

**Women and the environment: a preliminary analysis of gaps
and opportunities in Latin America and the Caribbean**

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EXECUTIVE SUMMARY

Gender equality and women's empowerment are globally recognized priorities, matters of fundamental human rights, and prerequisites for sustainable development (IUCN, 2018; World Economic Forum, 2015). Understanding the gender-environment nexus is not only key to understanding social and environmental inequities and barriers to sustainable development, but to unlocking options for transformative action, as well.

Changes in the environment affect women and men in different ways. It is a problem made worse by women having less access to economic resources, education and legal rights. The only way to identify and implement the best policies for the environment and sustainable development is to close this gender gap. However, there is a lack of reliable data available for decision makers.

During the XXI meeting of the Forum of Ministers of Environment of Latin America and the Caribbean, 2018, ministers agreed to consider the gender perspective in environmental policies considering the gaps and opportunities of the region in the context of the implementation of the Sustainable Development Goals. The 4th UN Environmental Assembly adopted in 2019 a decision to promote gender equality, and the human rights and empowerment of women and girls in environmental governance (UNEP/EA.4/RES.17, 2019) and requested UN Environment to facilitate the collection of data and of lessons learned.

In line with these agreements, this report explores some of the connections between environment and gender. The data and case studies explain how women's role reaches far beyond issues of gender and inequality including a wide variety of areas, such as water, energy, food security, forests, oceans, and consumption and production.

The report focused in those themes in which data evidence the existence of specific gender gaps on environmental issues. However, it also points out the need to further research the existence of these gaps in relation to other environmental topics such as biodiversity conservation and sustainable lifestyles.

The document also highlights the role of women in addressing environmental gaps from a gender perspective with some specific and positive examples from the region, as well as suggests a way forward in the framework of the regional work of the Forum of Ministers of Environment.

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DRAFT for peer review

INTRODUCTION

The Forum of Ministers of Environment of Latin America and the Caribbean was established in 1982 and holds meetings every two years. The 33 countries of the region are invited to participate with the goal to address priority regional topics related to environmental issues and sustainable development. UN Environment is the secretariat of the Forum and works towards finding innovative solutions for our current environmental challenges in order to achieve the Sustainable Development Goals (SDG).

During the XXI meeting held in Buenos Aires, Argentina, 9-12 October 2018, ministers discussed topics regarding pollution, decarbonization and sustainable use of natural resources, amongst others. The Ministerial Declaration of Buenos Aires includes for the first time the agreement:

“To consider the gender perspective as a significant variable for the development and implementation of public policies on environmental issues, considering the gaps that are present in the region today and the opportunities that arise from the exchange of experiences on this matter to meet the 2030 Agenda requirements and the Sustainable Development Goals (SDGs)”

The 4th UN Environmental Assembly adopted a decision to promote gender equality, and the human rights and empowerment of women and girls in environmental governance (UNEP/EA.4/RES.17, 2019) recognizing the role that women play as managers of natural resources and agents of change in safeguarding the environment. Member States also requested UN Environment to facilitate the collection of data and of lessons learned from Member States and other stakeholders on the progress made in achieving gender equality and the empowerment of women and girls in local, national and global environmental policies, programmes and initiatives.

In line with these agreements, this document provides an overview of existing gender gaps in environmental matters. The final document is to be presented during the intersessional meeting of the Forum in Barbados, in the third trimester of 2019, with the aim to introduce a comprehensive examination of the region and guide future national and regional efforts to tackle environmental problematics with an integrated gender approach.

Inequality between men and women, or the term gender gap as it is applied in this document, refers to any disparity or imbalances between women and men’s conditions in society. Inequality between men and women can be found in many spheres, both public and private, and are usually understood in terms of disparate economic empowerment, educational attainment, health conditions and political representation (UN Women Glossary). This document applies this concept of gender gaps to interactive relations with the environment, ranging from access to natural resources to exposure to chemicals and hazards and participation in environmental decision-making processes. The persisting traditional societal structures, norms and practices perpetuate imbalances and restrict women’s ability to exit situations of inequality, something that is also affecting their role in environmental management matters (GGEO).

Socially constructed roles, specifically gender based division of labour, dictate the ways in which women and men relate and interact with their surrounding environment. This establishes relations towards natural resources, in turn determining how different environmental risks and threats such as resource degradation, climate change or disasters affect women and men. The differentiated relations inevitably mean a discrepancy in perceived priorities, the seriousness of environmental problems and the appropriate interventions. Due to the established gender roles, women and men often have very different capacities and approaches to tackle environmental problematics (UN Environment, 2016, GGEO).

Countries and institutions have recognized the importance of a gender sensitive approach in tackling environmental challenges and have included it in national plans and international agreements. As of today, gender equality is a concept that has been mainstreamed into most Multilateral Environmental Agreements (MEAs). The three principal Rio Conventions, Biological Diversity (CBD), Climate Change (UNFCCC), and Combat Desertification (UNCCD), as well as the Basel, Rotterdam and Stockholm Conventions (BRS) and the major environmental financial mechanisms including the Global Environment Facility (GEF), the Green Climate Fund (GCF), the Climate Investment Funds (CIF), and the Adaptation Fund, all have guiding frameworks to ensure women's equal participation and ensure that their implementation is gender sensitive.

Moreover, in the context of climate change, the Paris Agreement recognized that adaptation to climate change and capacity building for mitigation, should be gender sensitive, participatory and fully transparent in order to close gender gaps and successfully address the threats of climate change both for men and women. Within the framework of sustainable development, the SDGs, unlike de Millennium Development Goals, do not only include a specific gender goal and targets, but integrate gender targets within other goals related to social, economic and environmental issues with explicit indicators and gender-disaggregated data and analysis (UN Environment, 2016).

The gender-and-environment nexus: identified issues in the region







UN Environment launched the Global Gender and Environment Outlook (GGEO) in 2016, which identified major areas with considerable gender gaps. It identifies gender inequality as one of the main challenges to advance the environmental dimension of sustainable development, as it has negative impacts on access, use and control of natural resources, as well as the right to a clean, safe and healthy environment for all. Moreover, the report explores how the differentiated environmental relationships sustain established gender roles that perpetuate inequality.

















The topics identified in the GGEO publication were used as a starting point to develop specific research on the situation in the region. Based on the availability of specific information to analyse the gaps, ten key topics were determined and are presented in this document. The structure for each identified gap includes:

1. a general introduction on the relevance of the topic in the region,
2. a presentation of the data and research that sustain the existence of gender inequalities in relation to the environment within each topic, and
3. a good practice in reducing the gap existing in the region.

This information will be the basis for further analysis on how to advance a policy agenda in the nexus between gender and environment in the region and to identify topics for which there is still not enough evidence for decision-making.

Table 1.- Gender gaps on environmental matters identified in LAC and their relationship with the Sustainable Development Goals. The existence of information to sustain the analysis of the gap was a requisite to include it in this document.

Rights to land and natural resources management	Right to land and women's role in agriculture	 2 ZERO HUNGER	 5 GENDER EQUALITY
		 15 LIFE ON LAND	 10 REDUCED INEQUALITIES
	Women in small scale mining	 8 DECENT WORK AND ECONOMIC GROWTH	 3 GOOD HEALTH AND WELL-BEING

	Women in fisheries		
	Women's role defending environmental rights		
Well-being: climate change and political participation	Disaster risk and climate change impacts		
	Sustainable consumption and production: waste management		
	Women in environmental decision-making		
Access to energy, water and sanitation	Access to water and sanitation		
	Access to clean cooking energy		
	Access to energy		

*Health has been considered a cross-cutting issue and, therefore, health implications are included in several gaps.

Right to land and women's role in agriculture

Economies in Latin America and the Caribbean are largely dependent on primary commodities and natural resource-based manufactures for income, namely from agriculture, minerals, hydrocarbons, forestry, livestock and aquaculture (CEPAL, 2018). The extractivist economic model, based on large-scale and intensive natural resource exploitation, gained momentum in the 1990s as part of the Washington Consensus structural adjustment policies. It was made possible by the historically ubiquitous and extreme land concentration in the hands of few oligarchs, strong tax incentives for investments in large-scale projects and weak environmental protection laws, all of which serve to secure private interests at great social and environmental costs. As a result, on average, the largest 1% of farms hold 51.19% of land, and although smallholdings account for the majority of total agricultural holdings, the smallest 80% occupy less than 13% of land (Oxfam, 2016).

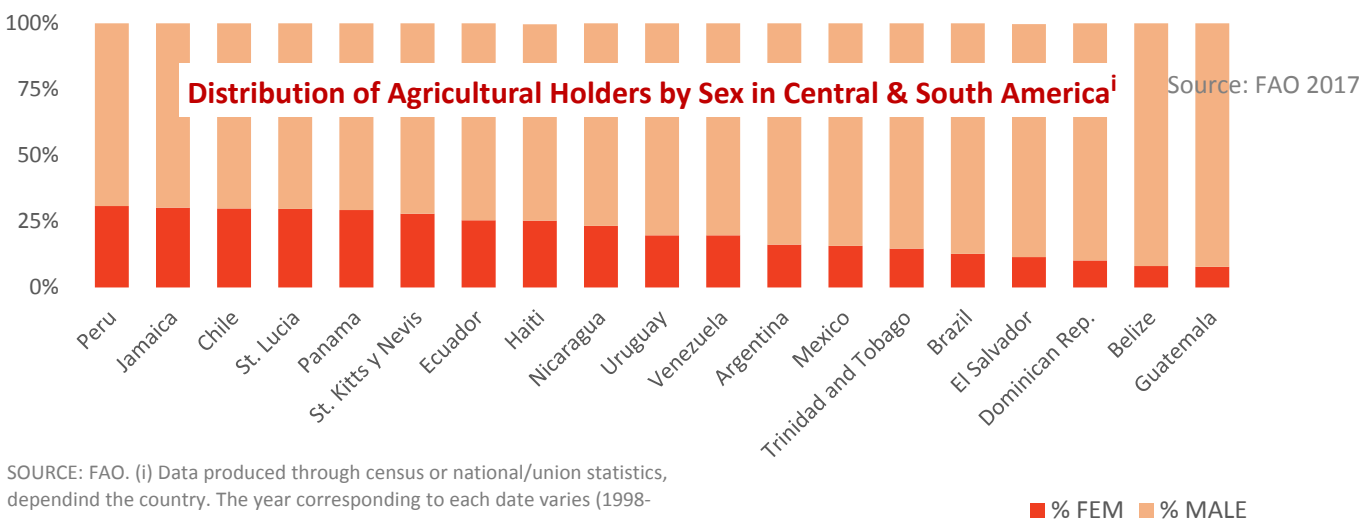
In addition to land concentration, land tenure in the LAC region is also characterised by increasing subdivision of land to sell, state land ownership and inheritance practices, all adding to the vulnerability of small landholders. Moreover, due to the costs and complexity of the regularization process, many small-scale agricultural activities operate without a formal land title, leaving them vulnerable to land-grabbing practices. Land grabs are a common problem, particularly salient in Argentina and Brazil (ECLAC, FAO, IINCA, 2012). Consequently, smallholders are driven out of their land to accommodate different types of extractivist activities, including large-scale monocultures of flex crops (i.e. soy, sugar, oil palm, eucalyptus), stimulated by intra-regional and international demand.

Indigenous and farmer populations are the most vulnerable and affected by such land tenure inequalities, as land is often one of the most important assets, as it provides food security and economic stability. Evidence shows that land security is correlated with higher levels of agricultural production as well as agricultural investment, and consequently greater economic wellbeingⁱ. Studies suggest that family agriculture can play an important role in resilience and sustainability to cope with the impacts of climate change and environmental degradation. In addition, subsistence and small-scale farming play a decisive role in increasing food security as well as environmental protection (Panorama FAO). In Latin America and the Caribbean, family agriculture represents 81% of agricultural enterprises and provide an estimate between 27% and 67% of total agricultural production. Furthermore, intensive agricultural practices do not only bring forth large land concentration and land grabbing, but also land degradation, water scarcity, and biodiversity loss, all factor which affect these populations. (IPS, 2018).

Related gender gaps

Most countries in Latin America and the Caribbean provide for equal land rights between men and women, yet the reality is often far removed from that stated in legal frameworks. Available data confirms that women are at a disadvantage to men, regarding land rights and tenure. Globally, less than 15% of landholders are women and although the estimates are higher for the LAC region at 18%, the gap is extremely wideⁱⁱ. Moreover, women who do own land are more likely to not have legal documents proving their ownershipⁱⁱⁱ. Beyond legal ownership, women are also in their access, use, transfer and inheritance of land. Agriculture still represents a considerable proportion of women's economic and subsistence activities^{iv}, and subsequently in household and national food security and nutrition. However, on average, women only head 16% of smallholdings (FAO, 2017) and along with tenure insecurity, their plots are systematically smaller than that of men and of inferior quality and therefore productivity.

Women share in the agricultural economic active population (%)



SOURCE: FAO. (i) Data produced through census or national/union statistics, depending on the country. The year corresponding to each date varies (1998-

Women represent 20% of the agricultural workforce in LAC^v, yet fewer than 12% benefit from state agrarian reform processes and subsidies (Oxfam, 2000) and receive 14.5% of agricultural extension services (Panorama FAO). In addition to receiving fewer extension services and their yields are on average 25% lower than that of men, in part due to lower quality lands (FAO, 2011). Furthermore, because they lack land collateral, it is difficult for women to access bank loans which further inhibits their ability to invest in productive resources.

Food insecurity is also a problematic that statistically, effects women more than men. In the region, 8.4% of women find themselves in food insecurity in comparison with 6.9% of men. This translates to some 19.2 million women versus 15.1 million men (Panorama FAO). In this context, differentiated agricultural policies as well as training programs focused on women would not only result in higher income and agricultural productivity, but also ameliorate food insecurity for particularly vulnerable demographics,

specifically rural women (Panorama FAO). Some studies estimate that reaching gender equality within the agricultural sector would mean an increase of yield on women's farms by 20% to 30% and increase total agricultural outputs by up to 4% in developing countries (UNCCD).

Rural women are often characterized by their overburden, mainly caused by the traditional gendered division of labor. In addition to working the land, they are often solely responsible for childcare, sick care and elder care. It is estimated that they spend up to a quarter of their time on such non-paid reproductive tasks (CEPALSTAT), making it difficult for them to engage in leisure activities, community organization or any political involvement. Nonetheless they have become main actors in movements for resources and land defence and conservation^{vi}.

A positive example: the Landless Worker's Movement in Brazil

Indigenous and peasant women have been calling for land reform and recognition for decades, in some cases achieving policy change or public programs. The women within the Landless Worker's Movement (MST) and the Peasant Women's Movement in Brazil have organized not only to achieve comprehensive land reform, but also to be recognized, by law, as citizens and farmers. This undocumented state, many of the women within the movements found themselves in, did not only limit their access to land, but also access to any sort of aid, credit and rights as workers. They have organized marches and protests aimed to change their legal status as well as in attempt to stop megadevelopments that threatened their livelihoods. Today, MST as an organization possess legal right over land plots which they have utilized as communal lands, sometimes granting specific access to other women's organizations as seen in the Cooplantas cooperative.

Cooplantas is a women's cooperative which produces organic medicinal herbs following agroecological practices on a settlement managed by MST in Sao Paulo since the early 1990s. What started as the sporadic production of a healing ointment made from the Capuchin Herbaceous plant has now evolved into a structured operation composed of 30 women who cultivate tens of medicinal varieties such as chamomile, calendula, horsetail, melissa and many more. They formalized in 2009 and have since entered a partnership with the Ministry of Health, private entities and universities, to produce and commercialize their medicinal products. The project is also subsidized by the government and has now begun the process to build a factory to process tealeaves and tea bags for sale.

Women in fisheries

Globally, the fishery and aquaculture sector directly employ 200 million people, most of whom operate at the artisanal or small-scale level. It is estimated that 70% of global fishery production in fact comes from small-scale and artisanal operations^{vii}. This makes small-scale and artisanal fishing important factors when attempting to reduce food insecurity, malnutrition and alleviating poverty^{viii}. However, in Latin America and the Caribbean, 95% of fisheries are industrial^{ix}, and countries like Chile and Perú, have the largest industries. In fact, the region is estimated to provide 24% of the world's global fisheries produce^x. Nonetheless, small scale fisheries are estimated to employ some 2 million people in the region^{xi} and still play an important role for national economies. In the Caribbean region, fisheries employ some 350,000 people and represents 4.3% of the region's workforce. Small-scale fisheries are included in this number and constitute a large part of the region's economic stability and food sovereignty^{xii}.

The world's and the region's marine populations are being threatened by several anthropogenic factors. Industrial overfishing, increasing temperatures, ocean acidification and drilling for petroleum are amongst the most prevalent threats to fish stocks and other marine organisms^{xiii}. This does not only make the fishery sector unstable and vulnerable, but also threatens regional and national food security and livelihoods^{xiv}. Inevitably, small-scale fishers are the most affected by such changes in fish stock and are often forced towards non-sustainable and/or illegal fishing practices or other employment sectors^{xv}.

Economic development initiatives are often skewed toward highly concentrated industrial sectors and the same remains true for the fishery sector. For instance, in Chile, it is reported that the Angelini-Longueira Law on fishing grants private renewable 20-year concessions, crowding out 90% of fisherpersons of fish catch quotas^{xvi}.

Related gender gaps

Globally, although the fisheries sector is generally perceived as being a masculine activity, it is in fact almost equally represented by women and men, when both primary and secondary sectors are taken into account^{xvii}, this is also true for the artisanal and small-scale fisheries sector. Despite the involvement of women throughout the fisheries value chain, they often hold lower paying and unstable jobs. Production is largely the domain of men, while processing and commercialization that of women. In Latin America and the Caribbean, on average, women represent 19% of the primary fisheries sector workforce, although there are considerable variances amongst countries. For instance, in the sector, women represent 72% of the work force in Colombia, but only 21% in Paraguay^{xviii}.

When involved in the production stage, women often operate fewer and smaller boats or canoes in lagoons and rivers and tend to be engaged in pre and post-harvest activities such as mending nets, quality control, fish and shellfish cleaning^{xix}. Many female workers are responsible for the collection and marketing of their own products^{xx}, making their livelihoods extremely vulnerable to market fluctuations as well as to resource depletion. Only 14% of women in the sector occupy salaried positions, which are mostly temporary so female workers often lack benefits such as health insurance or retirement funds due to the temporal or informal nature of their employments. This has economic implications for them, such as women having low access to credit and loans in this sector^{xxi} and because their contribution to the sector is undervalued, most women do not receive technical trainings, training in microenterprises or co-financing to improve their productivity in the sector^{xxii}.

Given the fluctuating labor demand in the sector, most women opt to be involved in other complementary activities such as agriculture, to sustain their families. In addition, women often cover most reproductive responsibilities, dictated by preconceived societal gender roles. Leaving them with little time left to engage in leisure, recreational activities, or community organization.

Case Study: The algueras of Pichilemu (Chile)

In the context of decreasing fish stocks and ecosystem disruptions, artisanal and small-scale fishers throughout the region, are harshly affected. In response, the Latin America and Caribbean Parliament (PARLATINO), recently adopted the world's first model law on small-scale fisheries in 2017. It establishes a reference framework for countries to develop their national laws in accordance to sustainability measures for the sector, as well as a clear gender approach for the enhanced recognition of women's contribution and further inclusion^{xxiii}. The law recognizes women and indigenous rights regarding fisheries, pointing out that these demographics are an important part of the fisheries sectors and sometimes might be at a disadvantage. Moreover, it pushes government to adopt direct differentiated policies to promote gender equity^{xxiv}.

In the coastal city of Pichilemu, located in Chile's central O'Higgins region, women have traditionally worked the glacial Pacific waters as hand gatherers of seaweed (algueras) and shellfish, contributing to their households' food security and economic stability. However, women's productive role had been dismissed by local men, whose patriarchal views ascribed women to housework. Women's work was also undervalued by the State and received little to no support. Hence, women activity was kept informal, non-remunerated, and any income derived from their activity was solely controlled by male partners, keeping women economically dependent and in times, in situations of exploitation (Valenzuela, 2012). In 1998, a group of algueras, led by Lidia Jimenez, decided to take a stand against the deep-rooted discrimination they experienced from their male counterparts and the resulting poor working conditions. They met with the National Women's Service in Rancagua to raise awareness of women's silent work and presented the idea of a seaweed and shellfish women's union. The initiative received a favorable response and the union was established in 2001. The decision was met with reprisal from men who physically harassed women and even tried to attempt against Lidia's life.

The union proved to be a catalyst for algueras' empowerment. In 2006, they were awarded an area for their sole exploitation and received proper diving gear and fishing equipment. They were able to assert their productive roles and gain a seat at meetings with other union leaders in the fishery sector. The algueras take turns to watch over their affected area and adopt sustainable harvesting methods, for example, not using knives so that algae can continue to grow and not harvesting shellfish species before maturity to ensure their reproduction. When interviewed, Lidia asserted that their view is different from that of men's short-sighted 'Bread for today, hunger for tomorrow' approach^{xxv}.

Women in small scale mining

Globally, artisanal and small-scale mining operations employ between 20-30 million people, providing livelihoods for over 100 million^{xxvi}. Although estimates are hard to make due to low reporting rates, high informality and illegality, the artisanal small-scale mining (ASM) sector in Latin America represents a significant economic activity as well as large production rates^{xxvii}. Primarily concentrated in Bolivia, Brazil, Colombia, Ecuador and Peru, engagement in the sector is often essential in many areas where economic activity options are limited^{xxviii}. Moreover, it can also be a part of households' livelihood diversification strategy, complementing other sources of income such as agriculture^{xxix}. Informality characterizes the ASM sector, exposing workers and neighboring communities to health and safety hazards.

At the mine level, the use of rudimentary equipment and lack safety gear is the norm, especially among the self-employed. The lack of security management exposes women and men to fatal workplace accidents from landslides or mine crumbling and contact with minerals and their dust can generate respiratory and gastrointestinal diseases. ASM has also been deemed to have high environmental costs and is often regarded as unsustainable, due to the high rates of mercury and other toxic chemical use^{xxx}. Although ASM often has positive effects for workers and communities, such as economic and social development, many times it brings along high rates of crime, prostitution and health issues^{xxxi}.

Related gender gaps

Like men, women often resort to ASM direct or indirect activities driven by high levels of poverty, lack of other economic options and the profits these activities bring^{xxxii}. Women and men's tasks will vary according to the nature of their integration and situation along the value chain. At mine level, whether self-employed or member of a mining cooperative, while most men engage in mine extraction work, most women recover the tailings of mining activities in quarry or alluvial work, transport, and wash minerals. The mineral processing and refining stages are often attributed to women who are perceived as more meticulous for handpicking like emeralds from rock fragments in Brazil, amalgamation and amalgam decomposition in gold extraction^{xxxiii}. Men tend to dominate the commercialization of minerals, while women are often dependent on buyers who then resell to processing plants. In mining cooperatives, men generally hold managing roles, while women provide administrative, cleaning and food preparation and health services^{xxxiv}.

This gendered division of labor also exposes women to highly toxic chemicals such as mercury and cyanide through bare hand manipulation and vapors in the mineral processing stages, especially during small-scale artisanal gold mining. Although south and central America are considered to have comparatively environmentally friendly techniques, the use of these harmful chemicals has been reported in Bolivia, Ecuador, Brazil, Perú and Nicaragua^{xxxv}. Exposure to these hazardous substances can cause neurological, optical degeneration and chronic exposure can even be fatal^{xxxvi}. Moreover, mercury bioaccumulates in aquatic organisms and also biomagnifies throughout the food chain. This can be particularly harmful for pregnant women, the development of the fetus and newborns and even cause sterility^{xxxvii}, even if they are not directly involved in mining activities.

Finally, mining communities, which generate a high influx of men, often see an increase in violence and crime such as human trafficking, gambling, alcohol, drug abuse and rape^{xxxviii}. Women who work in the mine or in bars can be found to engage in sex work, including in bonded and forced labor. Unsurprisingly,

sexually transmitted diseases, including HIV are prevalent amongst these communities^{xxxix}. There have also been instances of reported child prostitution in these newly established communities, where thousands of girls are auctioned off to the highest bidder^{xl}.

All the factors mentioned previously, added to the fact that women are mostly or completely in charge of domestic chores and care work, results in extreme disadvantages. Not only do women have the lowest paying jobs with highest exposure to harmful chemicals, but they are also exploited during sex work and care work. This exploitation sometimes hinders women from working full time in the mine or prevents them from getting proper rest^{xli}.

Some positive examples from the region:

In a study carried out by 'Solidaridad' the conditions of different groups of women miners in Bolivia was assessed. The team carried out surveys amongst women who worked with private enterprises, within cooperatives and individually and found major distinctions. They found that women who worked within cooperatives carried out a wide range of activities from surface and underground mine work, to actual organizational and administrative tasks. Moreover, significant differences were found in regards of women's health and safety measures. Women in the cooperative reported that 78% had health insurance versus only 6% of individual workers, likewise 67% of women in the cooperative had some sort of retirement fund or retirement insurance, while just 5% of individual workers had one. In terms of safety measures, 75% of individual workers reported having no safety equipment at all and when they did it was restricted to boots and in very rare occasions gloves. Women operating in a cooperative reported having gloves, boots, helmets, goggles working clothes; 13% reported having none. There is a clear improvement of both working and social conditions from women who work within a cooperative^{xlii}

Another example of sustainable small-scale mining is the Oro Verde initiative in Colombia. This initiative was developed by the Condoto Iró community council and have now received their fair trade and fair mined certificate for ecological gold. The initiative is part of efforts by the Afro-Colombian to preserve their ancestral knowledge and cultural identities. They have implemented artisanal mining techniques paired with sustainable natural resource and sustainable agriculture, prohibiting the use of toxic chemicals and implementing strict ecological restoration practices^{xliii}. The community also stresses the importance of sustainable and responsible use of hydraulic resources, so that these can be used for other subsistence activities and recreation. Parallel to this initiative there have been several projects focused on food security and sovereignty as well as children's and environmental programs^{xliv}.

Women's role defending environmental rights

Worldwide, activists and social movement leaders are often targeted victims of violence and repression; environmental activists are not the exception. A record number of 207 environmental defenders were killed in 2017 for protecting their land, wildlife and natural resources, 60% of these cases occurred in the Latin American and Caribbean region. These cases are often seen in remote villages or deep within rainforests^{xlv}, where rule of law is limited^{xlvi}.

Based on the number of deaths, Brazil has been the most dangerous country to be an environmental defender in the last decade, with an average of 42 killings per year between 2012 and 2017^{xlvii}. According to Global Witness^{xlviii}, 57 people were killed in Brazil in 2017, 80% of them while protecting the natural riches of the Amazon. This number includes three horrific massacres that resulted in the murder of 25 activists^{xlix}. Other countries that also rank high in environmentalist murders are Colombia, Mexico and Peru. Although the number of assassinations has declined, the growing active repression of civil society has restricted what activists can say and do. This widespread violence against defenders is partly rooted in a culture of impunity and corruption, that is often characteristic of the remote communities where this occurs. These conflicts often arise from a lack of compliance with customary and collective land rights and the exclusion of communities from other decision-making processes and require a joint effort to find a solution^l. In 2016 it was estimated that globally, nine out of ten murdered environmental activists were men, despite these number, it was found that women were victims to gender-specific threats such as sexual violence, harassment of their families and discrimination within their communities^{li}.

Some milestones have been achieved in the region in terms of environmental defenders' rights and protection. The Escazú Agreement was adopted in March 2018, aiming to strengthen capacities and cooperation amongst the region. The treaty is the first environmental treaty that contains specific provisions for the protection of defenders of human rights in environmental matters^{lii}. In March 2019, the UN Human Rights Council passed a resolution regarding Environmental defenders as Human Rights defenders. The resolution was passed unanimously and recognized Environmental defenders as necessary players in the path for sustainable development. It also recognized the right to a clean, healthy, safe and sustainable environment. The main point was to urge States to step up their fight against impunity during instances of attacks, harassment and assassinations, even when the private sector was involved^{liii}.

Related gender gaps

The LAC region is rife with socio-environmental conflicts. The competition for the use of natural resources, that are increasingly scarce such as water and productive soils, in addition to impacts on the environment, generate large asymmetries amongst communities, disrupting access to goods, natural resources and territory and increasing inequalities. Projects related to energy generation, big scale agricultural production and large infrastructure are bound to find resistance from particular groups who perceive a threat to their livelihoods, aesthetic values over land, access to natural resources and, in definitive, their human rights. Extractive activities, These communities often lack mechanisms to ensure their representation and participation in the decision-making process^{liv}.

Women are often seen at the forefront of such movements. Scholars have found a couple explanations for this phenomenon. Based on their societal roles, women are often responsible for natural resources management, leaving them in charge of water, food, agricultural territory and firewood, among others^{lv}. This direct tie to natural resources, resources that in turn are vital for their personal and community's survival, leads women to perceive threats differently. They have a different understanding of what a mega project like a dam might mean for their community and their daily activities. These struggles are often related to the protection of their livelihoods, rather than mere environmentalism. Another explanation is

the role women often hold as caregivers not only of their families but the entire community. Women are often responsible for taking care of children, the elder and the sick. A sociological study carried out in Guatemala among the Kaqchikel people, found that women perceived their own activism as care work, often motivated by concerns towards their children and communities' well-being^{lvi}.

Women engaged in the defense and protection of natural resources, the environment, community lands and indigenous territories, are regularly subjected to an array of violent repression methods^{lvii}. They are particularly vulnerable to violence, intimidation, and sexual assault^{lviii} as well as threats to their family's safety^{lix}. Moreover, these defenders are often discredited and victims of defamation campaigns, often questioning their commitment to their families and society as wives, mothers, and women. The criminalization of social protests, labeling the defenders as "national enemies" to justify abuse, harassment, imprisonment, even torture and assassinations is also a common method of repression^{lx}.

Women activists in Mexico and Central America are statistically in higher risk of being attacked and murdered, than in other countries of the region – particularly activists involved in indigenous and environmental conflicts^{lxi}.

The Mothers of Ituzaingo in Argentina

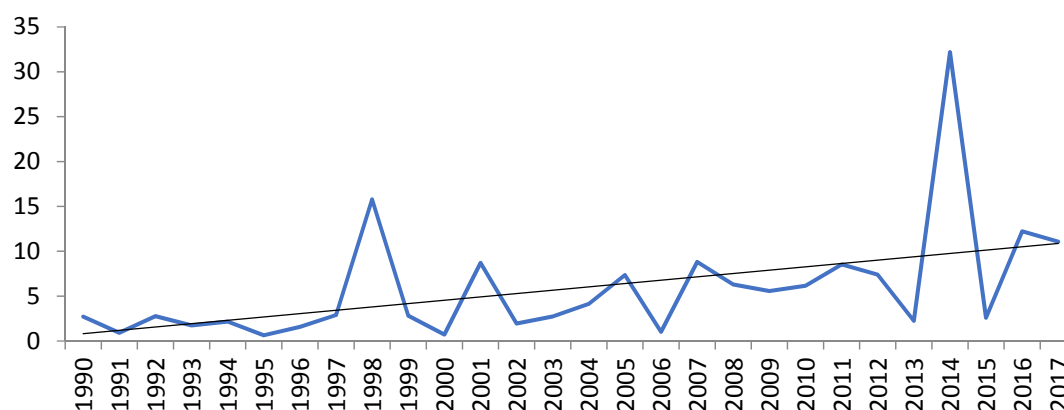
An example of environmental social movements led by women is the case of the Mothers of Ituzaingo in the Córdoba province of Argentina, a women's group that fights against the use of glyphosate and endosulfan in genetically modified soybean fields. In 2009, Endosulfan was added to the UN list of persistent organic pollutants to be eliminated worldwide, for its high toxicity to humans and other organisms^{lxii}. Large soybean plantations surround the Ituzaingo locality and the Mothers have been documenting the incidence of cancer, child malformations and still-born infants for years, which they attribute to the agrochemicals^{lxiii}. Throughout the process the Mothers organized demonstrations, conferences, anti-spraying campaigns and published materials to inform the public of the imminent dangers of these pesticides. The group has endured smear campaigns, insults and direct threats to their lives. Sofia Gática, the founder of the organization has suffered direct threats to her life, including violent break-ins to her house and being threatened at gunpoint^{lxiv}.

Despite the targeted violence, their work resulted in municipal ordinances prohibiting areal fumigation in all common lands in the city. In 2012, they contributed to the conviction of a soy farmer and pilot for illegal spraying on land nearby residences compromising the health of inhabitants. Sofia was awarded the renowned Goldman Environmental Award for her fight against GMOs and pesticides. Thanks to their pressure, the Mothers also achieved the closing of a genetically modified corn seed processing plant in the Malvinas^{lxv}.

Disaster risk and climate change impacts

Disasters, which are increasing in intensity and frequency^{lxvi}, have severe consequences across the LAC region. Vulnerability is associated with poor land-use planning, poverty, rapid urbanization and ecosystem degradation^{lxvii}. Climate change is increasing the intensity and frequency of floods, storms, wildfires, extreme weather conditions, landslides and more^{lxviii}. Moreover, growing natural resource scarcity may lead to disputes, especially but not only in territories with weak governance and communities with a history of conflict, which can also lead to migration and displacement^{lxix}. Globally, since 2008, disasters stemming from natural hazards have displaced an average of 24.6 million people each year^{lxx}.

PEOPLE AFFECTED BY CLIMATE DISASTERS IN LAC 1990 – 2017 (Millions of people)



SOURCE: CEPALSTAT

Latin America and the Caribbean are particularly vulnerable to meteorological hazards such as hurricanes and floods, as well as geological threats including landslides and earthquakes. Small island developing states are particularly vulnerable to disasters and climate change^{lxxi} as they are in hazard-prone regions, relatively isolated, and have populations concentrated on coastal areas^{lxxii}. Conflicts and disasters cause internal displacement and forced migration that bring alarming problems related to violence, food and water security, and health. In this context, disasters are the result of the realization of the hazardous event combined with the sensitivity of the population and the adaptive capacity. The populations' sensitivity refers to socio-economic conditions of the demographic, such as GDP and housing infrastructure. In addition, a countries adaptive capacity refers to the states preparedness to deal with a disaster, including emergency response, action plans and technologies^{lxxiii}. Climate change has a disproportionate impact on women and children, who are 14 times more likely than men to die during a disaster^{lxxiv}. Moreover, security and health challenges are exacerbated by poverty, cramped urban centers, corrupt government and security forces, and the resulting rise of disease and death during times of crisis. Crises often breakdown the public health infrastructures^{lxxv} reduce the physical health of survivors with injuries, intensify chronic diseases, and decrease access to the health services^{lxxvi}.

Related gender gaps

Vulnerability and impact of risks are different for women and men. Studies have shown that women are more vulnerable to disaster risks than men^{lxxvii}. They also tend to experience higher rates of sexual and

gender-based violence during disasters. This is particularly noticeable in the aftermath of disasters when large groups of the population are placed together for emergency care and shelter. Domestic violence, forced marriage, human trafficking, and forced prostitution are also more likely to occur during disasters. Climate change and disasters influence the prevalence, distribution and severity of new and re-emerging diseases. The susceptibility of women and girls to disease (such as cholera and malaria^{lxxxviii}) is heightened as a result of inequalities in access to food, nutrition and health care as well as social expectations^{lxxxix} that women will act as primary care-givers^{lxxx} for children, the elderly and the sick. Moreover, these social norms that dictate women as caregivers, adds substantially to women's material and emotional workloads^{lxxxix}. Considering that rural women in Mexico, Guatemala, and Ecuador contribute 80% of their total time spent in households to unpaid care work, including direct care and household chores^{lxxxii}, one can conclude the rigid differences between men and women's work during disasters.

Good examples from the region

As mentioned earlier, situations of crisis exacerbate pre-existing gender inequalities^{lxxxiii}. As climate change worsens causing increased frequency and severity of natural disasters and sea level rise, so will the effects on women. In addition, climate change is expected to result in increased conflicts, which will intensify the risks for women. In Latin America, approximately 75% of the population is estimated to live in disaster risk areas^{lxxxiv}. And while the region has the highest gender-based violence in the world^{lxxxv}, there is limited data related to the experiences of women and girls during and after disasters and conflicts. Only 20% of countries report progress regarding inclusion of a gender perspective in disaster risk reduction planning, 23% report they have measures to include gender perspective in recovery plans and only 15% have conducted vulnerability assessments^{lxxxvi}. For example, after a 2010 flood in Bolivia, women from 15 to 59 years old increased domestic work by five hours a day and were compensated by the government with a wage as an economic activity^{lxxxvii}.

The challenge of increased gender-based violence and vulnerability during disasters and conflicts is quite complex due to the ongoing violence against women across the region, as well as complications related to economic standing, age, and race. A multi-faceted, inter-agency effort must implement a gendered-approach to disaster preparedness and include disasters and conflicts in the analysis of gender-based violence in the region. One positive aspect is that some governments, such as Cuba^{lxxxviii} are providing training on disasters and gender-based violence.

The "Strengthening the Early Warning Hydrometeorological System" (FORSAT) project in Cuba was developed by the Civil Defense System in conjunction with national institutions, territorial governments and international actors such as UNDP. FORSAT focused on the inclusion of a gender approach in disaster response plans as well as related tools. Amongst these efforts are questionnaires, educational material and workshops focusing on the inclusion and consideration of women's specific risks and needs before, during and after disasters. This included sensitization workshops for involved actors and institutions that lead the application of disaster response plans and tools. Moreover, the project has promoted women's direct involvement in climate monitoring activities and has provided workshops for women involved in disaster response action^{lxxxix}.

PAGCC – PERU

Peru's Gender and Climate Change Action Plan (PAGCC) is another great example of gender inclusive government response plans. The plan aims to guide government actions to attain successful adaptation

and mitigation to climate change based on women's and men's differentiated needs and capabilities, directly referencing a gender approach. As part of the plan's core is a push for more in-depth reflection and conscience on gender inequities and its implications as well as the importance of valuing women's inputs on natural resources management and conservation. The participative character of this plan aimed to inform and include all affected and involved actors in the climate change and gender dialogue. The goal was to strengthen knowledge and promote dialogue about these highly intertwined topics. This dialogue allowed government actors to identify stakeholders' priorities, needs and concerns, and gives the plan validity as well as a strong connection to civil society. Through cooperation between government actors and international institutions, 8 priority areas were identified, including forests, energy, solid waste and disaster risk reduction, amongst others. Concrete actions for the implementation of the PAGCC have included workshops, public forums, public consultations and meetings with sectors involved in the identified priority areas.

DRAFT for peer review

Sustainable consumption and production: waste management

Sustainable consumption and production patterns are largely determined by efforts to reduce the creation of waste and ensure its safe and appropriate disposal and management. Latin America and the Caribbean region generate approximately 10 percent of global waste. At least 541 000 tons are produced daily in LAC and 90% of this waste is not reutilized^{xc}. Regional analysis reports estimate that almost one third of waste generated ends up in open air dumps, resulting in water, soil and air pollution as well as threatening communities' health^{xcⁱ}.

Moreover, it is estimated that 50% of waste produced is organic, which damages potentially recyclable materials when they are not properly separated and treated^{xcⁱⁱ}. Globally, solid waste management accounted for around 3% of global greenhouse gas (GHG) emissions in 2010 (IPCC). These open dumps also represent a health issue for workers that operate in or in their vicinities. Recycling and reutilization are also a major challenge.

Regional, national and local strategies for integrated waste management remain underdeveloped and underfunded. Among the world's 50 largest active dumpsites, eight of them are in the LAC region; five sites in Peru, one in Brazil, one in Bolivia and one in Argentina (Waste Atlas Partnership, 2019). Moreover, it is estimated that only 23% of waste goes to sanitary landfills – the most effective option in avoiding harm to the environment where recycling and alternative processing arrangements are not economically viable.

Improper waste management practices are driven by the high costs of waste management, typically too high for LAC countries to afford and require infrastructure far beyond current capacity. However, the appearance of informal waste pickers¹ is a common trend in LAC, especially in big cities. It is hard to make accurate estimates on the numbers of waste pickers in the region, due to the informality and fluctuation of the sector but estimates calculate some 4 million people who participate in such activities^{xcⁱⁱⁱ}. Their establishment in large cities has significantly increased recycling rates throughout the region^{xc^{iv}}.

These activities are also beneficial for local governments as they create inputs for several value chains. Informal recyclers are estimated to contribute between 25%-50% of all recycled materials in LAC. Moreover, they elongate the productive life of landfills, cut transport costs as well as bringing environmental and health benefits such as reduction of greenhouse gas emissions and removal of toxic materials^{xc^v}.

Coming from the poorest and most vulnerable strata of society, these workers are often autonomous, stigmatized and undervalued^{xc^{vi}}. Lack of legislation and programs to protect these informal workers leaves them vulnerable to poor working conditions, harassment and poor infrastructure (IEMS, 2014). Ineffective waste disposal practices and open dumps in LAC have dramatic negative impacts on health, sanitation and environmental quality, not only for workers but for neighbouring communities. The health problems of waste pickers are severe and often lead to premature death. Open-air burning and the disposal of waste in bodies of water exacerbate health and ecological damages; this has been seen in Bolivia, Belize, Nicaragua, Honduras, and Panama, amongst others (MDPI, 2008). Such conditions may lead to

¹ Informal waste pickers or recyclers refers to the collection, classification, cleanup, transport or transformation of recyclable materials outside of the formal system.

asphyxiation, respiratory diseases, chronic liver and kidney diseases, brain injuries, cardiovascular and cancer related diseases (DeMatteo, 2013).

However, when recycling efforts count with institutional and governmental support, proper organization can lead to the creation of new jobs within the formal sector, reduction of solid waste and promotion of circular economies^{xcvii}. In 2009 and 2010, Peru and Brazil were the first countries in the region to establish national solid waste laws which recognized informal waste pickers and protected their rights. This was a significant step to formalize the sector, promoting self-organization, education campaigns and legislation. Colombia and Chile have since also established specific laws concerning waste pickers and recyclers^{xcviii}.

Related gender gaps

Regional data is missing, but country estimates give us a picture of the scale of these populations. In Brazil, there are over a quarter million waste pickers, 33% of whom are women (Global Alliance of Waste Pickers, 2019), while in Quito, Ecuador, there are 2400 informal recyclers, of which 70% are women^{xcix}. Although in some cities they might count with equity or even overrepresentation in terms of participation in the sector, they often lack the necessary tools and social protection in their jobs^c. Female recyclers face a wide range of inequalities and threats while on the job. Studies have found that female recyclers have access to less valuable recycling materials than men, that do not only represent less income, but also have higher health risks^{ci}. Under these conditions, women are especially unsafe, and men consistently earn more than women waste pickers (WIEGO, 2018; Dias, 2011). Poor women are also more likely to transition into waste picking to subsist as they make up most of the informally employed. Another recurring theme for female pickers is sexual violence and harassment, as well as the lack of social support for child care, forcing them to bring their children to work^{cii}.

Women and children are most exposed to the harmful effects of poor waste management because they remain close to their homes, and thus are exposed to the smoke from the common practice of burning waste throughout the day. Moreover, their physiological characteristics make them more vulnerable to harmful substances. Women are disproportionately impacted as endocrine disrupting chemicals cause breast cancer and reproductive problems. In addition, women have more fatty tissue than men and undergo so-called 'windows of susceptibility' such as pregnancy and menopause (WECF, 2006). Occupational exposures to chemicals used in the plastics industry may contribute to the development of breast cancer and reproductive problems. Waste pickers are exposed to synthetic chemicals, especially plastics, that have been identified as mammary carcinogens and endocrine disrupting chemicals, and their work environment is often heavily contaminated with dust and fumes (DeMatteo et al. 2013).

The recyclers associations of Arequipa (Peru)

At the domestic level, government interventions are necessary to build the appropriate infrastructure for waste management and the promotion of "green jobs", with support from international organizations. Through cooperation with the Ministry of Environment and Ministry of Women and Vulnerable populations in Peru, the UNDP and UN Environment Poverty-Environment Initiative (PEI) began the Integrated Solid Waste Management for Sustainable and Inclusive Development project. An integrated and inclusive management plan for solid waste is a valuable opportunity not only to improve environmental issues within cities, but also tackle social problematics. The incorporation of recyclers or waste pickers into the waste value chain is fundamental to ensure safe access to materials, transport, storage and commercialization. In addition, trainings and workshops with a gender approach are pivotal

to address issues of harassment and access to resources. The project had two main aims, bettering institutional capacity to create policy, plans and budgets for the waste management sector and applying waste management models with emphasis on gender and social inclusion.

The project was implemented in the municipality of Arequipa with the support of the national government, where 85% of recyclers are women and 50% of them work on the streets. The PEI project contributed to the creation and strengthening of several plans and tools, such as the national solid waste plan (PLANRES), the municipal solid waste plan (PIGARS) which was specific to Arequipa, a gender socioeconomic diagnosis to determine inequalities, gaps and opportunities; and a guide to mainstream gender into municipal solid waste plans (<https://www.muniarequipa.gob.pe/descargas/gestionmanejoresiduos/GuiaInclusionAspectosSociales/GU%C3%8DA%20INCLUSION%20ASPECTOS%20SOCIALES%20EN%20PMRS.pdf>). Moreover, the project contributed to the strengthening of the national solid waste informational system (SIGERSOL) and aligned it with PLANRES, to ensure the gender and poverty inclusion among the indicators to be measured.

Formal assessments of the project concluded that formalization of green employment such as recyclers and waste pickers were a success, and currently the country is carrying out a census of the existing waste pickers to enhance their working conditions. Additionally, the creation of training materials for capacity building were distributed to both institutions and workers were also a core component of the project ^{ciii}, Finally, workshops to strengthen social capacities with a gender equality focus for recyclers have been held in the community, training over 200 recyclers, both men and women.

Women in environmental decision making

Latin America and the Caribbean region face a plethora of environmental issues and challenges, ranging from deforestation to pollution and resource depletion. In the last decade, the region has seen an increase in environmental policy and specifically a development of mechanism to implement such policies. Globally, the 1972 United Nations Conference on the Human Environment marked a turning point, as the issue of environmental degradation and sustainable development were put on the forefront of public and political spheres. Within the region this change has been seen through the institutionalization of environmental management, including important changes in public policy and judicial systems. The creation of Environmental Ministries has been crucial for this change and has allowed for comprehensive and applicable environmental policy, creating mechanism with political power and incidence. In addition to the establishment of official environmental ministries, some states have created environmental tribunals and even integrated “rights of the environment” and the concept of sustainable development in their national Constitutions. (UNEP/Cepei, 2018) (Gobernanza Ambiental y la Agenda 2030)

A particularity within the region are the Caribbean states, some of which have opted to merge their environmental departments with ministries responsible for financial and economic decisions and policy. This provides environmental departments with resources, funds and the political power necessary to implement effective policy. However, one concern is that in these instances, economic interests might be prioritized, leaving environmental issues in the background, hindering a truly integrated sustainable development approach. (Gobernanza Ambiental y la Agenda 2030)

Related gender gaps

A 2014 assessment reported that the percentage of women in parliamentary seats was 28% in Latin America and 14% in the Caribbean. Moreover, women represented 23% of ministerial posts in LA and 15% in the Caribbean, and participation in local governments is even lower^{cv}. This general trend can be seen across political sectors, including the environmental sector. The global Political Empowerment gender gap reflects low representation of women in all political roles and a particularly sporadic presence of women among heads of state^{cv}. At the global level, only 12% of environmental sector Ministers are women^{cv}. In the LAC region, out of 33 countries, eight have women at the head of environmental ministries. Although, this number is about twice as high as the global percentage, there is still much room for improvement. The inclusion of women in the decision-making process is necessary to ensure that the diverse perspectives and experiences of women are included, and innovative solutions might be provided.

One main problem is countries underreporting on gender participation in the environmental sector (EGI), although we have the data on environmental ministers, participation at lower levels is still unclear. To solve this information gap, the Environment and Gender Index was developed and has attempted to measure global and regional progress in women’s involvement in environmental decision making. The EGI found that, although women are still largely underrepresented in the environmental decision-making process, representatives of Green Parties and NGO representatives are closing up the gap. Globally, the highest performing indicator was ‘Nationally Elected Green Party Leaders’, of which women constituted 48%. This indicator is important as it allows women to directly influence policy framework and national agendas (EGI).

Moreover, the EGI concluded that women’s perspectives are necessary for the effective governance and conservation of natural resources, as they can provide diverse experiences as fishers, farmers, heads of

households and more (Environment and Gender Index, UN Women). When they are excluded from the decision-making process, their particular and specific concerns are left out of consideration, exacerbating even more the dramatic effects of climate change and natural resource degradation. Women are often seen at the forefront of environmental movements; however, data is missing on women's participation in community councils and other forms of local government.

-Example:

All Multilateral Environmental Agreements make now specific mention to guiding frameworks which aim to ensure women's equal participation. In 2014, the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) adopted the Lima Work Program on Gender. The program was developed to guide the effective participation of women within the bodies established under the Convention. Parties of the Paris Agreement recognized that adaptation to climate change and capacity building for mitigation, should be gender sensitive, participatory and fully transparent in order to close gender gaps and successfully address the threats of climate change.

In addition, the UNFCCC has demonstrated important links to gender equality and the empowerment of women through recent decisions, such as in its 2017 Gender Action Plan. (UNFCCC, 2017).

It is stressed that women make significant contributions to domestic, local, national, regional and international economies and to environmental management, disaster risk reduction and resilience to climate change at different levels. The Paris Agreement also recognizes that adaptation to climate change must be guided by the best science available and must ensure that all women have significant opportunities to participate in policymaking and development planning.

In order to ensure that women and girls have equal opportunities to participate, lead and engage in decision-making in disaster risk reduction and climate change activities, the Committee recommends that States Parties take some specific actions:

A: Adopt policies to ensure that at least 40% of its delegates to the Assembly are women and to gradually increase to 50% in the coming years;

B: Develop programs to ensure women's participation and leadership in political life;

C: Ensure women's equal representation in forums and mechanisms for disaster risk reduction and climate change at community, local, national, regional and international levels to enable participate in and influence the development of disaster risk reduction and climate change policies, legislation and plans and their implementation.

D: Strengthen national gender and women's rights institutions, civil society and women's organizations and provide them with adequate resources, skills, and authority to lead, advise, monitor and carry out strategies to prevent and respond to disasters and mitigate the adverse effects of climate change and

E: Allocate adequate resources to build women's leadership capacities and create an enabling environment to strengthen their active role in disaster risk reduction and response and climate change mitigation at all levels and across all relevant sectors.

The secretariats of the Rio Conventions – UNFCCC, CBD and UNCCD – have been in turn identifying and developing opportunity for joint for between parties and stakeholder to tackle gender issues. Efforts include trainings and capacity buildings to effectively promote women's empowerment and participation.

Moreover, specific country policies have been developed to address climate change with a gender approach, in accordance to multilateral environmental agreements between parties. The climate change gender actions plans (ccGaps) do not only aim to address women's specific priorities, needs and threats

but also stress the importance of taking into consideration their knowledge and experiences to develop innovative and comprehensive conservation, mitigation and adaptation plans. Countries in LAC with ccGaps include Costa Rica, Panama, Dominican Republic, Peru, Cuba and Mexico.

Even though these conventions have been adopted, for the most recent COPs, the CBD has the highest female participation rate, with an average of 43% of government delegates, office members and NGO representatives. The UNFCCC has an average of 36% and UNCCD has an average of 30%.

While progress is being made, no process has achieved gender parity in the Secretariat and in convention bodies, and Parties often still underreport, especially substantively, gender-specific information within reporting mechanisms (IUCN, 2016; Gilligan & Sabater, 2017). Therefore, for more concrete and meaningful progress, action programs, budgets and strategies need to be at different levels of governance - local and subnational, national, regional and international - in order to ensure an effective and human rights-based approach to governance, disaster risk reduction and climate change.

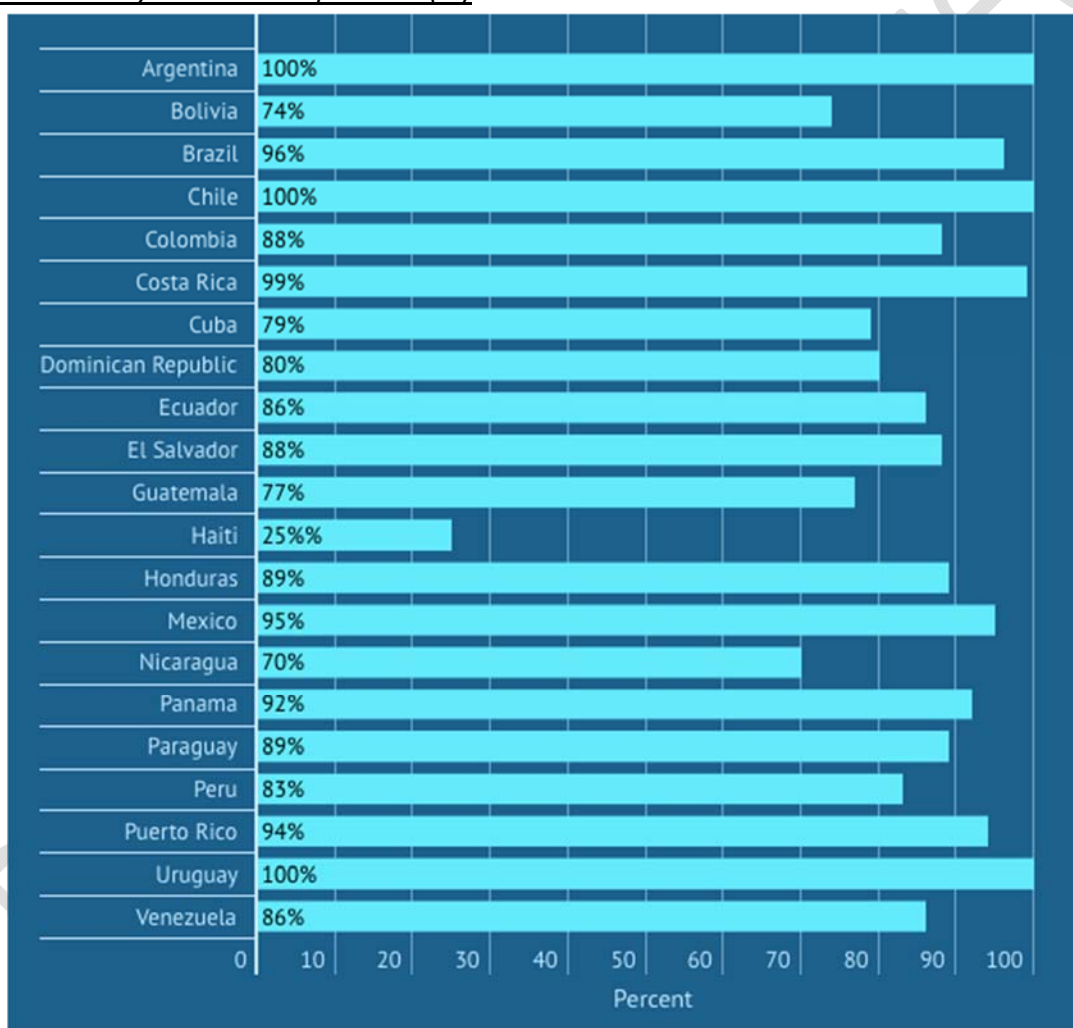
Thus, we stress that as citizens, women are crucial to good governance in the green economy, but have little influence, as few hold management positions in the public or private sector.

DRAFT for peer review

Access to water and sanitation

Universal access to safe drinking water is a fundamental human right as well as part of the SDGs. It is a necessary natural resource for an array of basic human needs and activities, such as health, agriculture, and cultural activities. In Latin America and the Caribbean, the increasing pressure of human activities and climate change on natural resources, such as increased rainfall variability, human-induced water salination^{cvii}, and poor water management practices and infrastructure, is affecting people’s access to enough quality water. Though 95% of the region’s population had access to improved drinking water services in 2015 “34 million still used unimproved drinking water sources”^{cviii}. Discrepancies in water coverage within and between countries are also

Figure 1.- Ready Access to Tap Water (%)



prevalent, with 89% of South America’s population benefiting from piped water on premises, compared to 27% in rural Central America and rural Mexico, and 38% in the rural Caribbean regions. Within national boundaries percentages also vary widely, Mexico is a great example of these discrepancies as the national

Figure 1 Percentages of population with piped water services. Source :Progress on Drinking Water, Sanitation and Hygiene: 2017 Update and SDG Baselines.

percentage of the population with access to piped water is 95%, while in rural areas, as mentioned earlier, this percentage is dramatically lower^{ci9}.

Drinking water coverage also tends to be “lower among indigenous people in several countries”^{cx}. Furthermore, access to piped water, although facilitating many daily activities, does not necessarily mean access to clean drinking water. Mexico, for instance, only has a 43% of its population with access to safely managed drinking water^{cx1}. In general, studies indicate that access to drinkable water is particularly affecting already marginalized populations living in rural areas, representing about 20% of Latin America’s overall population in 2017, and close to half of the population of some of its countries like Haiti, Barbados and Belize. The estimated number of people in the region lacking potable water is 126,218,292 in 2017^{cx2}.

Figure 2.- Access to Safely Managed Drinking Water (%)

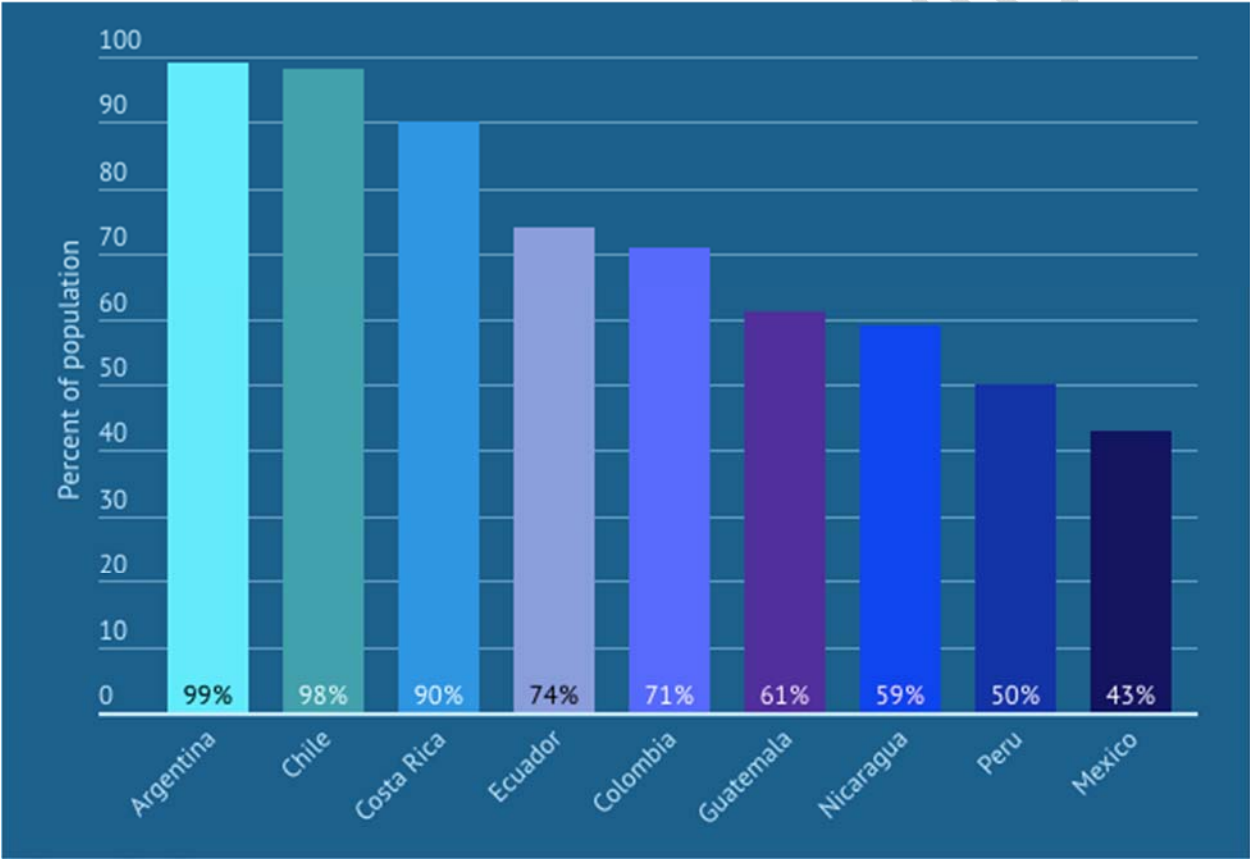


Figure 2 Percentages of population with access to safely managed drinking water. Source : Progress on Drinking Water, Sanitation and Hygiene: 2017 Update and SDG Baselines.

Related gender gaps

In most developing countries, water collection for domestic use is considered a feminine duty at household level^{cx3}. In LAC, this applies mainly to women living in rural areas, where drinking water services are considerably lower than in urban areas. Overall, the gendered nature of water collection results in three types of impact:

Losses in women’s productive time for income-generating activities

According to the UN Global Gender Outlook, water collection represents 40 billion hours used globally every year in water collection. This increases the burden of non-productive activities for Latin American and Caribbean women. “About 40% of women over the age of 15 do not have their own income despite working on a daily basis”, this is due to non-remunerated household, care and agricultural work, amongst others^{cxiv}. According to the FAO^{cxv}, this issue is further compounded by an increased “feminization” of agriculture in LAC; “in Chile and Panama, for instance, three out of ten farms were run by women”^{cxvi}. Given the increased pressure on water resources, and the ensuing vulnerability of the agricultural sector, this could further increase the burden of water collection on women for both household and productive purposes. Furthermore, the burden of water collection can also drive girls away from school, as girls in lower income homes, especially in rural areas, conduct the bulk of domestic chores and parents might perceive school as secondary and distracting from essential tasks^{cxvii}.

Health implications

Studies have found that carrying water from the source to home, does not only take up valuable productive time, but also presents a burden on women’s and girl’s body and mind. Problems might appear in the vertebral column, from carrying heavy weight for long distances as well as increased stress during times of water scarcity^{cxviii}. Since women are also often considered care-givers, they are at greater risk of experiencing psychological distress and overburden during and after water contamination^{cxix}. It is estimated that approximately half a million children die every year due to diarrheal diseases, often caused by unsafe water and poor sanitation. In addition, 50% of global malnutrition can be linked to poor water quality, causing diarrhea and intestinal worms^{cxx}. Data has also found a direct link between water quality and maternal health. Countries that have invested in improvements on access to clean water also tend to show a significant decrease in maternal mortality rates^{cxxi}. Moreover, the decreased availability of water, indeed, may result in a “fall in agricultural output” and also lead to under- or malnutrition^{cxxii}, particularly affecting women and children.

Increased risk of SGBV

The UN Global Gender Outlook (2016)^{cxxiii} further notes that “walking to remote locations to collect water for drinking, cooking and clothes-washing or to use WASH facilities, particularly after dark, puts women and girls at risk of harassment, sexual assault and rape”. Though no comprehensive study has been conducted on the relationship between water scarcity and SGBV in Latin America, gender and sexual violence is a widespread problem in the region, that affect women in domestic and public spheres.

Positive examples

Honduras is the second poorest country in Central America, and it is estimated that some 638,000 people lack access to safe drinking water, with rural communities facing the most challenges. To tackle these risks and create new opportunities, the NGO Water.org has been implementing a WaterCredit program since 2013, with the aim to provide rural households, particularly women, with loans to build water and sanitation infrastructures on the house premises, through partnerships with local financial institutions (Water.org). They have been working with private partners on a direct impact program, which includes the construction of a community water system, and introducing health and hygiene education in the community. The project is aimed to provide some 3,600 people in the communities of Mejocote and Montana Verde improved access to water. This will not only positively affect the entire community in terms of access to cleaner water and hygiene education but have great impact on women’s and girl’s time poverty, freeing up time and allowing them to engage in productive and leisure activities. In Peru, their

lending program started in 2015 and has helped reduce the burden of water collection for rural women^{cxxiv}.

Another example is Grenada's pioneering in climate change adaptation through community-based projects. The School for Special Education, run in its vast majority by women, has started a program for rainwater-harvesting, drip irrigation and solar power for a farm on their campus. The project is not only designed to tackle the often-occurring water shortages, but also promotes healthy alimentation and ensures food security for students, faculty, staff and the community in general. Moreover, the project represents an opportunity for students who are "differently able" to participate in an income generating activity as some of the harvests are sold in local markets and to the nearby Sandals hotel^{cxxv}.

DRAFT for peer review

Access to clean cooking energy

According to the WHO, some 3 billion people still cook using solid fuels such as wood, crop waste, animal dung and coal. In Latin America and the Caribbean, it is estimated that 90 million people, about 13% of the population according to World Bank data from 2016, still rely on these solid fuels for cooking, mainly due to a lack of access and high prices of other, cleaner technologies^{cxxvi}, but also cultural factors. The prevalence of this issue represents both an environmental threat as well as a health threat for communities and individuals exposed. Although large scale depletion of forest has not been found to be directly correlated to the collection of fuelwoods, as most fuelwood is collected from the road side or agricultural lands, local and regional air pollution are prevalent due to these practices^{cxxvii}. Scholars point out that 80% of air pollution in southern Chile came from firewood combustion^{cxxviii}. Although not all of this fuelwood was used for purposes of cooking, it sheds light on the gravity of these actions^{cxxix}. The industrial production of charcoal and coal for cooking have been found to lead to large scale deforestation, resulting in land degradation and depletion of resources^{cxxx}.

On the other hand, health concerns regarding this issue are clearer and widespread. The Geo 6 report states that air pollution is the largest environmental threat to public health in the Latin American region, causing an array of health problems. Burning of biomass releases harmful gasses such as benzene, carbon monoxide and Sulphur oxide, all gases that contribute to climate change, air pollution and are harmful for human health. The problem is not only related to these harmful gases, but with the size of particulate released when improper burning of fuelwood occurs. 2.5 micrometer particulate matter is the most dangerous, as it is inhalable and can even enter your bloodstream, causing several cancers and respiratory diseases^{cxxxi}. It is estimated that globally 3.8 million people a year die prematurely due to illness and complications related to solid fuel use for cooking. Many of these individuals are children, who are more susceptible to air pollution^{cxxxii}. Among the health complications caused by indoor air pollution are pneumonia, chronic obstructive pulmonary disease, stroke and lung cancer. Moreover, the burden of carrying heavy firewood for long distances can result in musculoskeletal damage^{cxxxiii}.

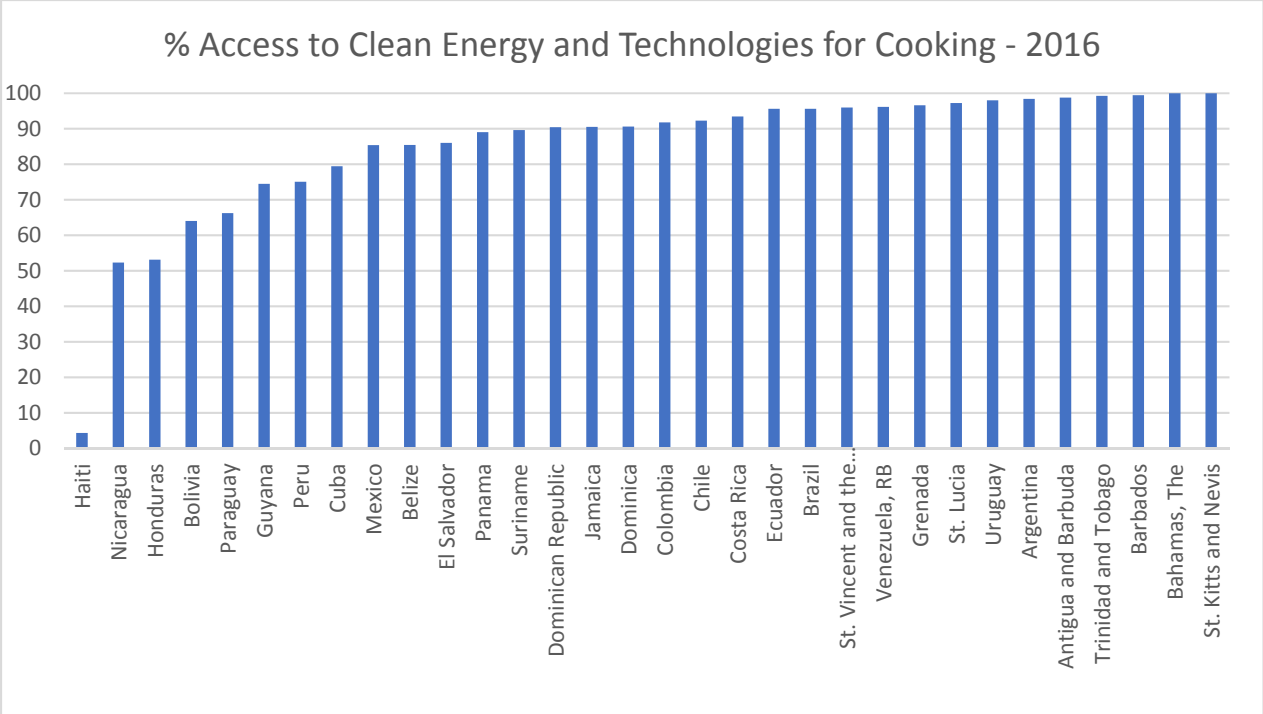


Figure 3 Access to Clean Energy & Technologies for Cooking. Source: World Bank 2016

Related gender gaps

Research has concluded that in Latin America, as well as most developing regions, women are still largely in charge of cooking and feeding their families. A report published by FAO found that what characterizes rural women is that on average they tend to work more hours than men but get less paid hours^{cxxxiv}. Being mostly responsible for household activities does not only limit women from developing other aspects of daily life such as economic activities or leisure time, but also, in this context, negatively affects their health^{cxxxv}. Women, especially lower income and rural women, are exposed to indoor air pollution for consecutive hours every day, having severe effects on their health. The WHO estimates that, globally, 60% of all premature deaths involving household air pollution were amongst women and children. They have also concluded that women exposed to solid fuel smoke are on average two times more likely to develop obstructive pulmonary diseases than other women. This also disproportionately affects infants and young children, of whom women are responsible for^{cxxxvi}. This creates an extra burden as they must care for an ill child. Solving this problem would not only require cleaner and safer forms of fuel and cooking technologies, but also a redistribution of tasks within the traditional family structure.

A good example

Although providing all low-income and rural families with gas or electricity kitchens might be an unattainable goal, there are several other methods available to better their cooking conditions. For example, a project developed in Nicaragua by Asofenix, a non-profit NGO, aimed to better living conditions and improve sustainability by modifying already existing solid fuel kitchens and introducing new models. Most of their models required basic building materials and have simple designs that allow for traditional cooking methods to be maintained while reducing the amount of fire wood used and redirect harmful smoke through a chimney. Through public-private partnerships, Asofenix arranged

partial and in some cases total financing for the construction of these kitchens and mobilized personnel to carry out workshops in these communities about proper use of the new equipment and sustainability practices. After just six months from the installation of the kitchens, 96% of families, within that community, reported improvements in their health, especially for women, children and elders. Other similar projects implemented throughout the region have had similar results. A partnership project developed by the UNDP and the Peruvian government, installed over 150, 000 improved cookstoves and estimated that greenhouse gas emissions would be reduced by one megaton per year per stove. The Peruvian government estimated that the project would avoid the emission of 41, 000 tons of CO², just in the La Libertad region^{cxxxvii}. This would equal the amount of CO² absorbed by one thousand trees for one year. Another project implemented by ENVIROFIT in México estimated that the reduction of firewood use would be from 60%-70%^{cxxxviii}.

Other positive outcomes of the Asofenix project included a reduced spending in time or money to attain fuel wood, reduced heat and soot in the kitchen, and a considerable reduction in time used for cooking. Moreover, the project implemented several workshops on gender equality and gender norms, as well as financing programs to promote female entrepreneurship^{cxxxix}.

In Cambodia access to clean energy is a prevalent issue. Nearly 85% of rural communities rely on firewood as their main source of energy. This does not only mean long hour collecting firewood, but also significant health issues, especially for women who are in charge of household activities.

ATEC International, a local enterprise, assists lower income households to invest and install biogas pipeline and a bio-digesters, often connected to their own animal sheds. This initiative has resulted in lesser economic burden, in the long run, less time occupied by household chores as well as decreased deforestation and GHG emissions.

Figure 4 EmPower: Women for Climate-Resilient Societies” UN Environment

Access to energy

Access to clean and affordable energy is central to most aspects of human life today, including education, economic development, food security, health – all basic to achieve the SDGs. Moreover, there is a clear correlation between access to clean energy and several “quality of life” indicators, such as life expectancy, literacy and fertility rates^{cxli}. In the Latin American and Caribbean region, about 7% of homes live without grid-connected electricity^{cxli}. Some countries such as Brazil or Costa Rica have virtually 100% electricity access, while others like Haiti fall far behind on statistics with approximately 38% of electricity access^{cxlii}. In total, it is estimated that some 31 million people currently live without grid connected electricity in their homes^{cxliii}. The vast majority of these households are located in remote rural communities, where schools, health centers and other services also lack clean, basic electricity services. Living without connection to energy complicates an array of day-to-day activities for women, men and children, such as educational activities, domestic chores, agricultural activities and leisure activities.

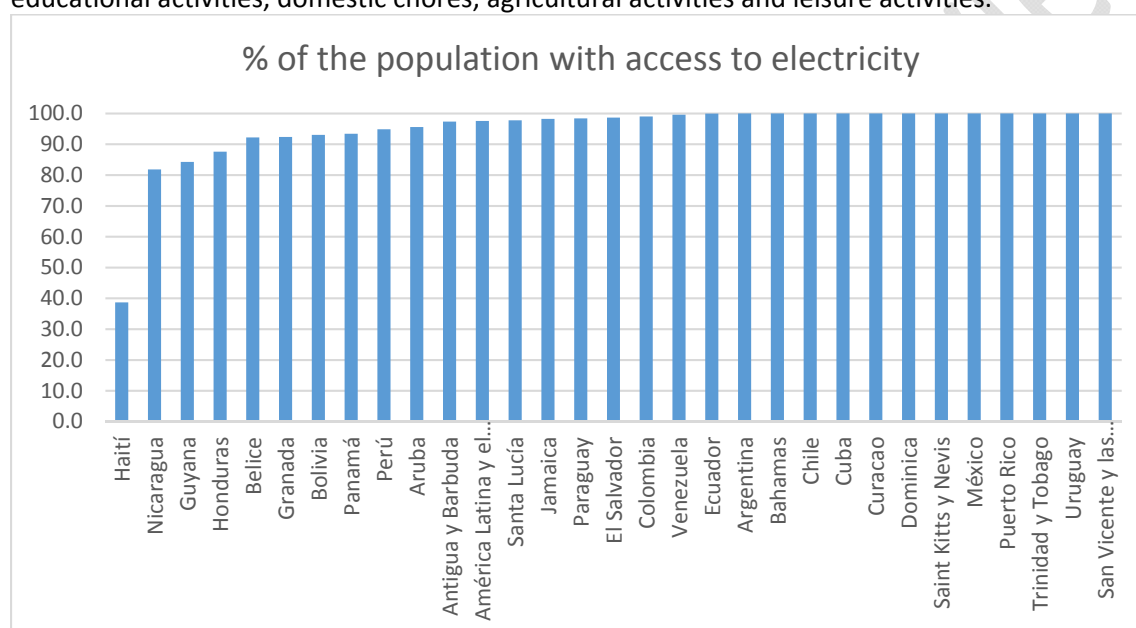


Figure 1: Electricity access in Latin America and the Caribbean. Source World Bank, 2016

Related gender gaps

Studies have shown, that women tend to be disproportionately affected by this problematic in contrast to men. Men and women perceive energy needs differently as gender and societal norms essentially define their needs. For instance, men tend to view access to electricity in terms of leisure and perhaps education for their children, while women view it as an improvement in health and a reduction in workload and time spending^{cxliv}.

For women, living without connection to the energy grid complicates basic tasks and translates into more effort and time invested in cleaning, washing and food preparation and preservation. As well as setting restrictions on time used for studying and night-time activities^{cxliv}. Women are usually responsible for gathering energy resources, especially when biomass is the primary energy source. This task usually takes up many hours of the day and is being extended by increasing pressure from climate change, resulting in

fatigue and possible physical injuries^{cxlvi}. This means women will encounter “time poverty”, reducing the hours available to develop economic activities or leisure activities. Moreover, young girls might be forced to leave school in order to help out at home with the heavy chores, resulting in a clear disparity of opportunities between boys and girls.

A positive example

Involving women in electrification/energy projects is key in order to take into account their specific needs. Several initiatives throughout the region have managed to increase access to electricity in rural and remote areas while succeeding in reducing gender inequalities. For instance, the PELNICA project in Nicaragua, was designed to address energy needs in seven departments. It aimed to directly supply 102,000 people with access to energy, including individuals in the construction process, providing workshops on sustainable energy use and entrepreneurship, and promoting the participation of women in the development and decision making process of the project. The project concluded in 2014, six years after its initial phase and provided the following observations and conclusions.

Through the realization of the “Creando Condiciones Para La Equidad De Género En Proyectos Públicos De Electrificación Rural” pilot project, women found that after gaining access to electricity their daily chores were significantly reduced in time and effort. Amongst the tasks mentioned by beneficiaries, that were improved by this project, were grinding corn, facilitated by the installment of several electrical mills, preparation of food and food storage. Moreover, the project has significant effects on children’s and even adults’ education as it allowed for the creation of night-time study groups, mothers helping children with homework and even the installation of equipment such as radios and tv’s in schools^{cxlvii}. The project also had major impact for the community as it counted with fund to give out small loans for women who desired to start small businesses.

This project could serve as an example of possible initiatives to implement throughout the region to minimize the previously presented gender gap.

Conclusions

It is now widely agreed upon amongst academia and policy makers that integrating gender sensitive approaches is necessary to achieve equitable societies, it is not a question of why, but of how. This document aims to justify the importance of mainstreaming a gender approach within environmental public policy and action. As a preliminary identification of where this action would be most relevant, the following conclusions can be highlighted:

- I. During this research we were able to identify the major gaps in the region that had available disaggregated data and identified themes related to rights to land and natural resources, access to energy and water, wellbeing, climate change vulnerability, sustainable consumption and production and participation in environmental decision making. All these gaps are determined and exacerbated by traditional gender roles, often being directly related to gendered divisions of labour, women's relation and interaction with resources and accepted interactions between men and women.
- II. In addition to the main gaps, throughout the document we identified several cross-sectional themes that reappeared several times. Vulnerability to the effects of climate change, differentiated health impacts and gender-based violence were amongst the recurring cross-sectional topics found through our research.
- III. Data gaps at this nexus, however, are persistent. Limited collection, dissemination and application of gender-environment statistics, including at national level, affects decision makers' and practitioners' knowledge and capacity to develop and adopt well-informed and effective policies and programming at all levels (UN Environment, 2016). Through the process of elaboration of this document, several areas where disaggregated information was not available were identified using non-disaggregated available data as well as research in other regions of the world. These likely existing gaps need further related research to truly understand the depth of issues such as the effects of poor sanitation systems, sustainable consumption and production patterns, the use of public transport, food access, nutrition and food security, and differentiated vulnerability to urban air pollution, all of which have shown to have different effects on women and men in regions such as Asia and Africa.
- IV. Within the framework of the 2030 Agenda and its Sustainable Development Goals, closing gender gaps and addressing gender inequalities is deemed central to achieve a truly sustainable development and maintain peaceful and prosperous societies. Failing to address such gaps within the gender-environment nexus, would set back one of the core commitments of the SDGs – leaving no one behind. This is particularly true for women who are already in a vulnerable position such as lower-income, indigenous and peasant women.

- V. Some central actions have been established as pivotal to successfully close the gender gaps. First, equal access to resources and decent jobs is necessary to achieve female empowerment and begin to close the economic gap and achieve economic independence. It is important to note that integration in the work force does not necessarily mean empowerment as many times jobs available are in sub-par conditions and do not result in economic independence. Moreover, necessary steps are to be taken to promote and ensure both public and private participation of women in decision making processes. These will be discussed in the recommendations section.
- VI. As mentioned in the introduction of this document, great strides have been made to incorporate a gender approach in environmental international agreements, conventions and secretariats. Such efforts have been led by the 2014 Lima Work Programme, which aims to advance the implementation of gender-responsive climate policies and mandates across all areas of negotiations. In fact, the Multilateral Environmental Agreements already provide often legally binding mandates dictating the necessity of promoting gender equality within the environmental sector. Environment and sustainable development agreements, including the 2030 Agenda, have made significant strides recognizing women's rights and mainstreaming of gender equality and women's empowerment. Many of these MEAs have adopted Gender Action Plans (GAPs) encouraging, or mandating, the collection of sex-disaggregated data and the use of gender indicators. Despite such efforts, no process has yet attained gender parity in the Secretariat and convention bodies, and Parties often still under-report, especially substantively, on gender-specific information within reporting mechanisms (IUCN, 2016; Gilligan & Sabater, 2017).
- VII. Many of the identified gaps in this document, as well as those which could not be analyzed due to lack of information, although having clear environmental links, often fall beyond the jurisdiction and areas of work of environmental ministries. It is therefore necessary to extend future actions far beyond the environmental scope and to coordinate efforts with all concerning sectors, both public and private. Some of the identified links include the economic sector, civil protection, energy, public work and education, amongst others.

Recommendations

Through the research, elaboration and revision of this document, UN Environment identified preliminary major gaps, conclusions and recommendations for the region. These recommendations are aimed at policy makers, government actors, stakeholders and international entities to better mainstream and implement comprehensive gender approaches in environmental legislation, project implementation and research.

- **Strengthen national capacities in the areas of data collection, assessment and disaggregation to further identify and properly characterize existing gaps.** Disaggregated data would also enhance monitoring of public policies and projects, identifying good practices and significant impacts. Promoting awareness and sensitization is the first step to successfully integrate a gender approach beyond technical mentions within policy.
- **A keyway to enhance gender equality and women's empowerment is to first understand current disparities to then develop evidence-based policies and programmes.** Data is essential for this process including the collection of sex-disaggregated data to gather information about how women and men interact with and rely on their environments. Although several specific gaps have been identified with available data, there is a need to further develop research in the area and statistics and information that can support the further identification of inequality gaps in issues such as sustainable consumption and production, biodiversity management, natural resources use, among others. Direct synergies can be established at this regard with the production and monitoring of indicators of the Sustainable Development Initiative for Latin America and the Caribbean (ILAC) as they already consider the possibility of disaggregation by sex.
- **Utilizing existing international commitments, in conjunction with strong national policies and frameworks across sectors, is key to enable gender-responsive environmental management.** The Multilateral Environmental Agreements and the SDGs provide a strong starting point, agreed and prioritized by the international community, to measure progress toward sustainable development. Unlike the previous MDGs, the SDGs framework make a concerted effort to highlight the interlinkages among topics, particularly by mainstreaming gender and environmental considerations throughout. There are entry points for gender considerations and sex disaggregation that are, as of yet, not utilized including in environmental related targets and indicators, therefore revealing great potential for strengthened attention to gender mainstreaming by prioritising sex disaggregation, gender indicators and gender-responsive methodologies for collection, analysis and use. The same applies to the indicators of the Sendai Framework for Disaster Risk Reduction that include clear references to disaggregated data by sex.
- **Further compile successful initiatives and/or projects that have been implemented in the LAC region or other geographical locations with similar cultural, environmental and economic conditions.** This is important not only to replicate in other location but to scale them up to the policy level and support successful implementation.
- **To recognize that not all women are the same or have the same priorities and needs regarding economics, social and environmental gaps.** Identifying vulnerable and marginalized demographics is necessary to successfully implement social programs or projects, in line with the 'leave no one behind' pledge of the Agenda 2030. In the region, reinforcing discrimination and exclusion variables should

be particularly considered. Inequality is reinforced in the case and women and girls by belonging to indigenous or afrodescendants groups, by migratory conditions, disabilities, and others. These communities ought to be included in the process identifying their priorities and needs as well as during the development and implementation of the solutions.

- **Develop and implement tools to mainstream gender in policies, national plans and local initiatives** (including encouraging gender-sensitive budgets, removing gender biases within public sector organisations, and recognising the important roles played by women both in national economies and during conservation, adaptation and mitigation efforts.). In addition, in order to close gender gaps and truly influence positive changes in traditional gender norms it is necessary to not only mainstream a gender approach within legislation at all levels, but to include communities in this process. Through the implementation of workshops and capacity building initiatives palpable change within the communities' structures could be achieved, rearranging gendered divisions of labour and hence women's workloads.
- **Political will and commitment at national level are essential for achieving sustainable development goals; national policies, laws and mandates provide the impetus to prioritise sustainable development across sectors and levels.** For example, Mexico also has gender equality and women's empowerment laws, mandates and policies, including guidelines for the mainstreaming of gender within statistical projects and the support of the Specialized Technical Committee on Information with a Gender Perspective. Gender mainstreaming mandates across ministries and within the statistical system strengthen the understanding of the gender-environment nexus and the collection of gender statistics.
- **Recognize the central role of the Ministries of Environment as well as the evident necessity to coordinate with other ministries and the private sector.** Regional information shows that most government policy regarding sectorial topics such as energy, forestry or biodiversity do not include mentions to gender or apply a gender sensitive approach. Moreover, gender policies do not tackle cross-sectional topics. In this sense, concrete actions such as the ccGAPs are necessary to not just mention but integrate a comprehensive gender approach into policy and legislation.
- **Specifically, for the Forum of Ministers of the Environment, UN Environment recommends establishing a defined action plan, setting objectives, timelines and expected results for future efforts.** Within this action plan the role of the Ministries of Environment needs to be defined, outlining coordination with other ministries and sectors as well.
- **The are several pending key policy-relevant questions:** • What social forces are producing the changes seen in the environment, and are they gender-dependent? • What are the large-scale consequences of ongoing environmental changes for social systems and human security, and are these consequences gender differentiated? • What do future projections and outlooks look like, are they gender-differentiated, and will there be different outcomes for women and men? • What actions could be taken for a more sustainable future that would position women and men as equal agents in taking such actions, and which socio-economic factors could shape different outcomes and responses for women and men?

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