

## Gender and the environment: an overview of issues and methodologies



## Key points

- Women and men face different vulnerabilities and needs in terms of the environmental dimension of development.
- Disaggregated data are crucial to understanding the gender-environment nexus, yet only 9 environment-related indicators in the SDG framework have a measurable gender dimension.
- Mainstreaming gender in environment statistics requires measuring environment-related issues disproportionately affecting or being affected by women or men.
- Some progress in women's participation in decision-making in the environmental sphere has been observed: women made up 39% of national delegations to the twenty-fifth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change in 2019, compared to 32% of national delegations to the fifteenth session in 2009;<sup>1</sup> more specifically, 21% of heads of delegations were women in 2019 versus 10% in 2009.

## Background

Human populations depend on natural resources and ecosystems for food, shelter, water, culture, leisure and their economic livelihoods. While all people require equitable access to natural resources to address these needs, the particular structural inequalities faced by women in terms of vulnerability to natural disasters, climate change and environmental degradation need to be addressed urgently. Understanding the gender-environment nexus requires data and analysis, in particular, gender-disaggregated data.<sup>2</sup> In the absence of such data, environmental analyses remain inadequate and partial, and establishing baselines, monitoring progress and assessing outcomes is challenging.<sup>3</sup>

## Data on gender and the environment is critical for environmental policymaking and for developing appropriate solutions and interventions

Mainstreaming gender in environment statistics is not only about producing sex-disaggregated data, it also requires measuring the environment-related issues disproportionately affecting or affected by women or men. To measure the environment-gender nexus comprehensively, indicators must identify socially constructed vulnerabilities and the specific needs, challenges and priorities of women, men, girls and boys in relation to the environment.<sup>4</sup> While the SDG framework provides a platform for monitoring all aspects of sustainable development, it does not have a specific focus on measuring gender and the environment. Moreover, the current monitoring framework for the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity, the Aichi Biodiversity Targets, lack specific measurable indicators on gender and the environment.<sup>5</sup> This despite the fact that the Convention on Biological Diversity recognizes "the vital role that women play in the conservation and sustainable use of biological diversity and affirms the need for full participation of women at all levels of policymaking and implementation for biological diversity conservation".<sup>6</sup>

Although gender and environment issues are not directly addressed in the SDG framework, it contains a number of Goals, targets and indicators that are related to gender and the environment (see figure I). By identifying indicators that focus on these topics, countries can track the most pressing gender and environment issues they face.<sup>7</sup> With regard to the absence of specific gender provisions in the Convention on Biological Diversity, efforts are under way.<sup>8</sup>

to ensure that gender-based concerns are more prominently addressed in the new 2020 framework to be adopted at the global level to provide an agreed legal framework for measuring biodiversity.

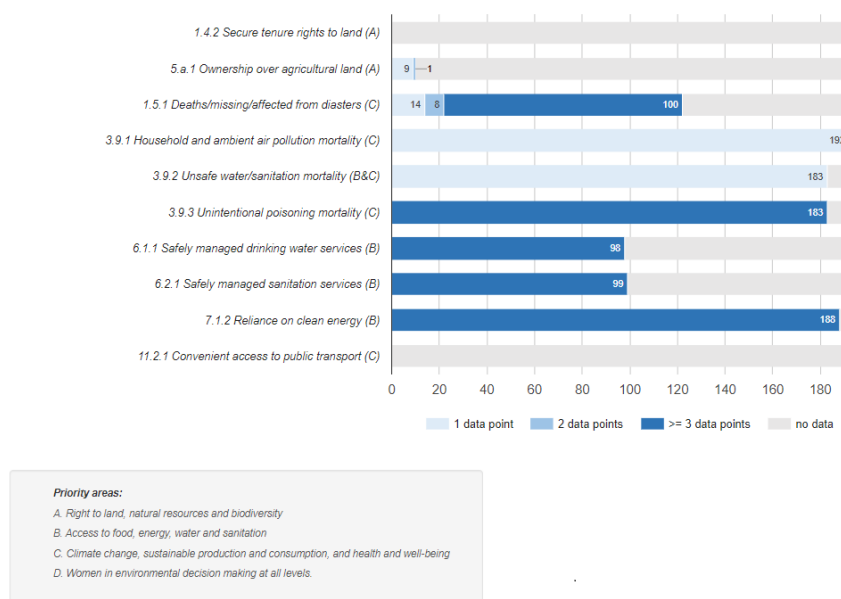
**Figure I:** Gender and environment priority areas in the Sustainable Development Goals

Priority Area	Relevant SDGs
A. Right to land, natural resources and biodiversity	   
B. Access to food, energy, water and sanitation	   
C. Climate change, sustainable production and consumption and health and well-being	      
D. Women in environmental decision making at all levels	   

**Source:** United Nations Environment Programme (UNEP) and International Union for Conservation of Nature (IUCN), Gender and environment statistics: unlocking information for action and measuring the SDGs, Nairobi, March 2019 (<https://www.unenvironment.org/resources/report/gender-and-environment-statistics-unlocking-information-action-and-measuring-sdgs>).

Although there is a gender dimension to many of the environment-related SDGs, only 9 environment-related indicators in the SDG framework have a measurable gender dimension.<sup>9</sup> Currently, there are sufficient data for 5 of the 9 SDG indicators (see figure II) and disaggregation of data by sex may be possible through additional analysis of the underlying information.

**Figure II: Data availability for Sustainable Development Goal indicators related to gender and the environment**



**Source:** See, Serrao, S., Duerto Valero, S., Campbell, J. and Gilligan, M., "Mainstreaming gender in environment statistics for the SDGs and beyond: Identifying priorities in Asia and the Pacific", Economic and Social Commission for Asia and the Pacific (ESCAP), Working Paper Series, October 2019 (<https://www.unescap.org/resources/working-paper-series-sdwp10october-2019-mainstreaming-gender-environment-statistics-sdgs>).

## Gender inequality contributes to power dynamics that determine who makes decisions at all levels

Environmental decision-making occurs at all levels, including through: participation of delegates to multilateral environmental agreements; climate change funding mechanisms; national level parliamentarians, environmental ministries and other government bodies; state and local officials; community-based conservation organizations; and household decision-making. In all such arenas, the unique voice and agency of women is a vital part of the decision-making process for the governance of natural resources, in particular in the development of gender-responsive policies. The perspectives of women have often gone unrecognized in decision-making spheres and their needs left out in the shaping of environmental policy.<sup>10</sup> Without their active participation, women's needs, vulnerabilities, strengths and knowledge will be missing from environmental policies, and this is especially true because women and men interact with, rely upon, have access to and manage environmental resources differently, and are differently impacted by the effects of climate change.

Numerous efforts have been made to ensure that gender equality and women's empowerment are central to the decision-making processes relevant to the environment and sustainable development,<sup>11</sup> and all three Rio Conventions<sup>12</sup> include provisions addressing the importance of gender equality and women's participation. The Convention on Biological Diversity recommends, inter alia, that States parties take action to measure and monitor women's participation and to include both women and men in capacity-building efforts and the development and dissemination of information on the Convention in ways that are accessible to both sexes.<sup>13</sup>

Although efforts have been made to measure women's participation in environmental decision-making, data gaps remain. Participation in the meetings of the Conferences of the Parties to the Rio Conventions is one of the more

reliably monitored and reported aspects of women's inclusion in decision-making processes in the environmental sphere. In this regard, the Women's Environment & Development Organization (WEDO) found that women made up 39% of national delegations to the United Nations Climate Conference in 2019, and that 21% of the heads of delegations were women. In contrast, at the 2015 Climate Change Conference, women comprised 32% of delegations and only 10% of heads of delegations were women.<sup>14</sup>

SDG target 5.5 sets the goal of ensuring women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life,<sup>15</sup> and indicator 5.5.1 addresses how to measure the proportion of seats held by women in national parliaments and local governments. In 2015, in an assessment of the extent of women's leadership in national-level environmental sectors, the International Union for Conservation of Nature found that across 881 national environmental-sector ministries from 193 United Nations Member States, only 12% of ministers were women. In 2020, worldwide, 25% of parliamentarians are women.<sup>16</sup>

## About the data

### Definitions

There is a lack of specific definitions related to the gender dimensions of environmental issues, a situation complicated by the fact that many environmental issues are measured at the household level. While there are 9 environment-related indicators in the Sustainable Development Goals (SDGs) framework<sup>17</sup> that have a potential gender dimension, additional indicators are necessary to capture this aspect of development. The United Nations Environment Programme (UNEP) and the International Union for Conservation of Nature (IUCN) have identified a set of indicators for consideration by national statistical bodies and international agencies.<sup>18</sup>

### Availability

Data for the SDG indicators related to gender and the environment are scarce. Currently, only 5 out of the 9 environment-related indicators in the SDG framework with a measurable gender dimension have sufficient data (at least 98 countries with 2 data points).<sup>19</sup>

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Footnotes

1. Women's Environment & Development Organization (WEDO), "By the numbers: UNFCCC: Progress on achieving gender balance", updated January 2020 .
2. UNEP, 2016: Global Gender and Environment Outlook, Nairobi, 2016 .
3. Ibid.
4. Serrao, S., Duerto Valero, S., Campbell, J. and Gilligan, M., "Mainstreaming gender in environment statistics for the SDGs and beyond: Identifying priorities in Asia and the Pacific", Economic and Social Commission for Asia and the Pacific (ESCAP), Working Paper Series, October 2019 .
5. Brautigam, C., Collantes, V., Hordosch, S., Van Huyssteen, N., Taylor, S. and Paulose, H., "Towards a Gender-Responsive Implementation of the Convention on Biological Diversity", United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), Research Paper, November 2018 .
6. Convention on Biological Diversity, 1992, United Nations, Treaty Series, vol. 1760, No. 30619 .
7. UNEP and IUCN, Gender and environment statistics: unlocking information for action and measuring the SDGs, Nairobi, March 2019 .
8. Secretariat of the Convention on Biological Diversity, "Towards a gender-responsible post-2020 global biodiversity framework: considerations for gender mainstreaming", note by the Executive Secretary, Nairobi, 2019 .
9. Serrao, S., Duerto Valero, S., Campbell, J., Gilligan, M. Mainstreaming gender in environment statistics for the SDGs and beyond: Identifying priorities in Asia and the Pacific. ESCAP Working Paper Series SD/WP/10/October 2019..
10. UNEP and IUCN, Gender and environment statistics: unlocking information for action and measuring the SDGs, Nairobi, March 2019 .
11. Ibid.
12. The three Rio Conventions are: Convention on Biological Diversity, United Nations Framework Convention on Climate Change and United Nations Convention to Combat Desertification.
13. Secretariat of the Convention on Biological Diversity, 2015-2020 Gender Plan of Action, Pocket guide: Summary and Examples, Montreal.
14. WEDO, "By the numbers: UNFCCC: Progress on achieving gender balance", updated January 2020 .
15. UNDESA, Sustainable Development, Achieve gender equality and empower all women and girls .
16. IUCN, Environment & Gender Index, "Women's participation in global environmental decision-making", August 2015 .
17. United Nations Department of Economic and Social Affairs (UNDESA), Statistics Division, Global indicator framework for the Sustainable Development Goals (SDGs) and targets of the 2030 Agenda for Sustainable Development .
18. United Nations Environment Programme (UNEP) and International Union for Conservation of Nature (IUCN), Gender and environment statistics: unlocking information for action and measuring the SDGs, Nairobi, March 2019.
19. Serrao, S., Duerto Valero, S., Campbell, J. and Gilligan, M., "Mainstreaming gender in environment statistics for the SDGs and beyond: Identifying priorities in Asia and the Pacific", Economic and Social Commission for Asia and the Pacific (ESCAP), Working Paper Series, October 2019 .

## Women and the environment in Asia and the Pacific [UN Women]





## Key points

- Women are not as prepared as men to cope with disasters and other environment-related challenges as they often own fewer assets and rely more heavily on natural resources for their livelihoods. More than half of the economically active women in 11 countries in the Asia-Pacific region are engaged in agriculture.
- Urban settings offer women economic opportunities but also place many, in particular slum dwellers, at heightened risk of poverty, violence and unsafe living conditions.
- There is a gender gap in the likelihood of women and men becoming slum dwellers: in five countries with available data, men living in urban areas were more likely to live in slums, while in four other countries women were more likely to be slum dwellers.
- Although the majority of people who lack access to basic drinking water sources live in rural areas, the urban poorest are also deprived in this regard. Since women and girls are disproportionately in charge of water collection, they are particularly affected. For example, the poorest women in urban settings are more likely to lack access to basic drinking water sources than men in Indonesia (10% more likely), Tajikistan (11% more likely), Afghanistan (14% more likely) and Myanmar (32% more likely).
- The average amount of time spent on water collection among slum dwellers in the Asia-Pacific region is 15 minutes, although some people spend as long as 6 hours each time they fetch water. In rural areas, people living in the most remote locations may spend up to 15 hours on this task.

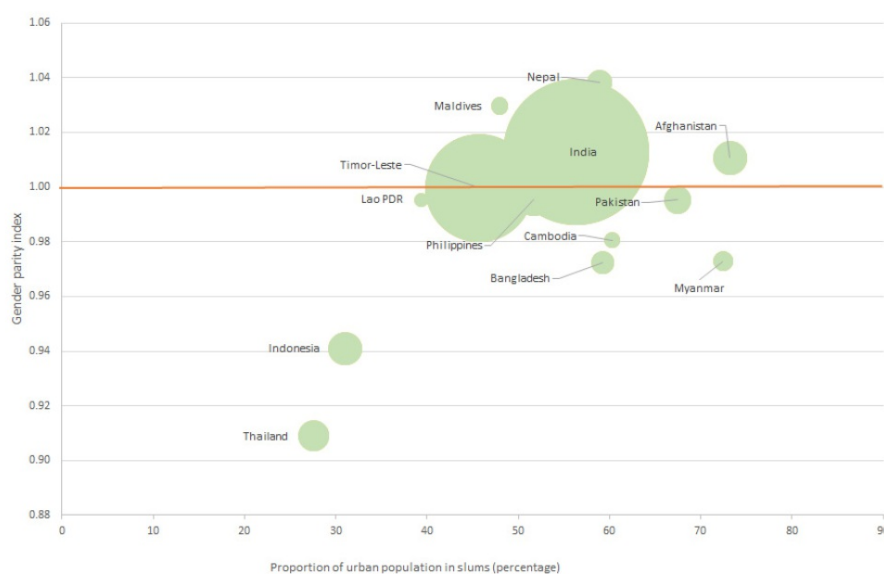
## Background

Just as women and men have unequal access to rights, resources and opportunities, they relate to and interact with the natural environment in different ways, face differing vulnerabilities and impacts, and have unique knowledge and adaptive capacity related to climate change, disasters and use of natural resources.<sup>1</sup> The lives of women in countries in the Asia and the Pacific region are intrinsically connected with the environment, with more than 50% of economically active women in 11 countries in the region engaged in agriculture.<sup>2</sup> Furthermore, because of its many low-lying areas, densely populated coastal cities and frequent natural disasters, the region is highly vulnerable to the effects of climate change. In general, women are less well equipped to cope with disasters and other environment-related challenges as they often own fewer assets and rely more heavily on natural resources for their livelihoods. Moreover, a large share of women also engages in informal employment (56% of women in Eastern and South-Eastern Asia and 88% in Central and Southern Asia),<sup>3</sup> which increases their vulnerability to external shocks.

Available data show gender differences in the likelihood of being a slum dweller: in Cambodia, Bangladesh, Indonesia, Myanmar and Thailand, men were more likely to live in slums, while in Afghanistan, India, Maldives and Nepal, women were more likely to be slum dwellers

Seven of 10 of the most populous cities in the world are in Asia.<sup>4</sup> Although urban settings offer economic opportunities, they also put many women at heightened risk of experiencing poverty, violence and health hazards, particularly in slum settings. An analysis of sex-disaggregated data for 12 Asian countries for the period 2012–2017 indicates that a greater proportion of women than men live in slums (see figure I). While in five of the countries with available data men were more likely to live in slums, meaning that the proportion of men living in slums out of all men living in urban areas was higher than the corresponding figure for women, women were more likely to be slum dwellers in four other countries, Afghanistan, India, Maldives and Nepal.<sup>5</sup>

**Figure I:** Gender differences in the proportion of urban population living in slums: 2012–2017 (latest available)

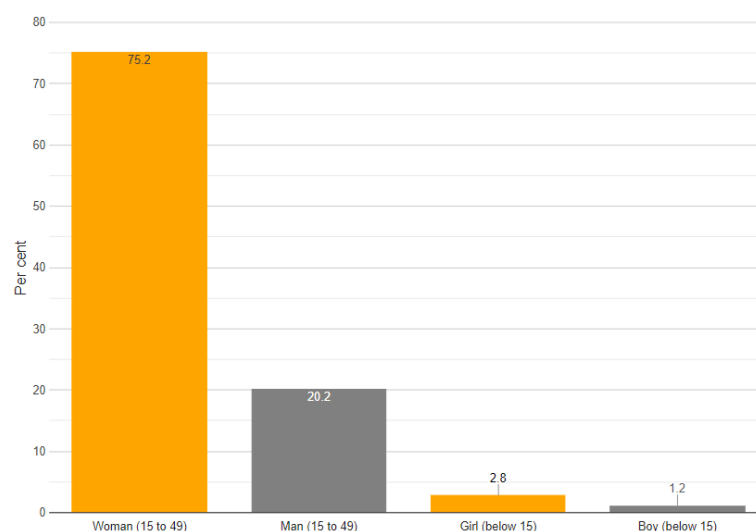


**Source:** United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), calculations based on Demographic and Health Surveys, Multiple Indicator Cluster Surveys and UNdata.

**Note:** Size of the bubble is proportional to the total urban population living in slums. The gender parity index (GPI) is calculated as the proportion of urban women living in slums, divided by the proportion of urban men living in slums. Values above 1 indicate women are more likely to be slum dwellers, while values below 1 indicate men are more likely to be slum dwellers.

People are classified as slum dwellers if they live in urban settings and lack improved water sources and improved sanitation facilities, live in overcrowded homes or in non-durable housing. An analysis of data for 15 Asian countries<sup>6</sup> shows that, although the majority of people lacking access to basic<sup>7</sup> drinking water sources live in rural areas,<sup>8</sup> the urban poorest are also deprived in this regard. For instance, during the wet season in Cambodia, more than 75% of people living in the poorest urban households lack access to basic<sup>9</sup> drinking water sources; this figure goes down during the dry season, but still remains above 60%.<sup>10</sup> As women and girls are most often in charge of water collection,<sup>11</sup> the lack of basic drinking water sources affects them disproportionately. Among the Asian countries with available data, India alone compiles data on water collection roles,<sup>12</sup> revealing large gender differentials: in 75% of slum dwellings in India, women are responsible for fetching water<sup>13</sup> (see figure II).

**Figure II:** Percentages of slum dwellers in India responsible for fetching water by sex and age: 2015—2016



Source: UN-Women, calculations based on Demographic and Health Survey, India, 2015–2016.

## There is wide variation across countries in the region in time spent in fetching water

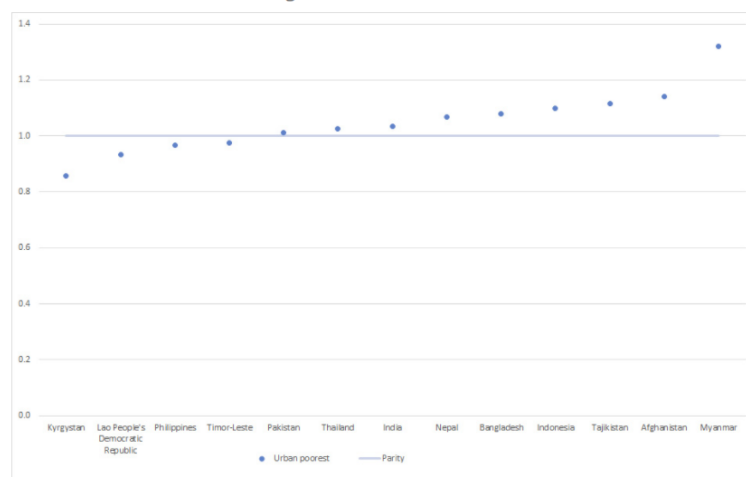
For women living in slums, the long distances that often need to be covered to fetch water adds a substantial burden to their daily workload. There is wide variation across countries in the amount of time taken to fetch water, from an average of less than seven minutes in Indonesia, to 88 minutes (about one hour and a half) in the Philippines. Although the median time for water collection stands at 15 minutes,<sup>14</sup> households located furthest from water sources may spend as long as 6 hours on this essential task.

## Gender gaps in access to water in urban and rural areas

There are gender differences in accessing basic drinking water sources among the poorest urban dwellers in many countries in the Asia-Pacific region: while women and girls in slum households are generally responsible for the time-consuming task of collecting water for drinking and cooking, there is not always enough water for their feminine hygiene needs. In Myanmar, for instance, women living in slum households are 10 percentage points<sup>15</sup> likelier than men to live in households that lack basic drinking water; a gender gap in access also exists in Afghanistan.<sup>16</sup> This may lead to a lack of proper sanitation, exposing women to health risks (see figure III).

In rural areas, where piped water is not as common, people often walk very long distances to collect water: in many rural and remote areas, people, most often women, can spend as long as 15 hours travelling to collect water. On average, rural dwellers spend from about 10 minutes in Indonesia in order to fetch water to 39 minutes in Timor-Leste and 38 minutes in Pakistan.

**Figure III:** Gender parity index among individuals aged 15–49 living in the poorest urban households without access to basic drinking water sources: 2012–2017



**Source:** UN-Women, calculations based on Demographic and Health Surveys and Multiple Indicator Cluster Surveys.

**Note:** The gender parity index (GPI) is calculated as the proportion of women aged 15–49 who lack access to basic water sources, divided by the proportion of men aged 15–49 who lack access to basic water sources. Values above 1 mean women are more likely lack access to basic water sources, while values below 1 indicate men are more likely to lack access to basic water sources.

# About the data

## Definitions

- **Proportion of urban population living in slums:** Proportion of the urban population lacking access to at least one of the following: clean water, improved sanitation facilities, durable housing or sufficient living space. <sup>17</sup>
- **Total number of people living in slums:** Proportion of people living in slums (United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women) calculations based on Demographic and Health Surveys and Multiple Indicator Cluster Surveys) multiplied by the total number of people living in urban areas (UNdata). <sup>18</sup>
- **Gender parity index among slum dwellers:** Proportion of urban women living in slums, divided by the proportion of urban men living in slums. This indicator serves to measure the gender gap in the share of urban women and men living in slums, as well as the gap in their risk or likelihood of being slum dwellers.
- **Gender parity index among individuals aged 15–49 who lack access to basic drinking water sources, by wealth quintile:** Proportion of women aged 15–49 who lack access to basic drinking water sources, divided by the proportion of men aged 15–49 who lack access to basic drinking water sources, disaggregated by wealth quintile.
- **Proportion of slum dwellers in India responsible for fetching water by sex and age:** Proportion of slum dwellers who are primarily responsible for collecting water for their household: data available for women and men aged 15–49 and girls and boys aged 0–14.
- **Total amount of time (in minutes) spent by slum dwellers on fetching water:** Total time taken by slum dwellers for a single round trip to collect water from a drinking source.
- **Total amount of time (in minutes) spent by people living in rural areas on fetching water:** Total time taken by rural dwellers for a single round trip to collect water from a drinking source.

## Coverage

Countries covered include all countries with available data from Multiple Indicator Cluster Surveys and/or Demographic and Health Surveys covered under the Regional Office of the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women) for the Asia and the Pacific region.

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Footnotes

1. [Economic and Social Commission for Asia and the Pacific \(ESCAP\), Work of the Secretariat and partners on mainstreaming gender in environment statistics, July 2020 \(ESCAP/CST/2020/INF/10\)](#) .
2. [Afghanistan, Bangladesh, Bhutan, India, Democratic People's Republic of Korea, Lao People's Democratic Republic, Nepal, Pakistan, Papua New Guinea, Tajikistan and Vanuatu; see International Labour Organization \(ILO\), Department of Statistics \(ILOSTAT\) database, Employment in agriculture \(percentage of female employment\) 2019 \(data retrieved in March 2020\)](#) .
3. See [Global Sustainable Development Goals \(SDG\) Indicators Database](#) and proportion of informal employment, by sector and sex (ILO harmonized) 2016 (data retrieved in April 2020).
4. See [United Nations Department of Economic and Social Affairs \(UNDESA\), The World's Cities in 2018: Data Booklet](#) .
5. These differences are significant at 99% confidence for India and Nepal. For Afghanistan and Maldives they are significant at 90% and 70% confidence, respectively.
6. A total of 15 countries with available Demographic and Health Surveys or Multiple Indicator Cluster Surveys were considered for this analysis.
7. For the identification of slum dwellers, the indicator methodology considers "improved water sources" only, however, for Sustainable Development Goal indicator 6.1.1.(proportion of population using safely managed drinking water services), all four criteria must be met. However, because information on availability and faecal contamination often does not exist, in practice "basic" is used instead (see [SDG metadata](#) for details).
8. In Asia, 40.20 % of the rural population, compared to 14.21 % of the urban dwellers: see [Global SDG Indicator Database](#), proportion of population using safely managed drinking water services, by urban and rural, 2017 (data retrieved in April 2020).
9. Drinking water services are classified as basic if the water source is improved and within 30 minutes round-trip collection time.
10. Estimates calculated by UN-Women using 2014 Multiple Indicator Cluster Survey data for Cambodia: values stand at 75.74% during the wet season and 63% during the dry season.
11. [UN-Women, Turning Promises into Action: Gender Equality in the 2030 Agenda for Sustainable Development, 2018](#) .
12. India is the only country with large enough sample sizes for calculations on the living circumstances of slum dwellers.
13. Estimates calculated by UN-Women using the Demographic and Health Survey, India 2016 (for approximately 67,000 slum households without basic water).
14. For countries included in the analysis (all countries with available data from Demographic and Health Surveys or Multiple Indicator Cluster Surveys).
15. Among urban poorest women, 39.95% lack access to basic drinking water, compared to 30.23% of urban poorest men (UN-Women estimates, from data analysis of the 2016 Demographic and Health Study).
16. Among urban poorest women, 43.24% lack access to improved water sources, compared to 37.88% of urban poorest men.
17. [United Nations, Sustainable Development Goals \(SDGs\) datasets](#) .
18. [UNdata](#) .