboundary policies (trade, investment, and development co-operation) promote the empowerment and engagement of women and indigenous groups in other countries.
- Multinational enterprises that operate in developing countries, especially those that use the natural
 resources within them, have a duty to act responsibly and mitigate the negative environmental and
 social impacts of their activities. Initiatives such as the UN Global Compact and the OECD's
 Guidelines for Multinational Enterprises play a major role in this regard, but efforts are needed to
 strengthen monitoring and sanctioning mechanisms.

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Notes

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From:

Gender and the Environment

Building Evidence and Policies to Achieve the SDGs

Access the complete publication at:

https://doi.org/10.1787/3d32ca39-en

Please cite this chapter as:

OECD (2021), "Women and SDG 15 – Life on Land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification halt and reverse land degradation and halt biodiversity loss.", in *Gender and the Environment: Building Evidence and Policies to Achieve the SDGs*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/131671a1-en

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