

Invest in Girls and Women to Tackle Climate Change and Conserve the Environment

Facts, Solutions, Case Studies, and Calls to Action

OVERVIEW

Gender equality and climate change are inextricably linked. Girls and women are critical to the mitigation of and adaptation to climate change, despite usually being the first to face its adverse consequences. As environmental degradation leads to increased poverty and hampers sustainable development, it is evident that dealing with and responding to climate change are critical to achieving gender equality.

Today, girls and women are on the frontlines of the fight against climate change and are often the first to respond to protect their families and communities. They are the innovators and changemakers, the ones who most often decide on the daily consumption of resources; play a key role in agricultural production and land conservation; procure and consume water, cooking fuel, and other household resources; and constitute the majority of climate migrants. As such, girls and women are not only well suited to find solutions to prevent environmental degradation and adapt to a changing climate, they have a vested interest in doing so.

The first steps toward sustainably tackling the climate crisis are to ensure that girls and women are recognized for their progressive and forward-looking solutions for both people and the planet and have a seat at the decision-making table. This policy brief examines the nexus between gender equality and women's empowerment and climate change and environmental conservation. It will present useful strategies to promote the meaningful inclusion of girls and women in climate change mitigation, adaptation, and decision-making.

SECTION 1: FRAMING THE ISSUE

While climate change has a negative impact on everyone, girls and women are disproportionately affected compared to men:^{1, 2}

- Around 21.5 million people are displaced each year because of climate-related issues,³ and children and women are 14 times more likely than men to die or be injured due to a natural disaster.⁴
- The World Bank estimates that more than 143 million people could be displaced by 2050 due to the impacts of climate change,⁵ and most of them will be women and children.
- Indigenous peoples—who make up 5% of the world's poorest and maintain 80% of the planet's biodiversity on their lands—have been among the first to face the direct consequences of climate change, given their inextricable links to the lands on which they live and the resources upon which they depend.⁶
- Climate disasters have been shown to increase gender-based violence (GBV), including sexual harassment and violence, domestic violence, child marriage, sexual exploitation of children, and human trafficking.^{7, 8}
- Women comprise 43% of the agricultural labor force in developing countries and 50% to 60% in parts of Asia and sub-Saharan Africa. Therefore, women are impacted by any strains on agricultural production.^{9, 10} During periods of drought and erratic rainfall, women, as primary procurers, work harder to secure food, water, and cooking fuel for their families.¹¹ This puts added pressure on girls, who often have to drop out of school to help their mothers manage the increased burden.¹²

While there is a growing understanding of the specific vulnerabilities girls and women face due to climate change, their unique and significant experiences, skills, and contributions to development and environmental sustainability are still under-recognized. Despite evidence showing women's positive role in leading the way towards more equitable and sustainable solutions to climate change, they continue to experience social, political, and economic barriers that restrict their ability to be included in climate change negotiations and policy planning. This limits their opportunities when it comes to mitigating, adapting, and coping with the effects of climate change.¹³ The problem is particularly acute for indigenous women, who are often overlooked and excluded from climate and environmental decision-making to an even greater extent.

The United Nations has prioritized safeguarding the rights of people whose lives are most impacted by climate change, recognizing the direct role the environment plays in shaping the economic and social rights of so many individuals.¹⁴ However, the United Nations Framework Convention on Climate Change (UNFCCC) largely neglected to outline any gender dimensions in its early years,¹⁵

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Empowering women to respond to the challenges posed by climate change is linked to the achievement of the Sustainable Development Goals (SDGs) and targets, including:

SDG 1: End poverty in all its forms everywhere

- **1.5** By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social, and environmental shocks and disasters

SDG 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

- **2.4** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters, and that progressively improve land and soil quality

SDG 3: Ensure healthy lives and promote well-being for all at all ages

- **3.7** By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information, and education, and the integration of reproductive health into national strategies and programs
- **3.9** By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination



despite the growing body of evidence that shows that failing to address climate change is an obstacle to gender equality. That began to change in 2007 with the release of the UNFCCC Bali Action Plan and the establishment of the Global Gender and Climate Alliance (GGCA).¹⁶ But it remains to be seen whether gender issues and the critical role women play in addressing climate change will gain traction in international negotiations.¹⁷

At the Conference of Parties to UNFCCC in 2016 (COP22), more negotiating blocs, including blocs of developing countries, came out in support of stronger mechanisms to address gender equality and women's rights at the international and national levels.^{18,19} In 2017, at COP23 in Bonn, Germany, participants took steps to include gender equality and women's empowerment in climate change policy discussions and actions through the adoption of a Gender Action Plan.²⁰ This sought to ensure women's representation and equal participation in all activities and decision-making bodies relating to climate change adaptation, mitigation, and implementation.

In general, a human rights-based approach is vital to the climate conversation.²¹ Women's health—including sexual and reproductive health—participation, and leadership are crucial elements in all discussions and decisions on climate change and need to be front and center in the era of the SDGs.

SECTION 2: SOLUTIONS AND INTERVENTIONS

The following evidence-based solutions have a high potential to ensure girls and women are able to claim their roles in all efforts to conserve the environment and tackle climate change:

- Invest in and integrate climate change resiliency, adaptation, and mitigation with women's health programming, especially related to sexual and reproductive health and rights.
- Include all women in climate change mitigation and adaptation efforts and decision-making.
- Ensure investment in and implementation of a gender-transformative approach to disaster preparedness, response, and recovery activities.
- Improve and enforce land rights (e.g., ownership, tenure, inheritance) for girls and women.
- Promote and fund women-led and women-focused sustainable solutions to climate change, including indigenous and grassroots nature-based solutions, resource management, and food production activities.
- Promote a gender-responsive approach to climate financing.
- Invest in and promote technologies that enhance renewable and clean energy sources and support women's participation in their development and use.

Invest in and Integrate Climate Change Resiliency, Adaptation, and Mitigation With Women's Health Programming, Especially Related to Sexual and Reproductive Health and Rights

Countries with the highest unmet need for contraception also tend to have the fastest-growing populations, the highest projected declines in agricultural production, and the greatest vulnerability to climate change.²² Without boosting investments to meet the current demand for sexual and reproductive health services—including access to modern contraception and safe abortion services—nations could erase important gains made in environmental and biodiversity conservation; impede adaptation for climate change; and roll back recent improvements in health, education, and gender equality.

Improving access to and the availability of voluntary family planning has been shown to be one effective way to remediate the effects of climate change, including reducing harmful greenhouse gas emissions and addressing food security gaps resulting from decreased crop productivity.²³ One team of several dozen researchers set out to "map, measure, and model" the 100 most substantive solutions to climate change using only peer-reviewed research found that the number one solution is a combination of voluntary family planning and girls' education.²⁴ Despite this type of evidence showing the meaningful links between population development policy and climate change, the climate community has largely remained silent on the issue, especially when drafting new policies or advocating for investments in cross-cutting solutions.²⁵ Accordingly, family planning does not often receive climate change-related funding.²⁶ Adaptation strategies should reflect multi-sectoral approaches and provide funding to known, effective approaches, especially when they also help reduce the current unmet demand for contraception.²⁷

One promising strategy is the population, health, and environment (PHE) approach, which involves linking efforts to improve environment and climate change adaptation with voluntary family planning and women's health. Projects have shown that the integrated nature of population, health, and environment has increased women's participation in natural resource management and uptake of voluntary family planning.²⁸ PHE operates under a rights-based approach, asserting the right of all people to have a satisfying and safe sex life; the choice to reproduce; and the freedom to decide if, when, and how often to do so.²⁹

One example, the Sustaining Partnerships to Enhance Rural Enterprise and Agribusiness Development (SPREAD) project in Rwanda, provided technical assistance to communities that make their livelihoods from the coffee sector and included an integrated health component that promoted health education for farmers. The project increased the demand for voluntary family planning and thereby achieved family-wide health and economic benefits.³⁰ A 2015 synthesis of multiple assessments of PHE programming suggests that, given the clear linkages and significant potential, more efforts are needed to rigorously document the impact of dually addressing voluntary family planning services and climate change adaptation.³¹



SDG 5: Achieve gender equality and empower all women and girls

- **5.1** End all forms of discrimination against all women and girls everywhere
- **5.2** Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
- **5.3** Eliminate all harmful practices, such as child, early, and forced marriage and female genital mutilation
- **5.5** Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life
- **5.6** Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences
- **5.a** Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance, and natural resources, in accordance with national laws
- **5.b** Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women



Case Study: Blue Ventures in Madagascar³²

Blue Ventures has been working in Madagascar to incorporate sexual and reproductive health services with sustainable coastal livelihood and resource management initiatives. This integrated approach addresses the interconnected challenges of poor health, unmet family planning needs, environmental degradation, and food insecurity in a holistic way. It enables communities to manage their resources sustainably, both now and for the future, by helping couples better provide for their families by decreasing crude birth rates, improving food security, and empowering women to play an impactful role in resource management. Since Blue Ventures began in 2007, it is estimated that more than 4,500 unintended pregnancies have been averted and more than 45,000 people have accessed its services.

Include All Women in Climate Change Mitigation and Adaptation Efforts and Decision-Making

Research shows that when women are in decision-making and leadership roles, there is a positive impact on sustainable natural resource management and climate change adaptation activities.³³ Ensuring women's leadership, agency, and participation in communal, national, and global climate decision-making processes is essential to both climate change action and gender-responsive disaster-risk mitigation. Women have a unique understanding of the impact climate change is having on the productive assets upon which they depend. Their perspectives and solutions must be acknowledged, valued, and incorporated into the development of sustainable approaches to climate change adaptation and mitigation.

Women often show more concern for the environment by supporting pro-environmental policies and leaders.³⁴ In Nepal,³⁵ Haiti,³⁶ Vietnam,³⁷ and beyond, women-led and women-focused organizations have demonstrated the knowledge and capacity to drive effective disaster preparedness, response, and recovery efforts in their communities. Therefore, increasing their participation and influence in politics and decision-making spaces could contribute to achieving environmental goals.³⁸

Yet while progress has been made boosting women's representation in political decision-making spaces over the last five years, the gender gap remains significant. As of October 2019, only 24.5% of national parliamentarians were women.³⁹ Women are also not equally represented in governance bodies concerning the environment. A 2015 survey in 65 countries found that only 35% of environmental sector ministries have a gender focal point, or a point-person responsible for integrating gender considerations into the ministry's policies and mandates, ranging from over half in the case of ministries of agriculture to less than a quarter for ministries of water.⁴⁰

A 2019 report on the United Nations Framework Convention on Climate Change shows that women accounted for an average of 40% of UNFCCC delegations and 22% of delegations at COP24 were led by women—an increase from 2008. However, based on the data, gender parity in the UNFCCC will still not be achieved until 2042.⁴¹ To respond to the negative impacts of climate change, women must be engaged in leadership and decision-making roles—not only by assuming political office, but by participating in the planning and implementation of sustainable natural resource management practices, climate change mitigation, and adaptation interventions, including at the local level.

Case Study: Climate Justice Listening Circles⁴²

At the 12th Community-Based Adaptation conference in June 2018, a gender-focused dialogue identified persistent gaps in female representation at international fora regarding climate change. In particular, the dialogue identified grassroots activists' inability to access the halls of power of global climate decision-making as a key impediment to the inclusion of local perspectives and knowledge in the policymaking process. To address this, the Mary Robertson Foundation has supported climate justice listening circles, in which women with grassroots perspectives who have often been excluded from climate decision-making receive support to travel to and access the most important international donor conferences on climate change strategy. The advocates' presence, stories, perspectives, and experiences have had a meaningful impact. According to a 2018 International Institute for Environment and Development (IIED) working paper, there is significant evidence that senior policymakers have changed priorities and programming decisions to better reflect the local perspectives of the women whose views were expressed through the listening circles.

Ensure Investment in and Implementation of a Gender-Transformative Approach to Disaster Preparedness, Response, and Recovery Activities

Girls and women account for half of all people affected by natural disasters but face disproportionately greater risks than men.⁴³ The impact of natural disasters and climate change often exacerbates existing inequalities and gender biases in society, leading to different forms of discrimination and increased vulnerability for girls and women.⁴⁴ Investment in gender-sensitive disaster preparedness, response, and recovery requires understanding the different needs and experiences of girls and women. Far too often, national governments and international agencies fail to apply a gender lens to the needs of affected populations and, therefore, underinvest in gender-sensitive disaster management.

Traditionally, girls and women play the role of domestic caretakers, working harder, walking farther, and risking their safety and wellbeing to procure food, water, and cooking supplies in times of drought or natural disaster. In response to this disproportionate burden, applying a gender sensitive approach can address the unequal distribution of labor related to the provision of food and other resources.⁴⁵ Humanitarian actors should also take into account the risks that girls and women face in fragile settings and address issues related to sexual violence, harassment, and mobility. For example, humanitarian actors could prioritize including women in food distribution teams and ensure that distribution points are as close as possible to those in need, where socio-cultural traditions may limit their mobility and access to resources in public spaces.⁴⁶



SDG 6: Ensure availability and sustainable management of water and sanitation for all

- **6.1** By 2030, achieve universal and equitable access to safe and affordable drinking water for all
- **6.2** By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- **6.4** By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
- **6.5** By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
- **6.6** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes
- **6.a** By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programs, including water harvesting, desalination, water efficiency, wastewater treatment, recycling, and reuse technologies

SDG 11: Make cities and human settlements inclusive, safe, resilient, and sustainable

- **11.6** By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management



Not only are women critical to helping their communities prepare for and respond to the effects of climate change, having women in leadership roles and participating in civic engagement opportunities can also have a positive ripple effect for communities. Women on the frontlines of climate change have deep knowledge of their natural environment and resources, which allows them to envision and establish novel methods to deal with disasters, for example by creating gender sensitive, safe spaces for vulnerable populations during disasters. To catalyze women's leadership in disaster response, funding should be directed to women-led organizations on the frontlines of climate change to build their capacity and visibility and facilitate their participation in decision-making at the global level.

Case Study: Women-Led Disaster Preparedness in Fiji⁴⁷

Women's Weather Watch (WWW) is a community based, women-led organization in Fiji that relies on a network of women leaders—from the capital city to the most remote parts of the country—to share updates about developing weather patterns, service provisions, and gaps in quantitative and qualitative data so that disaster management systems are more inclusive and take a strong prevention approach to gender-based violence. WWW emerged in the wake of 2004's devastating flooding in Fiji, which highlighted the reality that women often bear disproportionate responsibility in preparing and responding to such crises. Women are usually first responders during emergencies and are responsible for the entire family. WWW helps provide women with information that they otherwise may not have had access to, thus ensuring that they make well-informed decisions with regard to themselves and their family. It also creates a network for women to share their experiences in the aftermath of a disaster. The organization has been particularly focused on developing community media to ensure timely warning of impending natural disasters. In 2014, it provided support during the flash floods in the Solomon Islands, and in 2015 after Tropical Cyclone Pam.

Case Study: Safe Access to Fuel and Energy Programme - Saving Lives Through SAFE Cooking⁴⁸

The World Food Programme's (WFP) Safe Access to Fuel and Energy (SAFE) initiative addresses the risks people face when collecting and using firewood by providing access to fuel-efficient stoves. The SAFE initiative recognizes that the delivery of food assistance is linked to several safety, health, and environmental hazards, particularly in humanitarian settings, where girls and women are at increased risk of gender-based violence. The SAFE initiative adopts a multi-faceted approach to tackle these challenges by providing alternative fuel sources, promoting fuel-efficient stoves, and providing education to women and vulnerable communities on how to minimize air pollution. As of 2016, the SAFE initiative has reached more than 6 million people in countries such as Kenya, Malawi, Senegal, and Tanzania. The initiative aims to reach 10 million people by 2020.

Improve and Enforce Land Rights for Women

Land is an important resource for women. Having rights to land can improve their ability to access capital, derive income, protect household food security, and gain security in times of hardship. With secure land tenure, individuals and groups have greater incentive to invest in soil conservation, plant trees, and avoid deforestation.⁴⁹ Research shows that when women own land, they not only have more secure livelihoods, they also gain status, have greater bargaining power within their households, and, in some contexts, are less likely to experience domestic violence.⁵⁰

However, land tenure systems often favor men through laws and practices that dictate unequal access, use, ownership, and control. Furthermore, women's secure land rights are often ignored as a key piece of climate change action and development.⁵¹ Prior to consensus on the Paris Agreement, countries were required to submit Intended Nationally Determined Contributions (INDCs). In a review of the INDCs from a sample of 18 countries, representing a broad global cross-section that includes China, India, Nigeria, Indonesia, Brazil, and South Africa, conducted by the Landesa Center for Women's Land Rights, only three touched on land rights, land reform, or land tenure, and none mentioned women's land rights.⁵²

In order to address the challenges imposed by climate change—and find effective, sustainable solutions—it is critical to secure land tenure rights for women. The provision of legal land rights, for example, permits marginalized populations living in poverty to better access new funding sources and opportunities, which can promote efforts to curb climate change and facilitate the receipt of compensation when land is taken for conservation purposes or when climate-induced disasters destroy fields and homes.⁵³ Enforceable land rights will improve the management of natural resources while boosting the economic status of women.⁵⁴

Case Study: Indigenous Women Protect Land Rights in Mexican States⁵⁵

The National Network of Indigenous Women Weaving Rights for Mother Earth and Territory (RENAMITT), a network of indigenous leaders promoting women's land rights, works to raise awareness of the benefits to women and communities of female participation in land governance in Mexico. Indigenous women had been systematically excluded from environmental policymaking at both the community and national levels and were vulnerable to land dispossession and exploitation. Through grants from non-profit organizations like Semillas and the Women's Earth Alliance, indigenous Mexican women across five states participated in activities promoting women's land rights, including trainings and advocacy efforts to raise awareness and catalyze action against national laws that threaten their access to land and resources.

Between 2013 and 2015, RENAMITT made significant progress, including reaching more than 600 people, 280 of whom were indigenous women, through workshops, legal aid, policy advocacy, and site visits to advocate for indigenous women's land rights; creating a women's institute to respond to the needs of women in the Ayuujk municipality; and producing three radio spots on agrarian laws, indigenous communities, and women's right to access land, as well as a radio program that reached 12,000 people. RENAMITT has increased the visibility of indigenous land rights and built alliances with other grassroots organizations working to defend indigenous women's land rights and human rights.



- **11.7** By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

SDG 13: Take urgent action to combat climate change and its impacts

- **13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
- **13.2** Integrate climate change measures into national policies, strategies and planning
- **13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning



Promote and Fund Women-Led and Women-Focused Sustainable Solutions to Climate Change, Including Indigenous and Grassroots Nature-Based Solutions, Resource Management, and Food Production Activities

Traditionally, women have been responsible for collecting fuel and growing and preparing food. As such, it is important that their expertise in resource management be recognized and valued. Much of the natural resource base in rural areas is located on common lands. Because women often lack ownership of common lands, they can be barred from making decisions concerning the use and management of these resources.⁵⁶ For example, women have less secure rights to land when compared to men and have less time to commit to their plots.⁵⁷

But as the key providers of food at the household level, women frequently have a greater understanding of the impact climate change has on the local environment than men.⁵⁸ They are often the knowledge-keepers of traditional and sustainable methods of natural resource management, and when these methods are applied, they result in more resilient communities and improved livelihoods.⁵⁹ For example, a gender-sensitive study in the Amazon found 45 previously undocumented edible species that could be used to improve food security in the region, highlighting the need to consider women's role as knowledge sources and their responsibilities for growing certain crops when thinking about food security and biodiversity.⁶⁰ Thus, it is critical that any discussion on climate change mitigation, impacts, and adaptation not only includes women, but also ensures they have an active decision-making role in the process and implementation.

Fair trade organizations offer women the opportunity to support sustainable food production. Research from the Fairtrade Foundation shows that enabling women to join organizations that grow produce could benefit businesses, support global development, and provide gains for women.⁶¹ Fairtrade certification has been shown to increase calorie and micronutrient consumption, increase incomes, and improve gender equity.⁶²

As of 2016, women accounted for just 25% of the farmers and workers involved directly in fair trade, either through membership in a small farmer organization or employment at a farm.⁶³ In order to better equalize this gender gap, businesses should conduct gender analyses of their supply and value chains and develop a gender-equality policy and action plan that they can share with their producer organizations.⁶⁴ Governments in producer countries can provide women with agronomy training programs and ensure that there are loans and other support services for people who do not own land, especially women.⁶⁵ Some organizations have taken it upon themselves to encourage women's participation and support women's voices in decision-making. One example is Kuapa Kokoo, the Ghanaian cocoa cooperative, which has formed district-level gender committees. Nearly half of its National Executive Council members, including the president, are women.^{66, 67}

On average, women in the developing world constitute a sizeable portion of the agricultural labor force⁶⁸ and are thus extremely vulnerable to failing agricultural production. As women do not have the same access to financial and other resources—such as climate, weather, and market information—their ability to respond to drops in agricultural production related to climate change is low.⁶⁹ The agricultural sector is also one of the leading emitters of greenhouse gases.⁷⁰ Therefore, it is important for women working in agriculture to be involved with climate change mitigation. Once engaged, these women can incorporate climate-smart agriculture (CSA) and sustainable farming into their daily lives, thus increasing food security for themselves and their families.⁷¹ Some of these practices include water management, terracing, composting, incorporating high-yield and stress-tolerant varieties of crops, and pasture management.⁷²

Indigenous women—who often play vital roles as stewards of nature—are particularly impacted by the effects of climate change.⁷³ Indigenous women are usually responsible for their families' food security and survive off of the land, so they feel the impacts of climate change on a daily basis.⁷⁴ Consequently, indigenous and grassroots communities on the frontlines are leading on nature-based solutions and leveraging traditional ecological knowledge to address their immediate needs. In order to protect biodiversity and reduce degradation of the environment, indigenous women need to be recognized for their leadership role in mitigating the devastating effects of climate change and facilitating climate change adaptation efforts. Similarly, their nature-based solutions warrant attention and investment, including for upscaling for broader development and conservation efforts.⁷⁵

Case Study: Climate-Smart Agriculture in Mali⁶⁶

In 2017, a UN Women-led program called *Agriculture Femmes et Développement Durable (AgriFed)* partnered with *Groupe d'Animation Action au Sahel*, a local non-governmental organization (NGO) in Mali, on a project to help women improve their crop yield, income, and wellbeing. As climate-driven resource degradation impacts women's livelihoods throughout Mali, the project educates women in the Segou region on climate-smart agriculture. Techniques include using local plant extracts as biopesticides to fight crop disease, sustainable water usage, crop scheduling, and cultivation and preservation techniques. As a result of these climate-smart agriculture techniques, women in the region have had higher crop yields for onions and shallots and have introduced new crops such as potatoes, tomatoes, and peppers into their harvests to restore soil quality. The project has helped spur social cohesion between ethnic communities in Mali, with women now regularly meeting to discuss their agricultural strategies. The program has been so successful that it is expected to be implemented in other regions of Mali.

Case Study: Crop Diversification in Nicaragua⁷⁷

With resources from a community fund, local women in Jinotega, Nicaragua, conducted a risk-mapping exercise to identify new solutions for improving food production. They then received training, seeds, and tools, and



Relevant International Agreements:

- Convention on Biological Diversity (1992)
- Programme of Action of the International Conference on Population and Development (1994)
- The Beijing Declaration and Platform for Action (1995)
- The Kyoto Protocol (1997)
- The World Summit on Sustainable Development (2002)
- The Convention to Combat Desertification (2002)
- FCCC Bali Action Plan (2007)
- UN Human Rights and Climate Change Resolution 7/23 (2008)
- The 2005 World Summit
- Commission on the Status of Women (2008)
- The United Nations Framework Convention on Climate Change (2015)
- The Rio Declaration (2015)
- Sustainable Development Goals (2015–2030)
- UNFCCC's Gender Action Plan (2017)



collectively decided how the agricultural land could be used differently. From 2009 to 2014, the number of diversified plots in the community quadrupled, and crop production for household use increased more than five-fold. Within the same period, each farmer's annual net earnings increased roughly six-fold.

Case Study: Applying Local Knowledge to Crop Production⁷⁸

A UN-funded project in the high plains of Bolivia relied upon traditional community knowledge of weather to improve crop production and avert risks imposed by climate change. The key to the project's success was the emphasis on applying women's knowledge of the environment and farming, such as proper crop and seed storage. As a result of this gender-sensitive collaboration, more than 100 context-specific agricultural technologies and practices were either introduced or reintroduced to the community to lessen the potential effects of climate change.

Promote a Gender-Responsive Approach to Climate Financing

Integrating gender considerations into climate policies and action plans—including humanitarian response plans—requires gender-responsive financing, or financing approaches that are designed to address rather than reinforce gender inequalities at both the national and global levels. This includes using a gender lens when adopting financing tools and methods and impact measures and mechanisms through project cycles.⁷⁹ Climate related projects, for example, should start with a gender analysis in order to evaluate who has access and control over resources, how many women are impacted, and what activities should be prioritized to ensure equitable inclusion of all potential beneficiaries.⁸⁰

Promoting gender-responsive climate financing also requires the implementation and continued strengthening of gender policies of climate financing mechanisms, such as the Green Climate Fund and the Global Environmental Facility.⁸¹ Pursuing gender balance in the staffing and leadership of national and global authorizing bodies related to these mechanisms could ensure that women are represented as equal stakeholders in climate funding projects and in the development of their strategic frameworks.⁸²

However, for financing mechanisms to address the needs of the most vulnerable, they need to be more inclusive of local- and grassroots-level organizations. Local women's and indigenous groups have particular difficulty accessing financing because grassroots projects are considered too small for support provision.⁸³ A systematic preference for large-scale, technology-intensive projects often excludes small-scale, sustainable solutions that may need funding to replicate and scale. Introducing simplified application and approval procedures for small-scale projects could support the needs and mitigation efforts at the community level and potentially address similar climate issues at the national and regional levels.⁸⁴

Case Study: Global Alliance for Green and Gender Action

Organizations like Prospera International Network of Women's Funds and Global Greengrants Fund argue that lack of donor attention to the integral connection between women's empowerment and environmental stewardship is a key cause of the uncoordinated response to climate change to date.⁸⁵ To remedy this gap, a group of NGOs, namely Fondo Centroamericano de Mujeres (FCAM), Mama Cash, and Both ENDS, jointly founded the Global Alliance for Green and Gender Action (GAGGA) in 2016 with the support of the Ministry of Foreign Affairs of the Netherlands. The organization is built on the principle that environmental sustainability cannot be preserved without the active participation of women. It is a five-year partnership designed to support collaboration between grassroots environmental and women's rights organizations to promote synergies across locations and issue areas.⁸⁶

According to self-reported data, GAGGA has supported and connected 14 women's funds, six environmental funds, 28 NGOs, and at least 300 grassroots groups, working directly in 30 countries in Africa, Asia, and Latin America.⁸⁷ In August 2017, WEDO, a global women's advocacy organization, along with Both ENDS, as a member of GAGGA, launched a new joint initiative called Women Demand Gender-Just Climate Finance, which directly links grassroots projects to the Green Climate Fund by building their capacity to monitor financial flows to the fund.⁸⁸ To further bolster environmental justice advocacy around international financial institutions, GAGGA, along with Gender Action, launched a guide for women's rights campaigners doing the work of holding international financial institutions accountable.⁸⁹ This networked and international approach represents an important step in funding path-breaking activists at the intersection of gender and the environment.⁹⁰

Invest in and Promote Technologies That Enhance Renewable and Clean Energy Sources and Support Women's Participation in Their Development and Use

Approximately 3 billion people still heat and cook with solid fuels such as wood, coal, and charcoal, which emit gases that cause climate change⁹¹ and have serious negative health effects.⁹² The estimated economic, health, and environmental cost of inefficient cooking and continued reliance on solid fuels is a staggering \$123 billion per year,⁹³ and 4 million people die from the use of unclean and unsafe fuels each year.⁹⁴

Around the world, women are more adversely affected by energy poverty—the cumulative impact of higher health and safety risks stemming from inefficient lighting, household air pollution, and polluting cooking fuels.⁹⁵ Poor access to cooking energy can also put refugee and displaced women at increased risk of gender-based violence and trafficking when they are forced to seek firewood in dangerous areas beyond a protected area.⁹⁶ In some conflict-affected areas, travelling to dangerous territories to access firewood also puts women at increased risk of landmines.⁹⁷

If women had the economic and social power to make better energy choices—including the purchase and use of clean energy sources such as cookstoves and high-efficiency fuels—it could meaningfully contribute to reducing climate change.⁹⁸ Women could be financially supported to scale existing sustainable energy solutions, whether through improved access to credit and capital from government funding or tax incentives. Moreover, in order to ensure that women are equipped to leverage the benefits of climate-resilient economies, girls' and women's access to new educational and skill development opportunities should be supported and expanded.

Technology justice serves to advance the rights of groups that are in the greatest need of technological innovation by ensuring they have access to and benefit from technological advances.⁹⁹ Often, technological research focuses on the wealthy and lacks regard for social and environmental costs on other people and the environment. These trends need to be reversed so that all people can access environmentally friendly technologies that enhance wellbeing.

Currently, women make up about 32% of the renewable energy sector workforce, although this varies significantly by country and byproduct.¹⁰⁰ Bringing women into the workforce is a win-win, because female entrepreneurs would have improved access to consumers and could promote new solutions, innovative technologies, and clean energy products. This would offer household consumers greater



opportunity to choose safe, clean energy. Gender inclusivity within the energy sector is crucial for climate change mitigation and ensuring inclusive economic gains.¹⁰¹

Case Study: Solar Sisters Harnesses the Power of Women to Promote Clean Energy¹⁰²

By creating a woman-centered sales network that brings clean energy technology to rural Africa, Solar Sisters is working to eradicate energy poverty and economically empower women through a direct sales network to sell solar energy products and clean cookstoves. Solar Sisters currently works in Nigeria, Uganda, and Tanzania. Its programming boasts more than 4,000 entrepreneurs, of whom more than 80% are women, and its efforts promoting clean energy reach more than 1.4 million people.

SECTION 3: THE BENEFITS OF INVESTMENT

Investments in girls and women are critical to mitigating the effects of climate change. In the 2018 study Project Drawdown, it is argued that increasing investments in girls and women, specifically girls' education (ranked sixth) and family planning provision (ranked seventh), would together be more effective in reducing future greenhouse-gas emissions than any single other behavioral or technological solution of the hundred studied.¹⁰³ Another study found that countries with higher female parliamentary representation are more likely to adopt policies that combat climate change,¹⁰⁴ underscoring that women are key changemakers in the fight for a clean, healthy world.

Energy deficiencies and related economic challenges will increase over the next 20 years unless the international community empowers girls and women and includes them in climate change mitigation and adaptation efforts.¹⁰⁵ The social and environmental determinants of health—clean air, safe drinking water, sufficient food, and secure shelter—are directly affected by climate change.¹⁰⁶ The toll climate change takes and can continue to exact on human life alone is staggering. It is anticipated that poor health outcomes related to climate change will claim approximately 250,000 lives every year between 2030 and 2050.¹⁰⁷ These deaths will stem from malnutrition, malaria, diarrhea, and heat stress.¹⁰⁸

Current research suggests there is a correlation between women's involvement in climate change mitigation and adaption and the reduction of greenhouse gases. As of 2016, 65 parties had mentioned gender as part of their Intended Nationally Determined Contributions for the Paris Agreement.¹⁰⁹ Thirty-five of these countries mentioned gender in relation to adaptation, and another 18 mentioned gender in relation to mitigation.¹¹⁰ This division highlights the importance of understanding gender-climate linkages and the need for gender-responsive climate action.¹¹¹ The United Nations endorses the estimate that if women farmers had the same access to resources as men, the number of hungry people in the world could be reduced by up to 150 million.¹¹² In the Sustainable Development Goals, the United Nations has also committed to doubling the agricultural productivity and income of small-scale food producers by 2030, particularly women and other at-risk groups.¹¹³

SECTION 4: CALLS TO ACTION

If the world is serious about curbing climate change and conserving the environment, we have to see enhanced investment in gender equality, women's health and rights, equal participation in society, and equal decision-making. The framework offered by the SDGs clearly sets forth an opportunity for stakeholders to work together to power progress for all—people and planet alike. Uniting the gender equality and conservation communities around the climate crisis promises to be a galvanizing moment in advancing the SDGs and the health and rights of girls and women.

As powerful agents of change, girls and women should be recognized as the leaders they are in global efforts to mitigate climate change effects. In order to make shared progress, different stakeholders—governments, civil society, academia, media, affected populations, the United Nations, and the private sector—must work together to take the following actions for girls and women:

- Invest in girls' and women's sexual reproductive health and rights, especially family planning and contraception. (Most relevant for: governments, civil society, the United Nations, and the private sector)
- Strengthen the participation of girls and women, including indigenous women, grassroots groups, and humanitarian responders, in climate change policymaking at all levels and in all capacities—adaptation, mitigation, and resource management. (Most relevant for: governments, civil society, academia, media, affected populations, the United Nations, and the private sector)
- Develop policies to address climate change that recognize gender-sensitive impacts, provide women with access to resources, and give them opportunities to participate in mitigation and adaptation processes. (Most relevant for: governments, civil society, the United Nations, and the private sector)
- Promote gender-responsive approaches to climate financing. (Most relevant for: governments, civil society, the United Nations, and the private sector)
- Invest in technologies and initiatives to enhance sustainable and renewable energy sources that reflect women's knowledge, needs, and roles, while incorporating indigenous expertise and traditional practices. (Most relevant for: governments and the private sector)
- Integrate environmental conservation strategies within family planning and women's health programming and vice versa. (Most relevant for: civil society, governments, and NGOs)
- Prioritize the accessibility of clean energy and the distribution of fuel-efficient cookstoves for refugee and displaced girls and women, including in camp settings. (Most relevant for: governments, United Nations, and NGOs)
- Invest in research and program evaluations to better understand the links between clean energy interventions and the prevention of gender-based violence, particularly in humanitarian settings. (Most relevant for: United Nations, academic institutions, and NGOs)
- Include women in the creation of policies and strategies around environmental protection, including disaster response; building resilience; securing land and inheritance rights, food, and resources; and ending energy poverty. (Most relevant for: governments, civil society, the United Nations, and the private sector)



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