



Mapping Gender Data Gaps in Environment

INTRODUCTION

Global recognition that women are disproportionately impacted by environmental issues is a relatively recent shift. Hence, the lack of data on gender and the environment is the result of entrenched disciplinary and sectoral biases — there is little sex-disaggregation or gender analysis of most environmental data, just as the environment continues to be on the periphery of much gender equality work. The fact that there is no section on environment within the IAEG-GS minimum set of gender indicators speaks to this divide. To move the needle forward, we need action from all sides.

In 2019, the most pressing gender data gaps for environment are:

- women in environmental decision-making;
- disaster-related mortality and morbidity;
- disaster risk management;
- women's rights to land and natural resources;
- consumption and production; and
- environment and health

WHERE WERE THE GENDER DATA GAPS IN 2014?

In the MDG era, gender and the environment were treated as separate issues. None of the MDG 7 indicators on environmental sustainability were sex-disaggregated, though three could be considered gender-relevant: indicators 7.8 and 7.9 on access to safe drinking water and basic sanitation, respectively, and 7.10 on slums. By 2015, 147 countries had met safe drinking water targets, 95 countries had met sanitation targets, and 77 countries had met both targets (UN 2015a). The proportion of urban populations living in slums in developing regions also fell from approximately 39.4 percent in 2000 to 29.7 percent in 2014 (UN 2015a).

The 2014 gender data mapping exercise by Data2X did not include the environment as a key development domain. It is examined for the first time within this mapping update.

GENDER DATA AND ENVIRONMENT IN THE SDG ERA

Under the SDGs, a focus on the environment is interwoven across multiple goals and targets. For example, SDG 3 on good health and wellbeing aims to “substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination” by 2030, while Goal 13 on climate action seeks to “strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.”

Despite efforts to mainstream gender across the SDGs, it continues to be mostly siloed from the environment within the SDG monitoring framework. There are 18 gender-relevant environment indicators within the SDGs (full list available in appendix). Sex disaggregation is not possible for some of these indicators for which data are collected at the national or global level, but of the 15 gender-relevant environmental indicators that are monitored at the individual level, just four require sex-disaggregated reporting (i.e. 1.4.2 on secure land rights, 2.3.2 on average income of food producers, 5.4.1 on unpaid work, and 5.a.1 agricultural land rights).

At a fundamental level, we still need basic indicators, methods, and baseline data for gender and the environment. Sex-disaggregated data on environmental issues is extremely scarce and where available, is often fragmented at the country or global level, making it near impossible to aggregate and compare key issues among different regions (UN Environment 2016, 24).



The most pressing gender data gaps for environment are: women in environmental decision-making, disaster-related mortality and morbidity, adaptive responses to climate change and disasters, disaster risk management, women's rights to land and natural resources, consumption and production, and environment and health.

Women in Environmental Decision-Making

In 2015, the International Union for Conservation of Nature's (IUCN) Environment and Gender Information (EGI) platform revealed a dearth of sex-disaggregated data regarding who participates in environmental decision-making processes and forums (Prebble et al. 2015). Increasingly, national governments and international organizations are collecting sex-disaggregated data on participation and leadership in environmental decision-making. For instance, the Women's Environment and Development Organization (WEDO) monitors the proportion of women delegates, heads of delegations, and chief negotiators to international environmental agreements. Other relevant information is not tracked consistently by any international standard, methodology, or authority. This includes the proportion of women heads of environment ministries and national green parties, women participants in national level environmental forums and governance bodies, and finally, women's representation in natural resource sector workforces and organizations.

Disaster-Related Mortality and Morbidity

Sex-disaggregated data on disaster-related mortality and morbidity is difficult to collect and not widely available due to the unique challenges of data collection in disaster-stricken environments and the lack of baseline data available prior to disasters. In the aftermath of disasters, a large share of deaths, illness, and disability may not be reported because normal administrative reporting and civil registration and vital statistics (CRVS) systems are disrupted. Survey research also poses challenges to both researchers and respondents in environments plagued by damaged infrastructure, displaced populations, and environmental hazards.

Disaster Risk Management

Disaster risk management for both slow onset (e.g. drought) and quick onset (e.g. storms) events is another area where gender data are lacking. The recent Sendai Framework for Disaster Risk Reduction 2015–2030 makes some acknowledgement of the need to consider the gender dimensions of disaster risk reduction, calling for “a gender, age, disability and cultural perspective in all policies and practices; and the promotion of women and youth leadership” (UN 2015b). However, there is no international standard or authority for collecting data on women's participation in national disaster risk management processes or for monitoring national action plans and policies to track whether they are gender-responsive.

Women's Rights to Land and Natural Resources

In 2013, the IUCN wrote that “information about women's role and access in environment-related sectors is not comprehensively collected and reported” (IUCN 2013). Sex-disaggregated data with broad country coverage still does not exist to track women's rights to land and natural resources. This includes key data on women's access, security, ownership, management, and livelihood opportunities in connection with natural resources, as well as the equitable distribution of benefits from those resources, such as access to and use of energy. These data are not regularly collected by countries, but questions regarding land ownership are included in the OECD's Social Institutions and Gender Index (SIGI) and Demographic and Health Surveys (DHS). Some data also exist from Multiple Indicator Cluster Surveys (MICS) and World Bank Living Standard Measurement Study Integrated Surveys on Agriculture (LSMS-ISA).

We also need data on women's livelihood opportunities in natural resource sectors like fisheries, energy, and forestry (or REDD+ more broadly). This includes basic data on women's representation as workers within these sectors, but also data on trends, barriers, and specific forms of gender inequality and gender-related risks associated with working in different sectors. For example, recent research by IUCN and USAID



on gender and fisheries finds that higher-paid, equipment-intensive tasks are predominantly assigned to men, whereas women often perform lower-paid, time-intensive tasks, and in some countries, women in fisheries are disproportionately vulnerable to gender-based violence, sexual exploitation, and other risks (Siles et al. 2019).

Gender, Consumption and Production

Very little data exists on gender differentiated sustainable consumption patterns, seeing as gender considerations are not integrated in SDG 12 on sustainable consumption and production patterns (IUCN and UN Environment 2019). Key issues here include waste generation and management (including women as informal recyclers) and different consumption patterns for women and men. Transactional data could be a valuable new data source to help close this gender data gap.

Environment and Health

Gender differences in environment and health can include access to clean water and basic sanitation and hygiene (WASH), as well as exposure to air pollution, pesticides, and hazardous chemicals. Monitoring gender differences in environment and health is challenging in part because environmental data are rarely collected at the intrahousehold level where this access really matters. Currently, none of the SDG indicators for air pollution (3.9.1), unintentional poisoning (3.9.2), access to clean cooking fuels (7.1.2), or unsafe WASH (3.9.2, 4.a.1, 6.1.1 and 6.2.1) require sex-disaggregated reporting. Internationally comparable data on the menstrual hygiene management component of WASH is particularly scarce due to the persistence of social and cultural taboos. The MICS and DHS already include the necessary questions to measure use of safe drinking water, though have not adopted WASH standards requiring biological testing of water samples. Many countries have collected some data on sanitation access and clean cooking fuels, but these data are not always internationally comparable or sex-disaggregated.

WHERE DOES GENDER DATA ON ENVIRONMENT COME FROM?

The main sources of environmental data are **administrative data** from CRVS systems and other sources as well as population-based **survey data** from national censuses, household surveys, and agricultural surveys.

Administrative data on cause of death reported from CRVS authorities is the key source of data on mortality from disasters, air pollution, exposure to WASH, and unintentional poisoning. Less than one half of WHO member states have well-functioning death registration systems that record causes of death (UNSD 2017). In this case, registration data must be supplemented by data from hospital records, police and other law enforcement agencies, the UN and other international organizations, and civil society groups. WHO has also developed a protocol for “verbal autopsy,” which uses information gathered from people familiar with the deceased and trained recorders to produce a cause of death using standard WHO classifications (WHO 2017).

Data on women’s participation and leadership in environmental decision-making processes and forums is publicly available through government, political party, and environmental organization websites, as well as Rio Conventions on Biodiversity, Climate Change and Desertification conferences of the parties participant lists, and information portals for the United Nations Convention on Biological Diversity (CBD), the United Nations Convention to Combat Desertification (UNCCD), and the United Nations Framework Convention on Climate Change (UNFCCC). These are all types of administrative data.

Population-based household surveys (e.g. LSMS-ISA, DHS and MICS) are the best source for data on women’s land security, land ownership, and natural resource management at the national level.



WHAT EFFORTS ARE UNDERWAY TO IMPROVE GENDER DATA ON ENVIRONMENT?

Key actors providing guidance on gender data on environment:

- The [United Nations Environment Program \(UNEP\)](#) is responsible for many SDG indicators on the environment and has a vested interest in enhancing indicator development and data collection on the gender-environment nexus. The Rio Conventions on Biodiversity, Climate Change and Desertification – i.e. the United Nations Convention on Biological Diversity (CBD), the United Nations Convention to Combat Desertification (UNCCD), and the United Nations Framework Convention on Climate Change (UNFCCC) – are three key multilateral environmental agreements. The Basel, Rotterdam, and Stockholm Conventions are multilateral environmental agreements that share the common objective of protecting human health and the environment from hazardous chemicals and wastes.

Some significant large-scale efforts are under way to collect, analyze, and disseminate sex-disaggregated environment data, among them:

- The [Women's Environment and Development Organization \(WEDO\)](#) publishes data on women's participation and leadership in the Rio Convention's Conference of the Parties (COPs) and within national environmental forums and action plans.
- The [International Union for Conservation of Nature's \(IUCN\) Environment and Gender Information \(EGI\)](#) platform is a key source of global data and knowledge products on gender and the environment. Originally launched in its 2013 pilot phase as a gender-environment index, the EGI has been transformed into an umbrella gender-environment knowledge platform.
- FAO's [Gender and Land Rights Database](#) and new [Legal Assessment Tool](#) highlight the major political, cultural, and legal factors that influence realization of women's land

rights throughout the world. It also serves as a platform for addressing, discussing, and providing information about gender and land issues.

- In 2014, [UNESCO's World Water Assessment Programme \(WWAP\)](#) launched a groundbreaking project to develop and test sex-disaggregated indicators for the collection of global water data. Having developed a methodology and toolkit for more than 100 gender and water indicators to date, WWAP is currently pilot testing these indicators through field projects.

Other initiatives are calling for, supporting, or using gender data on the environment:

- The [UN Environment's Global Gender and Environment Outlook \(2016\)](#) provided a landmark examination of the links between gender and the environment and their importance for gender-sensitive policy making and action.
- [Gender and Environment Statistics \(2019\)](#) from IUCN and UN Environment supports an enabling environment for gender-environment statistics and proposes a list of 19 gender-environment indicators for inclusion in national action plans and the IAEG-GS Minimum Set of Gender Indicators. Many of these are recommendations that the SDG framework add sex-disaggregation to the methodologies of gender-relevant environmental indicators.
- [UNESCO's Gender and Water Toolkit](#) provides users with a conceptual and methodological framework and 40 sex-disaggregated indicators to assess the current status of freshwater resources on national, regional, and global scales.

RECOMMENDATIONS

To address gender data gaps in environment, conducting “**national gender and environment assessments,**” broken down by region, would help establish a baseline context within countries against which future changes and progress can be measured (UN Environment 2016, 209). Population-



based surveys will not provide a full picture as they tend to be representative at the national level, requiring a strong system with a mix of survey, administrative, and geospatial data to provide sub-national and individual level estimates.

Intrahousehold data collection is particularly important for understanding the gender impact of women's rights to land and natural resources and access to clean air and WASH. To fully understand women's experiences in this domain, we need detailed and reliable time use data to capture their responsibility for natural resource management, harvesting food, and collecting fuel or water for household consumption.

Geospatial data combined with cell phone (SMS, social media, or app-based) surveys could be useful for collecting information on women's ownership, consumption, and production of land and natural resources. Similarly, when CRVS systems are down, remote sensing satellite and crowdsourced data about the locations of victims in disaster-stricken settings can be an alternative source of information on estimates of mortality and morbidity.

On women's participation and leadership in environmental decision-making, government bodies, COPs, and environmental organizations can make progress by counting and reporting women's representation in their official data collection.

In addition to better data measuring the link between gender and the environment there is a need for more analysis of the interactions — e.g. How is access to natural resources related to violence? How is land tenure related to climate change vulnerability and migration? Due to lack of data, there is not much analysis on these interactions, but this type of information is important for creating better policy.

This brief is part of "Mapping Gender Data Gaps: An SDG Era Update." The full report can be accessed here: data2x.org/MappingGenderDataGaps.



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Appendix: Gender-Relevant SDG Environment Indicators (18 total)

- 1.4.2 Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure (Tier II)
- 1.5.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population (Tier II) (1.5.1/11.5.1/13.1.1 are repeats)
- 2.3.2 Average income of small-scale food producers, by sex and indigenous status (Tier II)
- 3.9.1 Mortality rate attributed to household and ambient air pollution (Tier I)
- 3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services) (Tier I)
- 3.9.3 Mortality rate attributed to unintentional poisoning (Tier I)
- 4.a.1 Proportion of schools with access to (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions) (Tier II)
- 5.4.1 Proportion of time spent on unpaid domestic and care work, by sex, age and location (Tier II)
- 5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure (Tier II)
- 5.a.2 Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control (Tier II)
- 6.1.1 Proportion of population using safely managed drinking water services (Tier II)
- 6.2.1 Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water (Tier II)
- 7.1.1 Proportion of population with access to electricity (Tier I)
- 7.1.2 Proportion of population with primary reliance on clean fuels and technology (Tier I)
- 11.1.1 Proportion of urban population living in slums, informal settlements or inadequate housing (Tier I)
- 11.5.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population (Tier II) (1.5.1/11.5.1/13.1.1 are repeats)
- 13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population (Tier II) (1.5.1/11.5.1/13.1.1 are repeats)
- 13.b.1 Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities (Tier III)