



GENDER AND CLIMATE CHANGE

Gender, climate change and food security

The interlinked challenges of climate change and food security are most evident in the agriculture sector, which (combined with land-use change) produces about a quarter of global greenhouse emissions. At the same time, climatic stresses on agriculture and food systems present formidable food security and livelihood challenges to millions. The climate challenge in agriculture requires integrated approaches that increase productivity, enhance adaptive capacity and cut back net emissions. The agency of rural female farmers is essential for enhancing agricultural productivity and realizing the Sustainable Development Goals (SDGs), including ensuring food security (SDG 2) and addressing the perils of climate change (SDG 13). Despite significant strides in addressing gender inequalities over the years, rural women are still among the most marginalized groups in society and are particularly vulnerable to current and future climate change and food insecurity. Given these close relationships, the response to climate change vis-à-vis the agricultural sector should therefore take into account gender dynamics and be gender-responsive.

Women improve agricultural productivity

In most parts of the world, women play a major role in agricultural production, a critical component of food security – women farmers bring to bear valuable knowledge in seed selection, vegetative propagation and the reproduction of plants and animals. A growing body of evidence in international development establishes that gender equality at the household and community levels leads to superior agricultural and development outcomes, including increases in farm productivity and improvements in family nutrition.¹ The McKinsey Global Institute (MGI) recently calculated the economic impact of closing the gender gap in labour markets in 95 countries (covering 93 percent of the world’s female population and 97 percent of its GDP) and concluded that the national GDPs of each country would increase by at least 9 percent and global GDP by as much as \$28 trillion or 26 percent.² Agriculture-specific data similarly shows strong correlation between women’s empowerment and agricultural productivity. Thus, according to the Food and Agriculture Organization (FAO), if women farmers were given the same access to resources (such as land and credit) as men, national agricultural production could rise by 2.5 to 4 percent and the number of malnourished people could be reduced by 12 to 17 percent.³ A recent comparative study in Nigeria, Tanzania, and Uganda also suggests that closing gender productivity gaps in these countries yields production gains of 2.8 percent, 8.1 percent, and 10.3 percent, respectively.⁴



Gender imbalances in agriculture

Women play a pivotal role in the three components of food security: food availability (production), food access (distribution), and food utilization.⁵ Women also play a role in a wide range of activities that support agricultural development, such as soil and water conservation, afforestation, and crop domestication. Men also play a crucial role in food production, often focused on cash crops. However, they face far fewer constraints than women. Men are more likely to have access to productive resources such as land, credit and extension services.⁶ In cases of crop failure due to harsh climatic conditions, cultural factors often make it easier for men to leave their farms in search of employment elsewhere, leaving women behind to struggle to feed their families and make ends meet. In many cases, women have diminished assets and resources to help them plan for and potentially avert the next crisis. Diverse gender-based barriers (including restrictive sociocultural inhibitions)⁷ in accessing land, financial services, social capital, credit and technology render women vulnerable to food insecurity (see Box 1: The gender gap in agriculture).⁸

Box 1 *The gender gap in agriculture*

- *Adverse environmental factors are expected to boost world food prices 30 to 50 percent in the coming decades and to increase price volatility, with harsh repercussions for poor households, including women-headed households.*
- *Although they predominate in world food production (50 to 80 percent), women own less than 20 percent of land.*
- *Gender productivity gaps in Nigeria, Tanzania, and Uganda are 18.6 percent, 27.4 percent, and 30.6 percent, respectively.*
- *Women receive only 5 percent of agricultural extension services worldwide.*
- *In most countries, the share of female smallholders who can access credit is 5 to 10 percentage points lower than that of male smallholders. This is partly attributable to the fact that women often do not have the necessary collateral.*
- *A World Bank study indicates that 155 of the 173 economies it covered (i.e., 9 in 10 countries) have at least one law impeding women's economic opportunities, including access to credit.*
- *If women farmers were given the same access to productive resources as men (e.g., land), the number of malnourished people could be reduced by 12 to 17 percent.*

Sources: UNDP (2015); FAO (2011a); FAO (2011b); World Bank Group (2015); Mukasa and Salami (2016)⁹

Agriculture – climate change interlinkages

The agricultural sector is predicted to come under substantial stress from climate change-induced increases in temperature, variability in rainfall, and extreme weather events that could trigger crop failures, pest and disease outbreaks, and the degradation of land and water resources.¹⁰ These impacts will be experienced acutely and increasingly in the poorest regions of the world where rain-fed agriculture is the mainstay of millions.¹¹ For example, early this year El Niño weather conditions disturbed rain patterns in the horn of Africa, driving up to 15 million people in the region to food aid and exposing up to 40 million people to droughts.¹²

While agriculture is highly prone to climate change, it also contributes to its effects. The Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) has underscored the criticality of low-emissions agriculture – currently the sector employs over 1 billion people (one in three of all workers)¹³ and accounts for up to 30 percent of greenhouse gas emissions (GHGs), making it the second major contributor of GHGs.¹⁴

While the interlinkages between climate change and agriculture pose complex overlapping and interrelated challenges, the improvement of food security and rural livelihoods and climate change adaptation and mitigation are not mutually exclusive ends. GHG mitigation in agriculture, when done right, could also produce food security and resilience co-benefits. One widely accepted approach that is currently being operationalized is ‘climate-smart agriculture’, which aims to sustainably improve agricultural productivity, enhance food security, boost farmers’ adaptive capacity and resilience to climate shocks *and* contribute to GHG mitigation.¹⁵ Such an approach employs a wide array of policy tools, techniques (such as agroforestry, conservation agriculture, and technology – e.g., biogas programmes) and investments to help facilitate the transition to high-production, resilient, sustainable and low-emission agriculture.

Box 2 Gender and agriculture in the pledges for climate action (INDCs)

As part of the requirements for compliance with the United Nations Framework Convention on Climate Change (UNFCCC) elaborated in Paris in 2015 (COP 21), over 160 Intended Nationally Determined Contributions (INDCs) were submitted, representing 190 countries.

Analysis of these INDCs made by the Research Program on Climate Change, Agriculture and Food Security (CCAFS) of the Consortium of International Agricultural Research Centers (CGIAR) shows that of 162 INDCs, 119 intend to make emissions reductions in agriculture, and 127 list agriculture as a priority for adaptation. Sixty-five countries mention gender in their submissions (35 in the context of adaptation, and 18 in relation to mitigation). Several additional countries made a general mention of gender, though not in relation to adaptation or mitigation. Only 15 countries included gender in the context of agricultural mitigation or adaptation.

Source: CCAFS (2016)¹⁶

Women are key to the success of climate-smart agriculture

The appeal of climate-smart agriculture is its balanced approach in seeking to improve livelihoods, increasing the productivity and resilience of poor communities, including rural women, while also providing mitigation benefits.¹⁷ However, existing gender imbalances in agriculture, as discussed above, mean that women are potentially at a comparative disadvantage in terms of participating in and benefiting from site-specific climate actions on the ground.¹⁸ Because gender-differentiated vulnerabilities to the impacts of climate change are the cumulative result of a complex array of sociocultural, structural and institutional inequities,¹⁹ climate-smart agriculture and similar efforts should seek to enhance the resource base of women and ensure that women's contributions to productivity and food security are broadly valued²⁰ – redressing gendered vulnerabilities and unequal power dynamics in agriculture would help ensure their efficacy and sustainability.

Box 3 Uganda: Closing the technology gender gap in agriculture

Farmer field schools have proved to be a participatory and effective way of empowering and transferring knowledge to women farmers. This was evident in Kenya, Uganda and Tanzania, where women who participated in these schools were more likely to adopt major technologies, including improved crop varieties, and livestock management and pest control techniques.

The sustainable rural livelihoods programme established in 2004 in eastern Uganda's Kamuli District was designed to improve food security, nutrition and health at the household and community levels. The programme employs farmer-to-farmer training and extension services to demonstrate and disseminate information on key management practices such as planting banana or cassava in ways that ensure productivity and control diseases; enhancing soil fertility through composting with manure; and growing and using nutrient-dense crops such as amaranth grain and sweet potatoes rich in vitamin A.

It also emphasizes the establishment of multiplication gardens and seed nurseries, post-harvest management and storage, the improvement of livestock breeding and feeding, the integration of nutrition and health with agriculture, farm enterprise development, marketing, and the strengthening of farmer groups. Women make up the majority of farm group members, leaders and trainers. They comprise about 58 percent of community-based rural development extension workers, 75 percent of community nutrition and health workers, 76 percent of committee members, and 71 percent of executive committee members.

The programme has resulted in the enhancement of women's human capital through training and experience gained in developing leadership skills, improved nutrition and health, and community-wide respect for their role as sources of valuable knowledge. The women are also involved in farm groups and emerging marketing associations. Another key result has been a significant increase in household food security.

Source: FAO, The State of Food and Agriculture (2011a)²¹

Key Messages

- **Undertake the reform of laws that restrict women's ownership of and/or access to productive resources.** Gender equality is a fundamental right, but it also makes economic sense – improving women's access to land, credit and other productive resources would increase the productivity of land and help boost food security as well as overall well-being at household and community levels. The rural poor, especially women, should have secure tenure or similar rights of access to land and other productive resources.
- **Adopt a gender-responsive approach in climate-smart agricultural initiatives.** Climate change necessitates a new approach to agriculture that employs policy and agro practices that enhance food security, promote adaptation and resilience, and yield mitigation co-benefits. Because gender imbalances in the sector affects how men and women contribute to and benefit from climate-smart agriculture, the latter should be closely attuned to the unique needs and means of women and men.
- **Ensure that technologies and extension services cater to women's needs.** New technologies (e.g., drought-resistant crops, irrigation practices) and existing ones will be adopted and/or adapted more effectively when they are suitable to the needs of women. Rural women also need to benefit from access to agricultural extension and climate information services.
- **Gather sex-disaggregated data in agriculture and food security.** Sex-disaggregated data on access to land and land tenure security, finance, extension services and agricultural tools, etc., would be helpful for gender-responsive policy design and monitoring. Gender analysis and gender-sensitive tools also need to be employed throughout the project cycle for all adaptation and mitigation actions for the agriculture sector.





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Gender, adaptation and disaster risk reduction

Global climate efforts have been gradually shifting towards a more balanced approach on adaptation and mitigation. Thus the Paris Agreement on Climate Change seeks to limit the global temperature rise to 2°C (and strives towards a rise of 1.5°C), but it also puts adaptation on par with mitigation, among other issues, by establishing a global goal on, and cycles for, improvement on adaptation.¹ Similarly, the Sendai Framework has adopted a disaster risk management approach that aims to broadly strengthen resilience and adaptive capacity to climate-related hazards and natural disasters, emphasizing the need for dovetailing climate change adaptation and disaster risk reduction (DRR) efforts. In both domains (adaptation and DRR), there is increasing recognition of the need for gender-responsive action in response to climatic and disaster risk. Gender equality and women's empowerment are key to the success of all post-2015 multilateral agendas, including 2030 Agenda, the Paris Agreement, the Sendai Framework, and all future actions on reducing climatic and disaster risk.

Gender gaps increase women's vulnerability to climatic and disaster risk

Vulnerability is a function of socio-economic, geographic, demographic, cultural, political and environmental factors. Different groups are thus differentially vulnerable based, in part or in whole, on their gender, age, social status, health and wealth/poverty; on whether they have a disability; and on other sociocultural characteristics.² Climate change is disproportionately harsh on vulnerable groups, a large majority among them members of rural communities, particularly women. The reasons therefore are manifold but fall broadly within the stated vulnerability characteristics. Women are often poorer, receive less education, and are excluded from political, community and household decision-making processes that affect their lives.³ Such economic and social inequities translate into women possessing fewer assets and meagre means to cope with the negative effects of the changing climate. The tendency of women and girls to depend more on natural resources for their livelihoods also lends itself to increased vulnerability. For instance, climatic stress on water and forest resources often leads to women having to travel longer distances for a longer time to fetch water or wood, exposing them to health risks⁴ and limiting their prospects for engaging in high-return ventures such as education, politics and business.⁵

Similarly, while disasters pose threats to everyone in their paths, they often have disparately harsher impacts on women. Studies have shown that disaster fatality rates are much higher for women than for men. This is due, in large part, to gendered differences in the capacity to cope with such events and insufficient access for women to information and early warnings.⁶ For example, women accounted for 61 percent of fatalities caused by Cyclone Nargis in Myanmar in 2008, 70–80 percent in the 2004 Indian Ocean tsunami, and 91 percent in the 1991 cyclone in Bangladesh.⁷ This gendered asymmetry in vulnerability to disaster risk is rooted primarily in geographic, economic, social, educational/informational and political power imbalances in societies. These factors translate into women having lower levels of access to economic resources in general, and in particular, lower levels of access to education and information that would allow them to read and act upon disaster warnings.⁸ Women also tend to live by and work closely with the natural resources and geographical features that are most effected by disasters and shocks (e.g., marginal lands and informal settlements) – men also live in these areas but women are less likely to be able to cope with the shocks. Further, cultural norms on gender roles sometimes limit women's ability to make snap decisions in disaster situations and, in some cases, the clothes they wear and/or their unpaid care work (of children, the sick and/or the elderly) and household responsibilities may restrict their range of movement to escape disasters (particularly water-related hazards) (see Box 1: Gender differentiated vulnerability to climate and disaster risk).

Box 1 *Gender differentiated vulnerability to climate and disaster risk*

- *Women and children are 14 times more likely than men to die during a disaster.*
- *The Human Development Index (HDI)* value is lower for women than for men.*
- *Globally, women earn 24 percent less than men. In Latin America, in Mexico, women earn an average of 20 percent less than men; in Argentina, 12 percent less; and in Brazil, 25 percent less.*
- *If all countries were to match the progress towards gender parity of the country in their region with the most rapid improvement on gender inequality, as much as \$12 trillion could be added to annual global GDP growth in 2025.*
- *In the 2004 Asian tsunami, women in many villages in Aceh, Indonesia, and in parts of India, accounted for over 70 percent of the dead.*
- *More women than men died during the 2003 European heatwave. In France, most deaths were among elderly women.*
- *During Hurricane Katrina, most of the people trapped in New Orleans were African-American women and children, the poorest demographic group in the United States.*
- *A study by the World Bank indicates that 155 of the 173 economies it covered (one in nine) have at least one law impeding women's economic opportunities.*

* HDI is a summary measurement of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living.

Sources: UNDP (2015a); UNDP (2015b); UNFPA and WEDO (2009); World Bank Group (2015); MGI (2015)⁹

Adaptation and disaster risk reduction response could unintentionally worsen socio-economic inequities

While there is almost unanimous consensus on climate change and its damaging impacts, the specific methods and ingredients required to implement 'good' adaptation on the ground is far from clear.¹⁰ Thus it is not enough that we make a concerted response to climate change – *how* we respond is just as important. Adaptation (and disaster risk reduction) policies, plans and projects that do not take women's issues and needs into account may unintentionally exacerbate existing gender inequities. The UNFCCC Technology Executive Committee, for example, notes that a lack of careful planning in adopting technologies in support of agricultural adaptation (e.g., agricultural machinery that may not be gender-friendly) increases the risk of social/economic *maladaptation*.^{11/12} Similarly, diverting fresh water to areas where there is a water shortage (through dikes, water transfers or irrigation canals) may have the unintended consequence of lengthening and intensifying women's productive and reproductive

working day by placing water sources in distant places.¹³ These examples underscore the need for proper consideration of the interests and contributions of all members of society, especially women and other vulnerable groups, in the design, planning, financing and implementation of adaptation actions.

There is a growing interest in developing tools and guidelines on how to consider the environmental, sociocultural and economic dimensions of adaptation actions and thereby lower the risk of maladaptation.¹⁴ More effort should be made on developing new (and honing existing) standards that ensure thorough consideration for gender in the implementation of adaptation and disaster risk reduction actions.

Building resilience to risks and addressing underlying vulnerability is increasingly being accepted as a unifying goal for climate change adaptation/mitigation, disaster risk management and poverty reduction. The Sendai Framework for Disaster Risk Reduction 2015–2030, adopted on 18 March 2015 at the Third UN World Conference in Sendai, Japan, is one of the highest profile endorsements of the need for an integrated approach to disaster and climatic risk. There is a lot of merit in ensuring that adaptation and disaster risk management efforts are mainstreamed at the national level to increase policy cohesiveness. It is also important that such mainstreaming efforts integrate gender-based vulnerabilities and needs and concerns across scales. Box 2 provides critical elements of gender mainstreaming in adaptation and disaster risk reduction.



Box 2 *Critical elements of gender mainstreaming in adaptation and disaster risk reduction*

Common elements

- *Include gender perspectives in adaptation and disaster reduction efforts at the national, regional and international levels – including in policies, strategies, action plans, and programmes;*
- *Build the capacities of national and local women's groups' and provide them with a platform to be heard and to lead;*
- *Include gender-specific indicators and data disaggregated by sex and age to monitor and track progress on gender equality targets;*
- *Ensure that climate finance is responsive to climate change and disaster risk; vulnerability dynamics, especially within marginalized groups of society, including poor women and men. To this end, undertake a gender analysis of applicable budget lines and financial instruments to determine the differentiated impacts on women and men. More broadly, engage with existing climate finance frameworks, networks and instruments at all levels to ensure more meaningful integration of gender perspectives in disaster risk reduction and adaptation efforts;*
- *Consider the reallocation of resources, if relevant, to achieve gender equality outcomes from the actions planned;*
- *Include women's traditional knowledge and perceptions in the analysis and evaluation of adaptation and disaster risks, coping strategies and solutions; analyse climate change data (e.g., on desertification, floods, drought, deforestation) with a gender-sensitive perspective and collect sex-disaggregated data;*
- *Increase women's participation and representation in all levels of decision-making processes.*

Elements specific to disaster risk reduction

- *Take gender-aware steps to reduce the negative impacts of disasters on women, particularly in relation to their critical roles in rural areas in the provision of water, food and energy (i.e., provide support, health services, information and technology);*
- *Ensure that women are being visibly engaged as agents of change at all levels of disaster preparedness, including in early warning systems, education, communication, information and networking opportunities;*
- *Consider the level of women's access to technology and finances, health care, support services, shelter and security in times of disaster.*

Elements specific to adaptation

- *Address gender differences in capabilities to cope with climate change adaptation. Specifically, make women's equal access to information, credit and other productive and reproductive resources a priority;*
- *Develop and apply gender-sensitive criteria and indicators for monitoring and evaluation of the results of ongoing adaptation actions.*

Women's empowerment improves adaptation to climate and disaster risk

While women's vulnerability is almost always assumed, their unique capacities and contributions to adaptation and across the disaster management cycle (mitigation, preparedness, response and recovery) have not been well documented.¹⁵ In fact, women's individual and collective knowledge and experience in natural resource management and other societal activities at the household and community levels equip them with unique skills that benefit adaptation and disaster efforts across scales and sectors.¹⁶ For example, during a drought in the small islands of the Federated States of Micronesia, the knowledge of island hydrology that the women had as a result of their land-based work enabled them to find potable water by digging a new well.¹⁷ Similarly, in Honduras, post-Hurricane Mitch (1998), women helped save lives and assets as the water rose,¹⁸ and, as part of the recovery efforts, they led and organized community-based work to rebuild homes and other properties.¹⁹

With the new 2030 roadmap and Sustainable Development Goals (SDGs) adopted by the global community, not only is gender equality reaffirmed as a matter of human rights and dignity (SDG 5), it is also recognized as central to all of the SDGs. Appreciating, engaging and promoting women's unique capacities in adaptation and DRR would allow decision makers to pursue policies that build resilience in communities while also remedying gender injustice.

Key Messages

- **Climate effort challenges also provide opportunities to improve human development.** Vigorous, pro-poor and gender-responsive planning and implementation is a winning pathway for nurturing sustainable and resilient livelihoods. Climate change adaptation and disaster risk reduction plans and programmes should aim to build up the asset base of women, promote their participation in the planning and execution of these activities and enhance their empowerment in society.
- **Climate change adaptation and disaster risk reduction actions could lead to maladaptation, unintentionally worsening socio-economic imbalances.** Adaptation and DRR efforts on the ground should be keenly attuned to the varied needs and interests of poor and marginalized communities, especially women, to ensure that these efforts do not inadvertently worsen the status quo. Promoting diversification of economic and/or livelihood opportunities of the poor and adopting gender-sensitive technology are examples of gender-aware DRR and adaptation planning. Existing systems of climate finance (such as the Green Climate Fund) could be helpful in promoting integrated adaptation and disaster risk reduction solutions that also advance social development.
- **Mainstreaming gender considerations into adaptation and through all phases of disaster reduction would add much value to these efforts.** Women bring unique capabilities and knowledge to the adaptation and disaster risk reduction efforts that could lead to greater returns

for environmental sustainability across SDGs. Incorporating gender perspectives into adaptation and disaster risk reduction and management policy and projects through improved collaboration among all members of society, including men and women, would lead to the greater equitability, effectiveness and sustainability of adaptation and disaster risk reduction efforts (see Box 2: Gender mainstreaming in adaptation; and Box 3: Gender mainstreaming in disaster risk reduction).

- **Adaptation and disaster risk reduction is a process – there is a need for continuous assessment and realignment of goals and priorities.** The empowerment of women and poor and marginalized groups should be seen as one crucial goal in the monitoring and evaluation of projects designed to reduce climatic and disaster risk. Current adaptation and DRR efforts at all levels (such as National Adaptation Plans, Intended Nationally Determined Contributions, Disaster Risk Management National Plans, etc.) should be subjected to persistent reviews with an eye towards improving our understanding of climate and disaster risk reduction pathways that both empower women and lead to climate-resilient development.

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GENDER AND CLIMATE CHANGE

Gender and REDD+

Forests support the livelihoods of 1.6 billion people and 80 percent of all terrestrial biodiversity,¹ and they help absorb up to 30 percent of carbon emissions from the atmosphere through photosynthesis.² There is thus a strong ecological and socio-economic rationale for forest conservation. REDD+ aims to address the forest-climate mitigation interface by promoting sustainable forest management, which reduces carbon emissions from deforestation and forest degradation while allowing developing countries, including local communities within them, to receive benefits from the carbon sequestration capacity of their forests. However, there are many hurdles that marginalized groups, especially women, still face, including a lack of rights around forest use and land tenure, which can prevent them from equitably accessing and receiving such benefits. For the global REDD+ effort to succeed in reducing carbon emissions, it has to deliver REDD+ co-benefits in the form of sustainable development, poverty reduction and gender equality—nothing less will make REDD+ effective, equitable and sustainable, and therefore successful.

The role of REDD+ in protecting forests and promoting sustainable development

Forests are indispensable—they play a pivotal role in biodiversity conservation, climate change mitigation, ecosystem services provisioning and livelihoods.³ It is estimated that 300 to 350 million people live within or adjacent to dense forests on which they depend for their subsistence and income, while 1.6 billion rely on forests for their livelihoods to some extent. Forests absorb carbon; they provide critical habitat for terrestrial species of animals, plants and insects; they purify the air we breathe, conserve our soil and water and prevent flooding; and they have tremendous cultural and aesthetic value.⁴

Yet, the Earth's forests continue to decline as forested areas are converted for agricultural and other land uses.⁵ To illustrate, some 129 million hectares of forest—an area equivalent in size to South Africa—have been cleared in the last 25 years.⁶ According to the Intergovernmental Panel on Climate Change (IPCC), the Agriculture, Forestry, and Other Land Use (AFOLU) sector represents 20 to 24 percent of total emissions globally, making it the largest emitting sector after energy.⁷ And the situation could worsen: according to one recent estimate, some 289 million hectares of tropical forest—an area the size of India—could be cleared during 2016 to 2050, dumping a significant amount of carbon (169 gigatons of CO₂) into the atmosphere.⁸

In response, numerous global processes have commenced to help combat this forest loss, to reduce emissions that result from such activities, and to mitigate the effects of climate change. The main international mitigation mechanism designed to encourage developing countries to reduce carbon emissions from deforestation and forest degradation was introduced by Parties to the United Nations Framework Convention on Climate Change (UNFCCC) during the Eleventh Conference of the Parties (COP) in 2005. Known as REDD+, this approach is defined as 'reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks'.⁹ REDD+ creates incentives for governments, companies or owners of forests in developing countries to undertake measurable, reportable and verifiable reductions in greenhouse gas (GHG) emissions from activities in the forest sector.

Further underscoring the relevance and importance of addressing forest loss to help mitigate climate change and promote sustainable development, the IPCC devoted a separate chapter on AFOLU (chapter 11).¹⁰ Then, building on the UNFCCC Warsaw Framework for REDD+ (COP 19) and previous COPs,¹¹ the UNFCCC 2015 Paris Agreement formally recognized the role of forests in combating climate change.¹² The 2030 Agenda for Sustainable Development,¹³ which includes the 17 Sustainable Development Goals (SDGs), has also set an ambitious goal to conserve forests, with universal targets that include an end to deforestation by 2020 (SDG 15). And while REDD+ is specific to the forest sector, it can be viewed as a thread that runs through many SDGs, for example SDG 13 (climate change mitigation), SDG 15 (sustainability of terrestrial ecosystems) and SDG 7 (access to energy). To the extent that REDD+ has non-carbon benefits that come in the form of conserved biodiversity (from avoided deforestation) and socio-economic benefits to forest communities (from carbon credits/purchased offsets), its objectives and possible outcomes can also promote the achievement of other SDGs, such as SDG 1

(poverty eradication) and SDG 2 (sustainable food security).¹⁴ Additionally, if REDD+ is designed and implemented in a manner that is gender-responsive and meaningfully incorporates the rights, concerns and aspirations of forest-dependent communities, with the inclusion of women and men on an equitable basis, it can catalyse progress in achieving gender equality and women's empowerment (SDG 5).

Scope of REDD+ action and support

The scope of REDD+ action has evolved over the years, and has ranged from project-based to subnational- and national-level approaches. More recently, there has been a growing recognition of the need to create more REDD+ action that is scaled up at the subnational and national levels.¹⁵ While often much more complex and lengthy in process, subnational and/or national approaches can provide opportunities to engage with governments to align policy strategies on a larger scale, develop consistent approaches for measuring emissions, and involve multiple types of land use.¹⁶

Currently, support for REDD+ action can come from a wide range of private and public sources. Such support can range from international funding mechanisms, such as the Carbon Fund of the Forest Carbon Partnership (FCPF), the Forest Investment Program of the Climate Investment Funds (CIFs), and the Green Climate Fund. It can also come through multilateral arrangements (e.g., UN-REDD Programme, EU REDD Facility, etc.) or bilateral agreements between donor countries looking to offset their emissions by financing REDD+ within developing countries. Additionally, funding and support can come from various international and national organizations, including NGOs and conservation networks as well as from countries themselves, which seek to support REDD+ action within their own borders through national funding vehicles.





Gender dynamics around REDD+

Women's and men's specific roles, rights and responsibilities, as well as their particular use and knowledge of forests, shape their experiences differently. They also often respond differently to corresponding incentive measures and public policy interventions, have different relationships with institutions, and use the forests differently. For example, while men tend to focus on timber and profitable non-timber forest products, women likely focus on firewood and fodder.¹⁷ Additionally, women tend to rely more on natural resources for their livelihoods¹⁸ and are often the primary users of forests—their practices can include traditional agroforestry systems, gathering wild plants for food and medicinal purposes, collecting non-timber forest products (NTFPs), and forest patrolling and monitoring.¹⁹

However, as a result of social, economic, and cultural inequalities and legal impediments within the forest sector, women (and other marginalized groups such as youth, indigenous, poor and/or disabled people, etc.) continue to experience societal exclusion that limits their ability to fully participate in, contribute to, and benefit from REDD+ action. As result, while women in forest-dependent communities contribute considerably to the management of forests, they do not often benefit from forest-related investments and/or are excluded in relevant decision-making.²⁰ They also face inequalities regarding forest and land tenure and possess fewer assets to overcome such hurdles.²¹

In many cases, the gender disparities are sanctioned by law: a recent study by the World Bank indicates that 9 in 10 countries in the world currently have at least one law impeding women's economic opportunities.²² Increasing commercial demands on and for land (in the form of 'land grabs') are also creating challenges for poor women to gain or retain secure and equitable land access.²³ This asymmetry in power has a negative cumulative effect on sustainable development in general and the sustainable management of forests in particular.

Box 1 Gender statistics around REDD+ thematic areas

- 129 million hectares of forest - equivalent in size to South Africa - have been cleared in the last 25 years. Deforestation deprives of poor communities of their livelihood resources.
- Almost 75 per cent of the world's poor are affected directly by land degradation.
- Study in 20 REDD+ sites in 6 countries found that women have been less informed and less involved in the design and decision-making related to REDD+.
- With limited land ownership and control over productive resources, women, relative to men, may not have strong incentive to engage in tree planting. Studies (e.g. Ethiopia) show that land certification significantly increases productivity on plots farmed by women.
- 90 percent of Africa's rural land is currently undocumented, leaving rural communities vulnerable to land-grabbing. Land grabs have been shown to adversely affect rural livelihoods, especially women.
- Since 1980, Brazil has approved more than 300 territories where indigenous peoples have the right to use their forests for their own needs, wherein it is safe from external outside pressures (e.g. soy farmers, ranchers, gold miners, etc.).
- Study in India shows that women's participation in forest projects is associated with a 28 percent greater probability of forest regeneration.
- Countries with higher female representation in parliament are more likely to safeguard protected land areas.

Sources: Larson et al. (2015); Forest Trends (2015); Bernier et al. (2013); Bezabih et al. (2012); Agrawal et al. (2006); UNDP (2011); UNEP (2016); Oxfam, ILC, RRI (2016); UN (2016)²⁴



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The role of social inclusion and gender equality in REDD+

It is widely acknowledged that gender equality and women's empowerment are catalysts for reaching sustainable development, including in REDD+.²⁵ Both women and men are key agents of change whose unique but often differentiated knowledge, skills, and experience are central to economic development as well as environmental sustainability. For example, recent research from the McKinsey Global Institute finds that if women were to participate in the economy “identically to men”, they could add as much as \$28 trillion or 26 percent to annual global GDP in 2025 (roughly the combined size of the current US and Chinese economies).²⁶ Studies also show that countries with a higher representation of women in congress/parliament are more likely to set aside protected land areas and to ratify multilateral environmental agreements.²⁷

Box 2 Gender-sensitive REDD+ action supported under the UNFCCC

REDD+, as it evolved under the UNFCCC over the years, has become a complex and technical climate financial mechanism, largely due to efforts to ensure that it is fair, transparent, inclusive and effective.²⁸ In this process, a few key UNFCCC REDD+ decisions have ultimately impacted and encouraged the uptake of gender-sensitive REDD+ policy and action as well. For example, in Decision 1/CP.16, which resulted from the UNFCCC COP 16 in Cancun in 2010, developing country Parties were guided to address gender considerations, among other issues, when developing and implementing their REDD+ national strategies or action plans.²⁹ Building on this guidance, at COP 17, the Durban Outcomes (Decision 12/CP.17) further guided countries that when providing information on how safeguards are addressed within their efforts on REDD+ (what is now commonly referred to as safeguard information systems (SIS)), gender considerations should also be respected in this process.³⁰

As primary users and managers of forest products in many communities, women play a crucial role in the sustainable management of forests as well as in other productive and reproductive activities at the household and community levels. This puts them in a position to contribute to livelihood strategies adapted to changing environmental conditions. Such knowledge and capabilities can and should be deployed to benefit climate change mitigation, disaster reduction and adaptation strategies.

Box 3 *The symbiotic relation between forests and women —examples from India and Nepal*

A review of 17 studies in natural resources management demonstrates that increased participation by women leads to improvements in local natural resource governance and forest (and fisheries) conservation efforts in India and Nepal.³¹ For example, one study found that women's participation is associated with a 28 percent greater probability of forest regeneration.³² On the other hand, when women and poor communities are included in forest management initiatives (e.g., reforestation, forest surveillance), their livelihoods can be measurably improved.³³ For example, research from West Bengal (India) shows that gender-sensitive participatory forest management decreases the labour and time that women put into collecting non-timber forest products and increases their input to family income.³⁴ Similarly, research from Nepal shows that inclusive forest governance led to increased income for poor communities, especially poor women.³⁵

There is strong evidence (e.g., India and Nepal) that shows conservation outcomes were improved in forest projects by providing women with more powers in decision-making.³⁶ Additionally, a study of 61 countries cited in UNDP's *Human Development Report 2011* showed that a greater per capita number of women's and environmental NGOs correlates with decreased levels of deforestation. Women's participation in decision-making, therefore, has both intrinsic value and instrumental importance in addressing equity and environmental degradation.

Therefore, gender-differentiated needs, roles, experiences and knowledge of the forest need to be valued equitably in the design and implementation of REDD+ action. They all serve as critical inputs to REDD+ policy and programmatic interventions, which can help promote that REDD+ is gender-responsive, and thus efficient, effective and sustainable, both in policy and in practice.³⁷

Looking forward: Achieving gender-responsive REDD+

Initiatives involving forest conservation and the sustainable management of forests benefit women and benefit from women (see the box on ‘The symbiotic relation between forests and women—examples from India and Nepal’). There is increased acknowledgement of the critical role that gender equality and women’s empowerment play in the long-term success of REDD+ and in the entities and stakeholders supporting REDD+ action, which include government agencies, private sector entities, civil society organizations, women, men and youth from forest-dependent communities and indigenous peoples. This is leading to gender-sensitive REDD+ policy and action, and the implementation of associated safeguards to ensure the social inclusion of more marginalized groups (e.g., women, youth, indigenous peoples, etc.).³⁸ Such efforts have helped support the integration of women’s participation and gender equality principles across various REDD+ thematic areas (e.g., REDD+ governance, policies, stakeholder engagement, safeguards, allocation of incentives, national forest monitoring systems [NFMS], etc.), including national REDD+ strategies. For example, the National REDD+ Strategy of Indonesia underscores, as a key principle, the need for ensuring the participation in decision-making and building the capacities of local communities, especially women and other vulnerable groups.³⁹

Nevertheless, there remains the continued and pressing need to better integrate gender-responsive activities in a more cohesive and systematic way throughout the REDD+ policy cycle; that is, in its design, implementation and monitoring. This challenge does not involve just one problem, but rather a multitude of issues happening simultaneously within REDD+ policy and action. Varying across countries, the scope of this challenge includes the limited integration of women’s roles and needs as primary users of forests in REDD+ conservation policies, the underrepresentation of women in meaningful engagement and in influencing REDD+ decision-making, the continued insecurity of rights to forests for women and other marginalized groups, and a lack of understanding and knowledge by those designing and implementing REDD+ on how to develop, implement and measure gender-responsive REDD+ policies.⁴⁰ For example, a recent study of 77 villages in 20 REDD+ sites found that women have been less informed and less involved in REDD+-related design and decision-making.⁴¹ Additionally, when efforts are made to undertake gender mainstreaming, there can be a tendency by REDD+ designers and implementers to misinterpret what is needed to integrate a gender perspective into REDD+ (for example, there is the assumption that gender mainstreaming entails primarily increasing the number of women in REDD+-related committees, meetings, etc.). Increasing the numerical participation of women, while helpful, is far from sufficient to advance women’s effective and meaningful participation in REDD+.⁴²

Thus, increased efforts in the form of context-specific and locally appropriate guidelines for gender-responsive REDD+ are crucial.⁴³ Key work streams to support such gender mainstreaming efforts across the REDD+ policy cycle—that is, in the design, implementation and monitoring—are mentioned in the box below (see Box 2). These streams can and should also be integrated across REDD+ thematic areas, such as in NFMS, governance arrangements, stakeholder engagement, safeguards, incentive structures, etc.

- 1. Undertake gender-responsive policy assessments:** Conducting gender-responsive assessments around REDD+ policies can help establish a gender baseline and identify areas for improvement in REDD+ policy and whether policies exclude or restrict the rights of certain groups (i.e., women, youth, indigenous groups), account for gendered roles in REDD+, and are consistent with any existing country policies on gender equality.
- 2. Raise awareness and build capacity on gender:** Gender mainstreaming relies on stakeholders having proper knowledge of gender equality and women's empowerment concepts. To achieve this, there remains a need among local and national state and non-state stakeholders (e.g., governments, civil society, the private sector, local communities and indigenous peoples) to increase the depth of understanding of such concepts, build capacity on how to integrate them, and address the misperceptions concerning gender issues.
- 3. Ensure gender-responsive participation:** Ensuring that REDD+ consultations, committees, platforms, task forces, decision-making bodies, etc., equitably involve women and women's groups and take their perspectives into account is part of a socially inclusive policy process. In this work, deliberate action should be taken to account for the contributions and constraints of women, youth and men, and adapt REDD+ concepts to the reality, culture and context of local and indigenous women. This can help ensure that women, in addition to men, are equitably involved and can meaningfully participate.
- 4. Undertake gender-responsive planning and monitoring:** Developing gender-responsive planning and monitoring measures, including within budgets and targets and indicators in reporting frameworks, can help assess whether women and men (and youth, girls and boys when applicable) are benefiting from REDD+ and assist in ensuring there are adequate financial resources to implement gender-related activities.
- 5. Exchange knowledge on gender:** Systematizing good practices and lessons learned for gender-responsive REDD+ action is critical for demonstrating how to move from policy to action in integrating gender equality and women's empowerment concepts into REDD+. Sharing such experiences can also serve as an effective vehicle to drive change, illustrate what is possible and empower others to undertake similar action.

Sources: UN-REDD Programme (2017)⁴⁴

Key Messages

- **REDD+ readiness and implementation benefits from equitable inclusion of both women and men and integration of gender-differentiated use and knowledge of forests.** Both women's and men's skills and knowledge on forest use, conservation and management contribute to the long-term success of REDD+. A gender-responsive and participatory approach throughout the REDD+ policy cycle can enhance the efficiency, effectiveness and sustainability of such work and increase ownership, as well as help to maximize the ecological dividends of forest conservation, including carbon sequestration, biodiversity protection and ecosystem services provisioning.
- **To help catalyse key SDGs, including gender equality and women's empowerment (SDG 5), the benefits of REDD+ need to be equitably shared among women and men.** Because of its unique place at the intersection of livelihoods and climate change mitigation, REDD+ can help reduce poverty by improving the resource base and rights of historically disadvantaged groups, especially women, while also delivering mitigation benefits. However, women and other marginalized groups, given various political and socio-economic barriers, tend to be disadvantaged and have weak rights to land and trees. Thus, they run the risk of not being involved in and benefiting from REDD+. To remedy the systemic discrimination related to land access, ownership, control and decision-making, REDD+ action should strive to address structural inequities around land and forest tenure. In this process, gender considerations also need to be fully mainstreamed with REDD+ incentive allocation systems, so that benefits from REDD+ are equitably shared among those undertaking action to reduce deforestation and forest degradation.
- **REDD+ action should go beyond a gender-sensitive approach (e.g., 'do no harm'), to instead achieve a gender-responsive approach of 'doing better'.** Undertaking a gender-responsive approach focuses on catalysing broader socio-economic development throughout the REDD+ policy cycle, by changing national and local laws, attitudes and customs that impoverish marginalized groups, including women, in order to advance gender equality and women's empowerment, and, thereby, more sustainable REDD+ processes and outcomes. With this enhanced conceptual and practical focus, emphasis is placed on ensuring the equitable, full and effective participation of women in REDD+ decision-making and policy design and implementation.
- **Developing gender-responsive accountability tools and frameworks can help ensure REDD+ action advances gender equality and women's empowerment.** Such efforts would include developing succinct gender indicators for monitoring goals and targets set in relevant national processes, including national REDD+ strategies and country approaches to safeguards. Doing so can help hold project designers and implementers accountable for undertaking gender-responsive work. In this process, it is critical to equitably involve local women and men (across stakeholder groups) in both development and implementation, to ensure such tools and frameworks link to and reflect on-the-ground realities.

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