

BEIJING
+30



**CHARTING NEW PATHS FOR
GENDER EQUALITY AND
EMPOWERMENT: ASIA-PACIFIC
REGIONAL REPORT ON
BEIJING+30 REVIEW**

CHAPTER 7



ESCAP
Economic and Social Commission
for Asia and the Pacific



CHARTING NEW PATHS FOR GENDER EQUALITY AND EMPOWERMENT: ASIA-PACIFIC REGIONAL REPORT ON BEIJING+30 REVIEW

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CHAPTER 7

Gender and the environment



Kem Oum stands in front of her solar PV panel, which the EmPower programme helped install in her Kolkorm Village, Tramkork Commune, Tramkork District of Takeo Province in Cambodia. She uses it for raising chickens and for operating water pumps to irrigate her field. UN-Women/Ploy Phutpheng

KEY MESSAGES

In pursuit of gender-responsive environmental interventions and feminist climate justice, it is required that gender-specific risks and vulnerabilities are recognized, resources and opportunities in transition to green economies are fairly distributed, and that the leadership and agency of women and girls in driving transformative change is valued and realized.

Natural resources access and management

Despite women and girls bearing the primary responsibility for gathering natural resources to meet household needs, in many contexts, their rights and access to essentials for subsistence and livelihoods remain insecure across the Asia-Pacific region.

- + Women are significantly disadvantaged compared to men in accessing secure rights over land. In four out of the nine countries with data, the share of the male agricultural population with ownership or secure rights over agricultural land is at least twice as high as that of women.¹
- + Women generally tend to be more food insecure than men. A gender gap exceeding 5 percentage points is observed in Southern Asia, where two in five women face moderate or severe food insecurity.²
- + Noticeable progress has been made in recent decades to improve women's and girls' access to safe drinking water. Yet, about 30 million women and girls in Central and Southern Asia, and Eastern and South-Eastern Asia, still drink water from unimproved sources.³
- + Despite years of improvement, only 3 in 20 people in Oceania (excluding Australia and New Zealand), and 3 in 5 in Southern Asia, relied primarily on clean fuels and technology in 2021. Women often bear the brunt of restricted access to affordable and clean energy.⁴

1 ESCAP SDG Gateway, "Indicators by SDG: 5.a.1 – Secure rights over agricultural land", database. Available at <https://data.unescap.org/> (accessed on 10 March 2024).

2 United Nations SDG indicators Database, "Indicator 2.1.2, Series: Prevalence of moderate or severe food insecurity", database. Available at <https://unstats.un.org/sdgs/dataportal/database> (accessed on 11 March 2024).

3 Central and Southern Asia and Eastern and South-Eastern Asia follow SDG regional groupings. UN-Women and United Nations DESA, Progress on the Sustainable Development Goals: The Gender Snapshot 2023 (New York, 2023).

4 United Nations SDG indicators Database, "Indicator 7.1.2, Series: Proportion of population with primary reliance on clean fuels and technology (%)", database. Available at <https://unstats.un.org/sdgs/dataportal/database> (accessed on 12 March 2024).

Women continue to experience marginalization in key sectors related to natural resource management.

- + While approximately 30–40 per cent of all workers in agrifood systems are women in Asia and the Pacific, in some subregions, agrifood systems tend to be a more significant source of livelihood for women than for men. However, women in the sector are often confined to irregular, informal, part-time, low-skilled and labour-intensive work under highly unfavourable conditions.⁵
- + Women constitute an untapped pool of talent for the water sector. They are severely underrepresented in integrated water resources management in the region. Women were formally represented or regularly consulted in policy and management processes in only 13 per cent of countries in Eastern and South-Eastern Asia, 9 per cent in Central and Southern Asia, and 0 per cent in Oceania (excluding Australia and New Zealand).⁶
- + Two-thirds of the over 13 million jobs in the renewable energy industry are located in Asia. However, women remain largely excluded from the sector, especially in technical roles, representing about 30 per cent of the workforce worldwide.⁷

Disasters and climate change

The impacts of disasters and climate change are not gender neutral. Gender inequalities lead to varied experiences of disasters and climate change between women and men in all their diversities.

- + Disasters do not affect women and men equally in terms of mortality, violence exposure and socioeconomic outcomes, such as health, education and economic empowerment, in many contexts.
- + Climate factors are often associated with worsening gender-related outcomes for women and girls, such as diminished health, increased care work and domestic responsibilities, heightened risks of gender-based violence and impaired employment prospects.

Women and girls are increasingly engaged in disaster risk reduction (DRR) and climate action in the Asia-Pacific region. However, their participation and leadership still fall short of achieving gender parity or attaining a critical mass to influence decision-making.

Increased efforts are needed to examine deep-rooted causes of resistance to gender-responsive and transformative policies, programmes and approaches in the environment field. Equally important is continuing to sensitize policymakers, women's groups and other stakeholders to the gender-environment nexus. This includes challenging harmful social norms and gender stereotypes that hinder the effective participation and leadership of women and girls in natural resource management, DRR and climate change mitigation and adaptation.

7.1 OVERVIEW

Gender inequality, coupled with environmental degradation and climate crises, is the most formidable sustainable development challenge in the current era.⁸ Collective awareness of entrenched gender inequality and its manifestation in public policies has risen at both national and international levels. Concurrently, there has been a surge in the recognition of environmental emergencies, such as disasters, climate change, pollution and biodiversity loss. These two pressing agendas are closely interlinked and mutually reinforcing. The gender-environment nexus examines on the one hand, how women, men, girls and boys interact with and are

impacted by environmental factors differently and, on the other hand, the extent to which women and girls are empowered and contribute to environmental sustainability.⁹

Women and girls often experience restricted access to natural resources and are disproportionately impacted by environmental degradation, disasters and climate change. Situations of vulnerability and risk arise from a multitude of economic and social drivers undermining the agency and resilience of women and girls and their prospects for recovery and adaptation. Examples of these

5 FAO, *The Status of Women in Agrifood Systems* (Rome, 2023).

6 UN-Women and United Nations DESA, *Progress on the Sustainable Development Goals: The Gender Snapshot 2021* (New York, 2021).

7 International Renewable Energy Agency (IRENA), *Renewable Energy: A Gender Perspective* (Abu Dhabi, 2019).

8 United Nations, "Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes, Report of the Secretary-General", E/CN.6/2022/3 (New York, 2022).

9 OECD, *Gender and the Environment: Building Evidence and Policies to Achieve the SDGs* (Paris 2022).

drivers include discriminatory legal frameworks; a lack of access to inclusive infrastructure, services and technology;¹⁰ women's concentration in the informal economy without adequate social protection; an inequitable share of unpaid care and domestic work responsibilities; widespread gender-based violence; and underrepresentation and marginalization of women and girls from national and local governance and decision-making processes. Structural gender inequalities are exacerbated in the context of environmental and climate crises.¹¹

Women and girls are nonetheless powerful agents of change. Their participation and leadership in natural resource management, disaster risk reduction (DRR) and climate action result in improved conservation outcomes, enhanced governance and a more equitable distribution of benefits. Women and girls, especially those from indigenous and local communities, possess expertise and traditional knowledge that support biodiversity and sustainable practices. Advocacy groups led by women and girls on environment and climate issues are catalysing change. Women and girls' involvement in climate action has led to more inclusive policies and interventions that are responsive to citizens' needs. The unique experiences, ideas and voices of women and girls are increasingly acknowledged as vital components for shaping future environment-related policies, programmes, financing allocations and international dialogue.¹²

Gender inequalities in the management of natural resources and in the safeguarding of the environment stand as a critical area of concern in the Beijing Declaration and Platform for Action (critical area of concern K: women and the environment). Moreover, the achievement of a multiple of SDGs, such as 2, 5, 6, 7, 11, 12, 13, 14 and 15, will remain elusive without concerted efforts to simultaneously accelerate progress in advancing gender equality and environmental sustainability. General recommendation No.37 (2018) on gender-related dimensions of disaster risk reduction in a changing climate, adopted by the Committee on the Elimination of Discrimination against Women, underscores the urgency of reinforcing the resilience of individuals and communities in the context of

climate change and disasters and mitigating their adverse effects on the well-being of women and girls, based on human rights principles. Furthermore, the agreed conclusions adopted at the 66th session of the Commission on the Status of Women (CSW66) in 2022 calls for accelerated action to achieve gender equality and the empowerment of all women and girls in the context of climate change, environmental and DRR policies and programmes.

The Sendai Framework for Disaster Risk Reduction 2015–2030, endorsed by the United Nations General Assembly following the 2015 Third United Nations World Conference on Disaster Risk Reduction, outlines seven targets and four priorities for action to prevent new and reduce existing disaster risks. It highlights that a gender, age, disability and cultural perspective should be integrated into all DRR policies and practices.¹³ The Gender Action Plan to Support Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030, launched by the United Nations Office for Disaster Risk Reduction (UNDRR) in 2024, proposes key objectives and recommended actions to promote gender equality and the empowerment and leadership of women and girls in DRR.¹⁴ The Paris Agreement, a legally binding international treaty on climate change adopted at the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21) in 2015, urges Parties to respect, promote and consider their respective obligations in relation to gender equality when taking action to address climate change.

The discussion in Chapter 7 centres on two crucial facets of the gender and the environment agenda: natural resource access and management, and disaster and climate risk governance. The chapter assesses the gender dimensions of access to natural resources and women's participation in key sectors related to natural resource management. It also sheds light on the gender-differentiated impacts of disasters and climate change, as well as on women's and girls' engagement in DRR and climate action. Good practice undertaken by Asia-Pacific Governments to address the gender-environment nexus is highlighted throughout the discussion.

10 IUCN, "Gender and natural resource governance: Addressing inequalities and empowering women for sustainable ecosystem management", brief (Gland, 2021).

11 UN-Women, "Report of the Expert Group, Sixty-sixth session of the Commission on the Status of Women, 'Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes'", meeting report (New York, 2021).

12 OECD, "The Gender Equality and Environment Intersection: An Overview of Development Co-operation Frameworks and Financing", *OECD Development Perspectives*, No. 38 (Paris, 2023).

13 UNDRR, "What is the Sendai Framework for Disaster Risk Reduction?", web page. Available at <https://www.undrr.org/implementing-sendai-framework/what-sendai-framework> (accessed on 27 March 2024).

14 UNDRR, UNFPA and UN-Women, *Gender Action Plan to Support Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030* (Geneva, 2024).

7.2 NATURAL RESOURCE ACCESS AND MANAGEMENT

The Asia-Pacific region is endowed with abundant and diverse natural resources, which serve as a source of sustenance and employment for millions of people. In many contexts, women are the primary gatherers and suppliers of the natural resources which are relied on for subsistence and livelihoods. However, women's rights and access to natural resources, including their derivative products, remain tenuous. Women are largely excluded from decision-making processes related to natural resource management, with their voices, perspectives, interests and needs often neglected. Furthermore, when natural resources become contested, competed over or under pressure, women possess limited power and influence in negotiating, deciding or mediating outcomes.¹⁵

7.2.1 Gender dimensions of access to land, food, water, energy and other natural resources

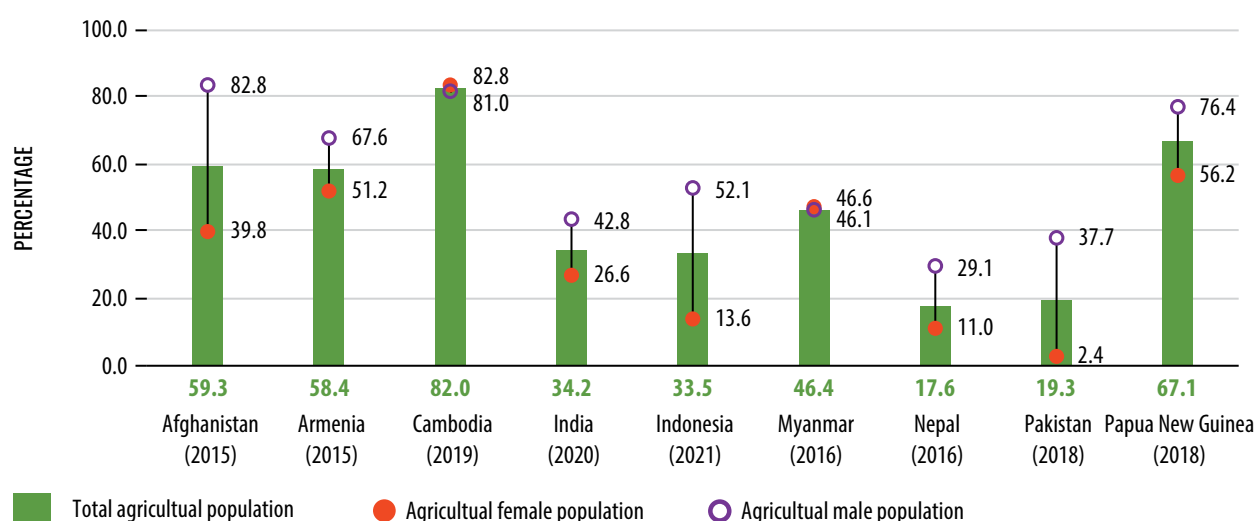
Access to land

For rural populations, land is often the most critical household asset for facilitating agricultural production and ensuring food security and nutrition. Secure land tenure is strongly associated with heightened investment and productivity in

agriculture, leading to higher incomes and economic well-being. Secure land rights for women often result in improved outcomes for them and their families, including increased bargaining power at household and community levels, enhanced child nutrition and reduced gender-based violence. However, **women are often significantly disadvantaged compared to men in accessing secure rights over land.**¹⁶

Among the nine Asia-Pacific countries with data on SDG indicator 5.a.1, the percentage of women with ownership or secure rights over agricultural land relative to the total agricultural female population varied significantly among countries in the region, ranging from 2.4 per cent to 82.8 per cent. In six of these countries, the figure fell below 50 per cent (Figure 7.1). For men, the percentage ranged from 29.1 per cent to 82.8 per cent, with the figure being at least twice as high as that for women in four countries. Moreover, the share of women among owners or rights-bearers of agricultural land varied between 6.6 per cent and 56.8 per cent. In five countries, men accounted for at least 60 per cent of the owners or rights-bearers of agricultural land, highlighting significant gender inequalities in land ownership and rights.¹⁷ Furthermore, data on SDG indicator 5.a.2 suggest that only 2 out of 14 Asia-Pacific countries¹⁸ with available information had high or very high levels of guarantees of gender equality in land ownership and/or control in the legal framework.¹⁹

FIGURE 7.1 Share of agricultural population with ownership or secure rights over agricultural land, by sex, latest year available



Source: ESCAP SDG Gateway, "Indicators by SDG: 5.a.1 – Secure rights over agricultural land", database. Available at <https://data.unescap.org/> (accessed on 10 March 2024).

15 UN-Women, "Gender, peace and security in natural resource management: Land, forest and water management in the Asia Pacific", research brief (New York, 2022).

16 FAO, "The gender gap in land rights", brief (Rome, 2018).

17 The share of women among owners or rights-bearers of agricultural land was 36.6 per cent in Afghanistan (2015), 49.4 per cent in Armenia (2015), 54.0 per cent in Cambodia (2019), 41.3 per cent in India (2020), 19.6 per cent in Indonesia (2021), 56.8 per cent in Myanmar (2016), 39.3 per cent in Nepal (2016), 6.6 per cent in Pakistan (2018) and 38.7 per cent in Papua New Guinea (2018). ESCAP SDG Gateway, "Indicators by SDG: 5.a.1 – Secure rights over agricultural land", database. Available at <https://data.unescap.org/> (accessed on 10 March 2024).

18 Cambodia and Georgia.

19 ESCAP SDG Gateway, "Indicator by SDG: 5.a.2- Legal framework on equal rights to land ownership", database. Available at https://data.unescap.org (accessed on 14 July 2024).

Access to food

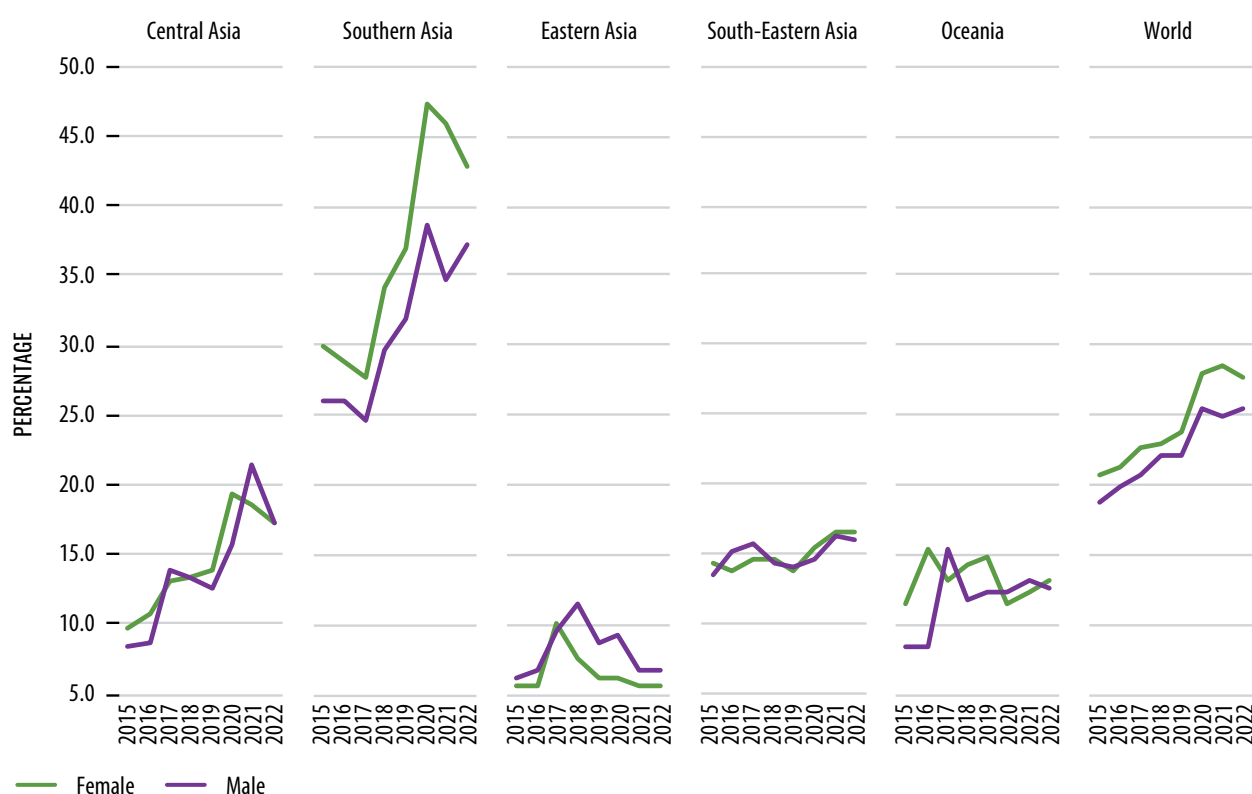
Despite playing a pivotal role in sustainable food systems, women generally tend to be more food insecure than men. Women often assume primary responsibility for feeding their families and communities but have access to food last and least.²⁰ This inequality is more pronounced among poor and landless households.²¹ Globally, the gender gap in food insecurity widened considerably during the height of the COVID-19 pandemic in 2020 and 2021, as women were more affected by job and income losses and shouldered a larger share of additional unpaid care responsibilities compared to men (see [Chapter 2](#)). In 2021, the gender gap was 3.8 percentage points, with 28.6 per cent of adult women experiencing moderate or severe food insecurity compared to 24.8 per cent of men. In 2022, the gap narrowed to 2.4 percentage points (27.8 per cent for women and 25.4 per cent for men), partially reflecting a return of women to economic activities and a weakening of the disproportionate impacts of the pandemic on women's access to food.²²

The gender gap in food insecurity was evident in Southern Asia (SDG country grouping), following the global pattern (Figure 7.2). In 2022, 42.7 per cent of women in Southern Asia faced moderate or severe food insecurity compared to 37.3 per cent of men, with the gender gap narrowing from 11.1 percentage points in 2021 to 5.4 percentage points in 2022. In Central Asia, South-Eastern Asia and Oceania, gender gaps in food insecurity have varied over the years, with differences between women and men being relatively small in 2022. Food insecurity represented a less significant concern in Eastern Asia, where women tended to be more food secure than men. In 2022, 5.6 per cent of women experienced moderate or severe food insecurity compared to 6.8 per cent of men.²³

Access to water

Enhancing the availability, accessibility and quality of drinking water is a well-established priority for empowering women and girls, who often bear the responsibility for securing adequate water for

FIGURE 7.2 Prevalence of moderate or severe food insecurity among population aged 15 or above, by sex, 2015–2022



Source: United Nations Department of Economic and Social Affairs (UNDESA), "SDG Indicators Database, Indicator 2.1.2, Series: Prevalence of moderate or severe food insecurity". Available at <https://unstats.un.org/sdgs/dataportal/database> (accessed on 11 March 2024).

20 UNEP, *Global Gender and Environment Outlook 2016* (Nairobi, 2016).

21 UN-Women, "The climate-care nexus: addressing the linkages between climate change and women's and girls' unpaid care, domestic and communal work", working paper (New York, 2023).

22 FAO and others, *The State of Food Security and Nutrition in the World 2023: Urbanization, Agrifood Systems Transformation and Healthy Diets across the Rural–Urban Continuum* (Rome, 2023).

23 UNDESA, "SDG Indicators Database, Indicator 2.1.2, Series: Prevalence of moderate or severe food insecurity". Available at <https://unstats.un.org/sdgs/dataportal/database> (accessed on 11 March 2024).

drinking, cooking, cleaning and caring for family members in households.²⁴ **Noticeable progress has been made in the past decades to improve women's and girls' access to safe drinking water.** In 2022, about 1.07 billion women and girls worldwide, or 27.1 per cent, lacked access to safely managed drinking water services, marking a notable decrease from 39.2 per cent in 2000. In Central and Southern Asia, the number of women and girls drinking water from unimproved sources or surface water witnessed a 71.0 per cent decrease, dropping from 107 million in 2000, 61 million in 2015 to 31 million in 2022. In Eastern and South-Eastern Asia, it declined by 84.0 per cent, from 188 million in 2000, 73 million in 2015 to 30 million in 2022. Nevertheless, water stress due to climate change, rising water demand, pollution and decades of misuse is threatening progress towards universal access to safe drinking water. Already in 2023, approximately 380 million women and girls, accounting for 9.5 per cent of the global female population, experienced high or critical water stress, with this figure projected to rise to 674 million across 33 countries by the year 2050.²⁵

Collecting water from sources located off premises is a highly gendered activity. It is estimated that 16 per cent of the population globally reside in households where water is collected off-premises, including from improved and unimproved sources. In 63 per cent of these households, women and adolescent girls are primarily responsible for water carriage. Available data reveal that 24 per cent of the population in Central and Southern Asia rely on water collection, with women and adolescent girls being nearly three times as likely as men and adolescent boys to fetch water (69 per cent for women and adolescent girls and 24 per cent for men and adolescent boys). Moreover, the burden of water carriage, as measured by the average time spent collecting water, is heavier for women and girls compared to men and boys in many countries.²⁶

Water collection activities and inadequate access to sanitation facilities increases women's and girls' risk of gender-based violence, as they access isolated water collection points and seek privacy for accessing sanitation facilities.²⁷ Reducing the time spent on water collection is important for increasing school

attendance and enhancing learning outcomes among girls. Among adult women, improving access to water can free up time and open a broader array of employment opportunities, contributing to the achievement of decent work and poverty eradication.²⁸

Access to energy

Access to affordable and clean energy for all is essential for promoting sustainable food production and consumption, creating decent jobs and increasing incomes, tackling climate change and addressing other major development challenges.²⁹ Traditional gender roles and societal norms often dictate that women and girls shoulder the majority of unpaid care and domestic work, leading them to spend more time at home compared to men. **Consequently, women are often the primary users of household energy and rely heavily on it to fulfil their daily tasks. This dependence on energy exposes women and girls to high health risks associated with the use of polluting fuels and technologies indoors.**³⁰ For example, women and girls often face higher exposure to household air pollution due to traditional domestic roles, such as cooking with biomass fuels, which can result in severe respiratory illnesses and other health issues.³¹

Globally, 8.6 per cent of the population lacked access to electricity in 2021. Despite remarkable progress towards universal coverage in Asia and the Pacific over the past few years, a staggering 61.7 per cent of the population in Oceania (excluding Australia and New Zealand) still did not have access to electricity in 2021 (Figure 7.3). In some subregions, regardless of years of improvement, access to clean fuels and technology remained out of reach for many people. Only 15.0 per cent of the population in Oceania (excluding Australia and New Zealand) and 64.0 per cent in Southern Asia primarily relied on clean fuels and technology, both figures falling below the world average of 71.0 per cent in 2021.³² As women often bear the brunt of restricted access to affordable and clean energy, further energy interventions must consider their needs and priorities. By doing so, these efforts will further help alleviate household and community energy poverty.³³

24 UNICEF and WHO, *Progress on Household Drinking Water, Sanitation and Hygiene 2000–2022: Special Focus on Gender* (New York, 2023).

25 UN-Women and United Nations DESA, *Progress on the Sustainable Development Goals: The Gender Snapshot 2023* (New York, 2023).

26 UNICEF and WHO, *Progress on Household Drinking Water, Sanitation and Hygiene 2000–2022: Special Focus on Gender* (New York, 2023) and UN-Women, "Women and the environment: An Asia-Pacific snapshot", brief (New York, 2022).

27 UN-Women, UN-Water, and the United Nations, *From Commodity to Common Good: A Feminist Agenda to Tackle the World's Water Crisis* (New York, 2023).

28 UN-Women, *Gender Equality in the 2030 Agenda: Gender-Responsive Water and Sanitation Systems* (New York, 2018).

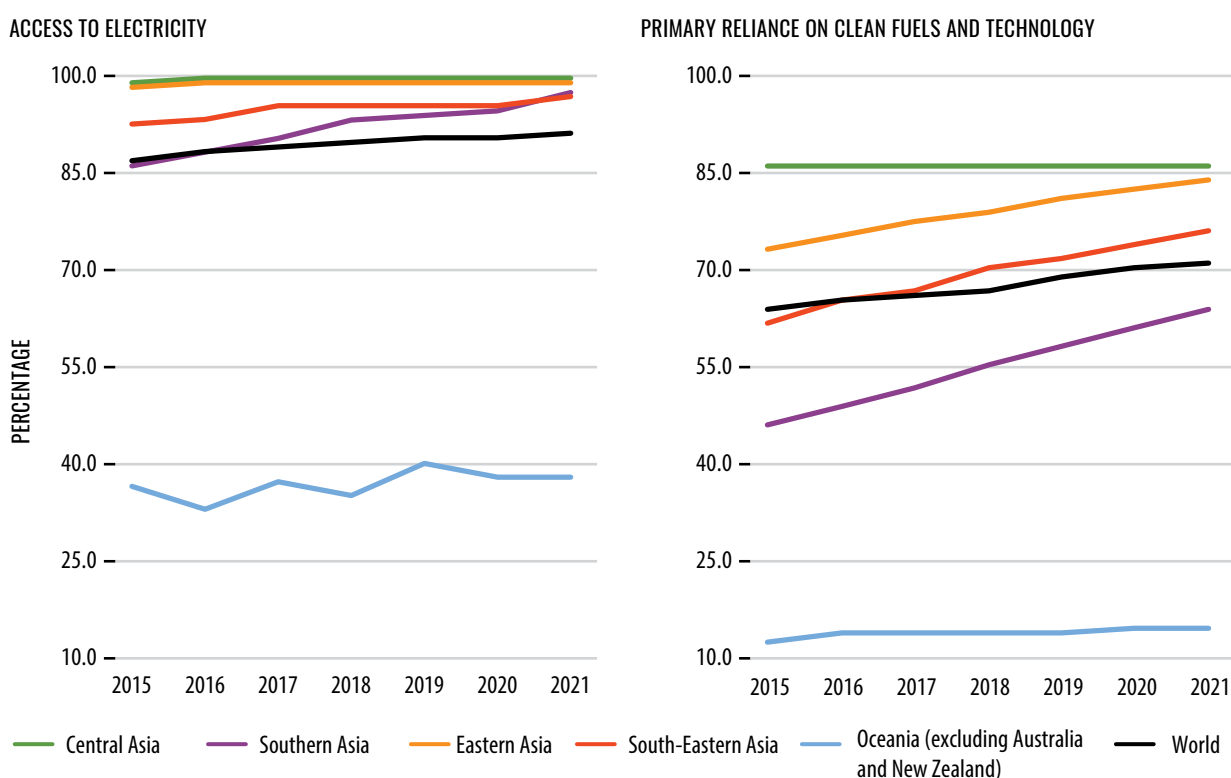
29 UN-Women and UNIDO, *Gender Equality in the Sustainable Energy Transition* (New York and Vienna, 2023).

30 WHO, "Household air pollution", web page. Available at <https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health> (accessed on 9 April 2024).

31 Stockholm Development Institute, *Applying a data-driven gender lens to air pollution policies in the ASEAN region* (Stockholm, 2023).

32 UNDESA, "SDG Indicators Database, "Indicator 7.1.1, Series: Proportion of population with access to electricity, by urban/rural (%)" and "SDG Indicator 7.1.2, Series: Proportion of population with primary reliance on clean fuels and technology (%)". Available at <https://unstats.un.org/sdgs/dataportal/database> (accessed on 12 March 2024).

33 UN-Women and UNIDO, *Gender Equality in the Sustainable Energy Transition* (New York and Vienna, 2023).

FIGURE 7.3 Proportion of population with access to electricity and clean fuels and technology, 2015–2021

Source: United Nations SDG indicators Database, “Indicator 7.1.1, Series: Proportion of population with access to electricity, by urban/rural (%)” and “Indicator 7.1.2, Series: Proportion of population with primary reliance on clean fuels and technology (%)”, database. Available at <https://unstats.un.org/sdgs/dataportal/database> (accessed on 12 March 2024). One hundred per cent of the population had access to electricity and more than 95 per cent primarily relied on clean fuels and technology in Australia and New Zealand in the period 2015–2021.

Gender inequality also manifests itself in the unequal access to other natural resources.

For example, across many parts of the Asia-Pacific region, rural women lack direct control over forest land and their resources, while men exercise control and authority over high-value tree products. Women are particularly susceptible to the increasing encroachment and commercialization of forest areas, which affect women’s food security, livelihoods and income-generating opportunities.³⁴ Women lack access and control over coastal and marine ecosystem resources. As climate change, pollution and globalization exert growing pressures on coastal and marine ecosystems, men and women experience these impacts differently due to their distinct roles, knowledge and needs. Yet women’s contributions in fisheries, waste management and conservation have historically been overlooked in research, management and policy.³⁵ Addressing the gender dimensions of access to natural resources, including their derivative products, is imperative to empower women and girls and achieving gender equality.

Improving access to natural resources for women and girls

Closing gender gaps in women’s access to natural resources needs a comprehensive approach that protects their rights and enhances their agency through capacity development, community collective action and service provision. Some countries have developed policies and undertaken reforms to support women’s land titling and registration, as well as their access to other natural resources.

Despite significant room for improvement, the Land Titling Project II (2004–09) in **Lao People’s Democratic Republic** was designed to ensure women’s customary land rights are reflected in the new official land registration systems, promote women’s employment in land institutions at all levels, and expand women’s access to specialized technical tertiary education. Under the project, 37.5 per cent of titles were issued to women compared to 23.4 per cent to men, and 29.3 per cent were registered jointly.³⁶ The Ministry of

34 UN-Women, “Gender, peace and security in natural resource management: Land, forest and water management in the Asia Pacific”, research brief (New York, 2022).

35 UNEP and Gender and Water Alliance. *Gender Mainstreaming in Coastal and Marine Ecosystems Management: Principles, Case Studies and Lessons Learned* (Nairobi, 2022).

36 World Bank, “Examples from East Asia on strengthening women’s land rights”, Agriculture and Environmental Services Department notes (Washington, D.C., 2014).

Natural Resources and Environment is running a new project from 2021 to 2026 to improve tenure security and land administration services, with targeted awareness campaigns for women and training for government officials on women's land rights and relevant registration procedures.³⁷

In **Indonesia**, the Ministry of Environment and Forestry strengthened equal access for men and women to manage social forestry by enacting Regulation No. 9/2021 on Social Forestry Management. The Regulation has changed the social forestry permit holder requirement from the head of a family (mostly a man) to anyone who lives in the area around the forest. The percentage of women receivers rose from 15 per cent in 2022 to 18 per cent in 2023.³⁸ In **Nepal**, agricultural and forestry policies that specifically promote inclusive and gender-balanced farmland ownership and forest management have been introduced, although implementation and monitoring remain weak.³⁹

Several initiatives in the region have effectively improved women's access to natural resources. Under the Coastal Community Development project (2013–2017) in **Indonesia**, formal fishers' groups were formed and equipped with improved fishing tools. Women's groups were established for business enterprises to process, transform and sell fish products. These groups received financial support and technical training and were directly connected to markets. As a result, there was a 27 per cent increase in women's participation in fish and marine processing and an 84 per cent increase in their general participation in community groups. Household-level income rose by 33 per cent, while sales of fish and marine products saw a boost of 28 per cent.⁴⁰ The Nuku'alofa Urban Development Sector Project (2011–2020) in **Tonga** benefitted women by improving water distribution and solid waste collection. A series of community and media campaigns on water safety, conservation and hygiene were organized, covering all women's groups in Nuku'alofa.⁴¹

7.2.2 Women's participation in key sectors related to natural resource management

Women's contribution to natural resource management is enabled by their effective participation in sectors, such as agriculture, forestry, fisheries, water and energy. Raising women's wages, optimizing their working conditions and breaking down barriers to their decision-making and leadership in business operations can empower women to sustain livelihoods while actively contributing to the sustainable management of natural resources.⁴² This sub-section highlights women's participation in three crucial domains, namely, agrifood systems, the water sector and the renewable energy industry.

Agrifood systems

Agrifood systems encompass an entire range of actors and their interconnected value-adding activities in food and non-food agricultural production, as well as associated off-farm activities, such as food storage, aggregation, post-harvest handling, transportation, processing, distribution, marketing, disposal and consumption.⁴³ It has been increasingly recognized that the world must accelerate actions to transform to more efficient, inclusive, resilient and sustainable agrifood systems for "better production, better nutrition, a better environment, and a better life."⁴⁴ Agrifood systems yield considerable benefits to society. They represent a major employer worldwide, providing jobs and livelihoods for more than a billion people. Many farmers offer environmental services to society as environmental stewards. Through sustainable practices, agrifood systems generate public goods such as biodiversity conservation, carbon storage and sequestration and watershed regulation. On the other hand, some agrifood systems are fragile and unsustainable due to market, policy and institutional failures, contributing to climate change and environmental degradation.⁴⁵

37 World Bank, "World Bank to support land administration, titling in Lao PDR", press release, 4 September 2021. Available at <https://www.worldbank.org/en/news/press-release/2021/09/04/world-bank-to-support-land-administration-titling-in-lao-pdr> (accessed on 31 March 2024) and World Bank, "Enhancing Systematic Land Registration Project", project document (Washington, D.C., 2021).

38 Indonesia, The Ministry of Women Empowerment and Child Protection, *National Report on the implementation of the Beijing Declaration and Platform for Action* (Jakarta, 2024).

39 UN-Women, "Gender, peace and security in natural resource management: Land, forest and water management in the Asia Pacific", research brief (New York, 2022).

40 FAO, *The Status of Women in Agrifood Systems* (Rome, 2023) and International Fund for Agriculture Development, *Impact Assessment Report: Republic of Indonesia Coastal Community Development Project (CCDP)* (Rome, 2019).

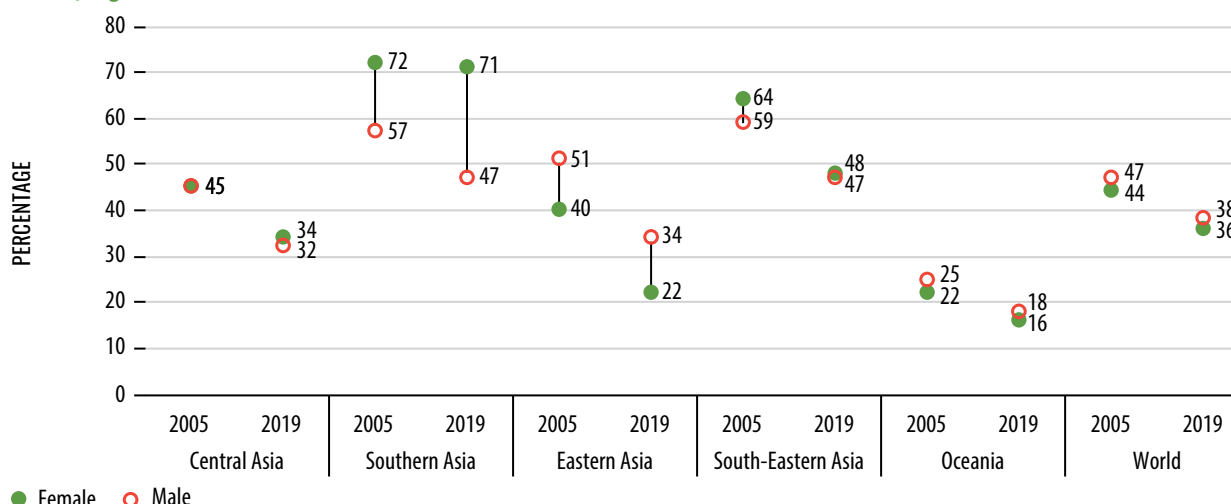
41 ADB, "Pathway to empowerment: Women's decision-making and access to water in the Pacific", blog, 23 October 2020. Available at <https://blogs.adb.org/blog/pathway-empowerment-women-s-decision-making-and-access-water-pacific> (accessed on 31 March 2024) and ADB, "Tonga: Nuku'alofa Urban Development Sector Project", completion report (Manila, 2021).

42 UN-Women, "Women and the environment: An Asia-Pacific snapshot", brief (New York, 2022).

43 FAO, *The Status of Women in Agrifood Systems* (Rome, 2023).

44 FAO, "Strategic framework 2022–31", framework (Rome, 2021).

45 FAO, *The State of Food and Agriculture 2023: Revealing the True Cost of Food to Transform Agrifood Systems* (Rome, 2023).

FIGURE 7.4 Share of agrifood-system employment in total employment in 2005 and 2019, by sex

Source: FAO, *The Status of Women in Agrifood Systems* (Rome, 2023).

Globally, the share of working women and men in agrifood systems witnessed a decline of nearly 10 percentage points between 2005 and 2019, driven by a reduction in primary agricultural production employment (Figure 7.4). In 2019, 36 per cent of working women were employed in agrifood systems, down from 44 per cent in 2005. The decline in women's employment in agrifood systems was evident in all subregions in Asia and the Pacific except for Southern Asia. India had a pivotal influence on this trend. While only about one in five women were working or looking for a job in the country, labour force participation remained relatively high among the poorest women, and agriculture was a major source of employment.⁴⁶

While approximately 30–40 per cent of all workers in agrifood systems are women in Asia and the Pacific,⁴⁷ in some subregions, agrifood systems are a more significant source of livelihood for women than for men. In Southern Asia, an overwhelming 71 per cent of female workers were engaged in agrifood systems in 2019, compared to 47 per cent of male workers. The share of agrifood-system employment slightly higher among women than among men in Central Asia (34 per cent of working women versus 32 per cent of working men) and South-Eastern Asia (48 per cent of working women versus 47 per cent of working men).⁴⁸ It is clear that agrifood systems hold significant potential to foster gender equality and women's empowerment, as well as to accelerate progress towards multiple development goals of the 2030 Agenda.

Despite the significance of agrifood systems for women's livelihoods and their families' well-being, women are often confined to irregular, informal, part-time, low-skilled and labour-intensive work under highly unfavourable conditions. Temporary and informal work reduces women's power and makes them more vulnerable to violence, including economic, psychological, physical and sexual abuse and sexual harassment.⁴⁹ Available data from across the world suggest that, on average, women working in agriculture in remunerated employment earn 18.4 per cent less than men. The gender gap in land productivity between female- and male-managed farms of the same size stands at 24 per cent. Moreover, the roles of women in off-farm work are likely to be in less-profitable activities or on worse terms than those of men due to discriminatory social norms and restricted access to assets and resources.

To strengthen women's participation in agrifood systems, actions are needed to increase their access to key resources, such as land, water, technology, services and finance, education and training, and networks. It is also urgent to improve women's involvement in intrahousehold decision-making regarding the use of land and income. According to FAO estimates, closing the gender gaps in farm productivity and wages in agrifood systems would increase global GDP by at least 1 per cent or nearly \$1 trillion. It would also reduce global food insecurity by at least 2 percentage points, contributing to a decrease in the number of food-insecure people by 45 million.⁵⁰

⁴⁶ FAO, *The Status of Women in Agrifood Systems* (Rome, 2023).

⁴⁷ The share of female agrifood-system workers was 44 per cent in Central Asia, 31 per cent in Southern Asia, 35 per cent in Eastern Asia, 43 per cent in South-Eastern Asia, 44 per cent in Oceania and 38 per cent worldwide in 2019. In several countries in South-Eastern Asia, including Cambodia, Lao People's Democratic Republic and Viet Nam, women represented nearly half of the labour force in agriculture.

⁴⁸ FAO, *The Status of Women in Agrifood Systems* (Rome, 2023).

⁴⁹ FAO, *The Status of Women in Agrifood Systems* (Rome, 2023).

⁵⁰ Ibid.

Some Governments have made strides in advancing women's participation in agrifood systems. Access to education and training is critical for women's empowerment. Interventions that tackle discriminatory gender norms and attitudes, address care and unpaid work, increase women's access to technology and resources, and enhance their land tenure security often result in improved productivity.⁵¹

The Agriculture, Nutrition, and Gender Linkages project (2015–2018) implemented by the Ministry of Agriculture in **Bangladesh** provided agricultural training, nutrition behavioural change communication and gender sensitization training to women and men. The project significantly elevated women's empowerment score and status⁵² and fostered small improvements in the gender attitudes of both women and men.⁵³ In **Cambodia**, the Ministry of Agriculture, Forestry and Fisheries and the Ministry of Women's Affairs collaborated in the roll-out of an initiative aimed at empowering both women and men who were small-scale producers in agribusiness. The initiative focused on creating profitable agricultural enterprises while facilitating positive changes in gender relations within households, communities and markets.⁵⁴

The Accelerating Progress towards the Economic Empowerment of Rural Women project (2014–2018) in **Kyrgyzstan** led to rural women's increased income, better livelihoods and food security from enhanced agricultural productivity. Factors that contributed to these results included the promotion of solidarity economic models, such as self-help groups and group economic initiatives, alongside facilitating access to training and interest-free commodity and cash loans. The project involved the implementation the Gender Action Learning System (GALS), a participatory, community-led empowerment methodology that can be adapted to various cultural and organizational contexts. GALS tools assisted in transforming gendered power relations, promoting women's and men's self-confidence and improving livelihoods.⁵⁵

In **Papua New Guinea**, within the framework of the National Food Security Policy 2018–2027, the Department of Agriculture and Livestock acknowledges the potential of natural resource management to empower women through increased control over resources, knowledge and social standing. Among the strategies to harness this potential, the policy prioritizes women as targets of extension services through strengthened rural resource centres. It promotes sustainable income-generating opportunities to contribute to improving access to nutritious food for children and families. Additionally, the Policy calls for support and collaboration with women's organizations like the Papua New Guinea Women in Agriculture Development Foundation, while involving men in supporting women's participation in decision-making related to agriculture, agribusiness and household nutrition.⁵⁶

Given the increasing incidence of climate change-related events, it is crucial for agricultural development to be climate-smart and to take a gender-responsive approach that understands the factors affecting women farmers' adaptive capacity. This approach addresses gender-based inequalities by improving women's access to resources, services, information, and training for climate-smart agriculture. It enables women to enhance their productivity, livelihoods and climate resilience.⁵⁷ In **Bhutan**, between 2019 and 2021, 952 women farmers received training in organic farming, vegetable and fruit tree cultivation and land management to support climate-resilient agriculture, in line with the Bhutan's Economic Development Policy 2016. The policy prioritizes organic farming, biotechnology and agro-processing and promotes climate-smart agriculture practices. The initiative "Supporting Climate Resilience and Transformational Change in the Agriculture Sector in Bhutan" has facilitated a shift towards climate-informed agriculture practices across eight Dzongkhags (districts), equipping farmers, including women farmers, with skills to build resilience to climate change.⁵⁸

51 FAO, *The Status of Women in Agrifood Systems* (Rome, 2023).

52 Empowerment was measured using the internationally validated project-level Women's Empowerment in Agriculture Index (pro-WEAI), including 12 indicators to assess intrinsic agency, instrumental agency and collective agency.

53 Agnes Quisumbing and others, "Designing for empowerment impact in agricultural development projects: Experimental evidence from the Agriculture, Nutrition, and Gender Linkages (ANGeL) project in Bangladesh", *World Development*, vol. 146 (October 2021).

54 Inputs from an FAO participant of the ESCAP Expert Group Meeting on Asia-Pacific Beijing+30 Regional Synthesis Report. For more information, please see Government of Cambodia, Ministry of Women's Affairs, "Cambodia National Report on the occasion of the thirtieth anniversary of the Fourth World Conference on Women and the adoption of the Beijing Declaration and Platform for Action (1995)" Available at <https://www.asiapacificgender.org/sites/default/files/2024-06/Cambodia%27s%20National%20Review%20for%20Implementation%20of%20the%20Beijing%20Platform%20for%20Action%20%282024%29.pdf> (accessed on 15 July 2024).

55 Natalia Kosheleva and Elmira Kerimalieva, "Final evaluation of the Kyrgyzstan Joint UN-Women/ FAO/ IFAD/ WFP Programme on Accelerating Progress towards the Economic Empowerment of Rural Women", final report (n.p., 2018) and FAO, IFAD and WFP, *Good Practice: Joint Programme to Accelerate Progress towards the Economic Empowerment of Rural Women* (Rome, 2020). The project was also implemented in Nepal.

56 Papua New Guinea, Department of Agriculture and Livestock, *Papua New Guinea National Food Security Policy 2018–2027: Growing agriculture for food security, good nutrition and health* (Port Moresby, 2018).

57 FAO, "Climate Smart Agriculture Sourcebook: The role of gender in Climate-Smart Agriculture. C6 – Overview", web page. Available at <https://www.fao.org/climate-smart-agriculture-sourcebook/enabling-frameworks/module-c6-gender/c6-overview/en/> (accessed on 7 August 2024).

58 Bhutan, The National Commission for Women and Children, *National Report on the implementation of the Beijing Declaration and Platform for Action* (Thimphu, 2024).

In **Kyrgyzstan**, 62 per cent of the population live in rural areas, and they depend heavily on crop and livestock production, with agriculture as the major source of employment.⁵⁹ In 2023, the Ministry of Agriculture introduced a National Action Plan for the Development of Family Farming. One of the key priorities of the National Action Plan was to promote gender equality in family farming and empower rural women to take on leadership roles in agriculture. The plan included the future organization of national and district-level competitions to award the “Best Women Farmer” prize. The Ministry aimed to promote the development of essential social infrastructure, such as clean water and sanitation, kindergartens, schools and rural medical facilities. The objective was to free up women’s time and allow them to participate in training in agricultural production skills for sustainable and climate-resilient farming. Additionally, the National Action Plan emphasizes the need for climate-smart agriculture and green farming approaches, which would be supported through the development of training programmes, information materials, and capacity building initiatives.⁶⁰

Water sector

Sustainable water resources management is essential for water ecosystem preservation, food and energy production, decent work and economic growth generation, and climate change mitigation.⁶¹ Increasing women’s participation in water utilities, as well as water supply and irrigation community governance groups, often catalyses advancements in water infrastructure, security and sanitation. However, a confluence of factors, such as the scarcity of female water professionals, entrenched social norms and gender stereotypes, and misperceptions about women’s managerial and technical competencies, perpetuates the marginalization of women in the water sector.⁶²

Women represent an untapped pool of talent for the water sector. Findings of the World Bank Utility Survey 2018–19 showed that, among the 64 water and sanitation service providers in 28 economies around the world, women accounted for only 17.7 per cent of the workforce. While 22.8 per cent of engineers and 23.3 per cent of managers were women, 32 per cent of the surveyed utilities had no female engineers and

12 per cent operated without any female managers. Women encounter barriers to employment in the water sector throughout their career cycle, including in relation to attraction, recruitment, retention and advancement.⁶³

In Asia and the Pacific, women are severely underrepresented in integrated water resources management, which promotes “the coordinated development and management of water, land and related resources to maximize economic and social welfare in an equitable manner.”⁶⁴ According to the UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water Survey, 2018/2019, only 22 per cent of 104 countries reported high levels of female participation in integrated water resources management, where women were formally represented or regularly consulted in policy and management processes. The percentage of countries with high levels of women’s participation was alarmingly low in almost all Asia-Pacific subregions, standing at 13 per cent in Eastern and South-Eastern Asia, 9 per cent in Central and Southern Asia, and 0 per cent in Oceania (excluding Australia and New Zealand).⁶⁵ Closing the gender gap in water decision-making at national and local levels plays a crucial role in increasing the efficiency and sustainability of water management processes.⁶⁶

Advancing women’s participation and leadership in the water sector often entails increasing gender diversity in the water workforce and establishing supportive frameworks for gender parity in water resources management. For example, the Urban Services Improvement Investment Program — Tranche 1 (2010–2021) in **Georgia** increased women’s participation in water supply and sanitation management and service delivery by creating employment and career development opportunities. At the end of the project, women represented more than 30 per cent of key management positions in the United Water Supply Company of Georgia (UWSCG) and over 40 per cent of employees in 9 UWSCG service centres at project locations.⁶⁷ In **the Philippines**, the Magna Carta of Women 2019 requires 40 per cent participation of women in Development Councils, which are responsible for planning water, sanitation and hygiene (WASH) and integrated water resources management. In **Vanuatu**, the amended

59 International Fund for Agricultural Development (IFAD), “Kyrgyzstan,” web page. Available at <https://www.ifad.org/en/web/operations/w/country/kyrgyzstan> (accessed on 4 June 2024).

60 Kyrgyzstan, Ministry of Agriculture, *National Action Plan for the Development of Family Farming in the Kyrgyz Republic for 2023–2028* (Bishkek, 2022).

61 UNESCO and UN-Water, *The United Nations World Water Development Report 2020: Water and Climate Change* (Paris, 2020).

62 ADB, “Women, water and leadership,” *ADB briefs* No. 24 (Manila, 2014).

63 World Bank, *Women in Water Utilities: Breaking Barriers* (Washington, D.C., 2019).

64 UNEP, “Water resources management,” web page. Available at <https://www.unep.org/topics/fresh-water/water-resources-management> (accessed on 14 March 2024).

65 At least 50 per cent of countries and/or 66 per cent of population were covered in each subregion. UN-Women and United Nations DESA, *Progress on the Sustainable Development Goals: The Gender Snapshot 2021* (New York, 2021).

66 ADB, “Women, water and leadership,” *ADB briefs* No. 24 (Manila, 2014).

67 ADB, “Georgia: Urban Services Improvement Investment Program – Tranche 1,” completion report (Manila, 2022).

Water Resources Management Act (2016) mandates 40 per cent representation of women in all rural water committees, and this is implemented through the registration of these committees.⁶⁸

Renewable energy industry

The advancement of the renewable energy industry contributes to reducing global carbon dioxide emissions and fostering new employment opportunities. The transition from fossil fuels to renewables facilitates a shift towards economic growth compatible with climate stability. Globally, renewable energy employment has continued to expand in recent years. In 2022, the sector provided an estimated 13.7 million jobs, up from 12.7 million in 2021, with significant contributions from fields such as solar photovoltaic (4.9 million), hydropower (2.5 million), biofuels (2.5 million) and wind power (1.4 million). Approximately two-thirds of all jobs were located in Asia.⁶⁹ The full potential of a just energy transition can be realized when the equality of opportunity and treatment of women and men is set up as a specific focus and goal from the outset.⁷⁰

Women remain largely excluded from the renewable energy industry, especially in technical roles.⁷¹

An online survey conducted by the International Renewable Energy Agency (IRENA) in 2018, covering more than 140 countries, revealed that women constituted 32 per cent of the full-time employees of responding organizations in the renewable energy sector. Administrative positions saw a higher representation of women at 45 per cent, compared to STEM jobs at 28 per cent and non-STEM technical roles at 35 per cent. Perceptions of gender roles, cultural and social norms, and prevailing hiring practices were listed by survey respondents as top barriers to entry for women in the modern renewable energy sector. Meanwhile, the glass ceiling – invisible barriers restricting women from rising to influential positions despite their qualifications – cultural and social norms, lack of flexibility in the workplace, and insufficient mentorship opportunities were reported as significant obstacles to women's career advancement.⁷² These findings suggest that a gender-responsive just transition in the energy sector must tackle structural gender inequalities and unleash women's potential as agents of change in all job opportunities along the value chain.

Building a gender-responsive renewable energy industry necessitates investment in, for example, evidence-based policy advocacy, gender diversity in the workforce and women's energy entrepreneurship, and decentralized sustainable energy technologies that support gender equality and women's economic empowerment.⁷³ **Nauru** developed national capacity to operate and maintain solar photovoltaic and battery storage systems, with a particular focus on increasing women's representation in the Nauru Utilities Corporation.⁷⁴ Similarly, the **Vietnam** Electricity Corporation (EVN), established by the Government, issued policies to recruit qualified women at every level of the workforce. The company set up a "women in leadership" programme and delivered gender equality training to senior executives. The share of women at the director level increased from 0 to 10 per cent.

In the state of Madhya Pradesh in **India**, the Solar Powering Anganwadi Centres pilot project (concluded in 2019) decentralized renewable energy to institutions run and managed by women that were not connected to the grid. The project enabled access to clean energy for 63 centres, providing avenues for lighting, cooling and mobile charging facilities. A cadre of female centre workers was trained in the management and maintenance of installed solar systems. The pilot led to the installation of solar systems in 2,500 remote Anganwadi centres in Madhya Pradesh.⁷⁵

In the **Marshall Islands**, a training initiative was implemented targeting young women residing in rural areas with a high school education. The objective was to develop their skills in electrical and mechanical assembly, as well as the commissioning of solar photovoltaic systems. These were male-dominated areas of work in the Marshall Islands. The participants supervised the installation of solar photovoltaic refrigerators in their own homes.⁷⁶

At the subregional level, **ASEAN** recognizes the potential of increasing women's employment in renewable energy to enhance industry robustness and societal welfare. To address challenges such as data insufficiency and male-dominated norms, ASEAN advocates adopting gender-responsive renewable energy policies and continuous development of gender-inclusive strategies supported by partnerships among member states and stakeholders.⁷⁷

68 Global Water Partnership and UNEP-DHI, *Advancing towards Gender Mainstreaming in Water Resources Management* (Stockholm, 2021).

69 IRENA and ILO, *Renewable Energy and Jobs: Annual Review 2023* (Abu Dhabi and Geneva, 2023).

70 UN-Women and UNIDO, *Gender Equality in the Sustainable Energy Transition* (New York and Vienna, 2023).

71 For more information on women's underrepresentation in certain industries see chapter 3.

72 IRENA, *Renewable Energy: A Gender Perspective* (Abu Dhabi, 2019).

73 ENERGIA, World Bank and UN-Women, "Global progress of SDG 7 – Energy and Gender", Accelerating SDG 7 achievement policy brief 12, (New York, 2018).

74 Government of Nauru, *Updated Nationally Determined Contribution* (Yaren, 2021).

75 UN-Women and UNIDO, *Gender Equality in the Sustainable Energy Transition* (New York and Vienna, 2023).

76 Marshall Islands (the), Ministry of Culture and Internal Affairs, *National Report on the implementation of the Beijing Declaration and Platform for Action* (Majuro, 2024).

77 ASEAN Centre for Energy, *Gender Equality in ASEAN Energy Booklet* (n.p., 2024).

BOX 7.1 Gender, peace and security and natural resource management



In the Asia-Pacific, the dependency on natural resources for livelihoods, combined with increasing pressures from exploitation and climate change, has heightened security risks at multiple levels — from individual to societal. The region has witnessed 23 significant conflicts linked to resources since the 1950s, nearly half have occurred in Indonesia, Myanmar, Papua New Guinea and the Philippines.¹ More recently, there has been a notable recent increase in resource-based conflicts in the region.² In Bangladesh, deforestation and extreme weather have increased landslide and flooding risks, leading to displacement and heightened conflict risks over resource competition.³ This deterioration in security affects women disproportionately, as they are often the primary managers of natural resources but are excluded from decision-making processes. Their involvement is crucial not only for managing resources sustainably but also for maintaining peace and security in resource-dependent communities.

To address the multifaceted security risks associated with natural resource depletion and escalating conflicts, it is crucial to fully integrate women into all levels of natural resource management. This integration should span from grassroots community involvements to high-level policy formulation and strategic decision-making. For example, in contexts where women and indigenous women are predominantly engaged in managing forests, land and water, their proportional representation in decision-making processes is essential.

Substantive reforms in land tenure systems and broader policy frameworks are necessary to tackle the root causes of gender inequality and resource-related conflicts effectively. These reforms should aim to elevate women's participation and leadership within natural resource management, thereby acknowledging their rights and significant contributions. Such strategic involvement is fundamental to fostering resilient communities and preventing conflicts, thus contributing to sustainable peace and security across the region.

For example, **Indonesia** adopted its National Action Plan on Women, Peace, and Security for the period 2020-2025 in July 2021. The National Action Plan addresses non-traditional security issues such as climate change, violent extremism and land disputes. It emphasizes prevention, mitigation and the empowerment and participation of women and children in addressing emerging security threats, including those posed by climate change. One of the key focus areas of the National Action Plan is natural resource access and ownership, which can be impacted by climate change.⁴

1 UN Women, "Extractive industries, gender, and conflict in Asia Pacific", programme brief (New York, 2020).

2 Idris Iffat, "Trends in Conflict and Stability in the Indo-Pacific", K4D Emerging Issues Report 42, Institute of Development Studies, January 2020.

3 Adam Day and Jessica Caus, "Conflict Prevention in an Era of Climate Change: Adapting the UN to Climate-Security Risks", United Nations University (March 2020).

4 UN Women, *Country Brief: Women, Peace and Security in Indonesia* (Bangkok, 2023).

BOX 7.2 Engaging and empowering women from ethnic minorities in natural resource management in China and Viet Nam



Indigenous women and women from ethnic minorities play an important role in managing national resources. In **China**, in the Liguang Villages' community conserved areas, women from the predominant Lisu ethnic minority group have been empowered to take on greater roles in resource management. Each village within conserved areas has elected a woman representative, further enhancing women's participation in managing and safeguarding natural resources.¹ In the province of Lao Cai, **Viet Nam**, ethnic minority women have the opportunity to leverage their traditional knowledge, protecting and managing the natural resources of the area and participating in sustainable development. Through the "Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD+)" Programme, public-private partnerships are being piloted between the provincial government, ethnic minority communities and businesses, focusing on traditional medicines. About 90 per cent of the active ingredients of traditional medicines come from forests. Indigenous women sustainably manage and harvest forests according to their knowledge.²

1 UNDP Nature Exposure, "Women. Tradition. Culture. - UNDP Nature", web page. Available at <https://undp-nature.exposure.co/women-tradition-culture> (accessed on 29 May 2024).

2 UNDP, "Viet Nam: Unlocking the entrepreneurial power of indigenous women to protect forests", blog, 13 December 2019. Available at <https://www.undp.org/asia-pacific/stories/viet-nam-unlocking-entrepreneurial-power-indigenous-women-protect-forests> (accessed on 7 August 2024).

7.3 DISASTERS AND CLIMATE CHANGE

The impacts of disasters and climate change are not gender neutral. Gender inequalities lead to varied experiences of disasters and climate change between women, men, girls and boys in all their diversities. The gender-differentiated impacts can exacerbate existing inequalities, thereby further affecting women and girls' future resilience to shocks and crises.⁷⁸ While women and girls are actively contributing to DRR and climate action, their participation and leadership have yet to achieve gender parity or a critical mass to adequately influence decisions and policies.⁷⁹ In pursuit of gender-responsive DRR and feminist climate justice, it is required that gender-specific risks and vulnerabilities are recognized, resources and opportunities in transition to green economies are fairly distributed, and above all, that the leadership and agency of women and girls in driving transformative change are valued and realized.⁸⁰

7.3.1 Gender-differentiated impacts of disasters and climate change

Disasters

Asia and the Pacific remains the most disaster-prone region in the world. In 2022, over 140 disasters occurred, including floods, earthquakes, tropical cyclones, heatwaves, droughts and others. These disaster events affected more than 64 million people, caused over 7,500 deaths and resulted in economic losses estimated in the value of over \$57 billion.⁸¹ **Disasters, whether caused by geophysical, hydrological, meteorological, climatological or biological hazards,⁸² do not affect women and men equally in terms of mortality and socioeconomic outcomes.⁸³**

Despite years of capacity-building and data collection efforts, the Asia-Pacific region still has limited sex-disaggregated data on Sendai

Framework Monitoring Targets A and B related to **disaster mortality and affected populations.**⁸⁴ As of March 2024, 18 ESCAP member States reported sex-disaggregated disaster-related mortality data (Target A) in the Sendai Framework Monitor. Fifteen ESCAP member States have also provided sex-disaggregated disaster affected population data (Target B). Women accounted for 47 per cent of disaster-related mortalities and 55 per cent of the total disaster affected population, among countries with available data in Asia and the Pacific.⁸⁵

Regarding **health outcomes**, boys tend to be more vulnerable to nutritional and physical stress in utero or during early life than girls owing to biological factors. However, the preference for treating boys with health problems can result in girls being worse off when their families encounter scarcity due to disasters. Damaged health facilities disrupted infrastructure and diminished economic resources can interrupt women's and girls' access to modern contraception, family planning, hygiene products and maternal care. Moreover, studies consistently suggest that women are more susceptible to depression, anxiety and stress-related disorders after disasters, although suicide rates tend to be higher among men.⁸⁶ In Tonga, for instance, as many as 92 per cent of women and 85 per cent of men who were exposed to disasters and related hazards experienced mental health issues.⁸⁷

The impacts of disasters on **school enrolment** vary for girls and boys. Whether girls or boys are withdrawn from school and engage in child labour depends on the needs of parents and the value they attribute to children's education. When parents are unable to afford tuition or require additional support at home, girls usually experience a more significant decrease in school enrolment compared to boys. On the other hand, when families need extra income and labour, boys are typically impacted to a greater extent than girls.⁸⁸

78 World Bank, *Gender Dimensions of Disaster Risk and Resilience: Existing Evidence* (Washington, D.C., 2021).

79 United Nations, "Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes, Report of the Secretary-General", E/CN.6/2022/3 (New York, 2022).

80 UN-Women, *Feminist Climate Justice: A Framework for Action* (New York, 2023).

81 ESCAP, *Asia-Pacific Disaster Report 2023: Seizing the Moment: Targeting Transformative Disaster Risk Resilience* (United Nations publication, 2023).

82 World Bank, *Gender Dimensions of Disaster Risk and Resilience: Existing Evidence* (Washington, D.C., 2021).

83 UN-Women, UNFPA and UNDRR, *Beyond Vulnerabilities to Gender Equality and Women's Empowerment and Leadership in Disaster Risk Reduction: Critical Actions for the United Nations System*, United Nations Joint Study on the Status of Gender Equality and Women's Leadership in DRR (New York and Geneva, 2021) and Eric Neumayer and Thomas Plumper, "The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy 1981-2002," *Annals of the American Association of Geographers*, vol. 97, No. 3 (February, 2007).

84 Global target A: Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortalities between 2020-2030 compared with 2005-2015. Global target B: Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared with 2005-2015. See PreventionWeb by UNDRR for more information <https://www.preventionweb.net/sendai-framework/sendai-framework-at-a-glance>.

85 Sendai Framework for Disaster Risk Reduction and UNDRR, "Sendai Framework Monitoring tool", database. Available at <https://sendaimonitor.undrr.org/> (accessed on March 2024).

86 World Bank, *Gender Dimensions of Disaster Risk and Resilience: Existing Evidence* (Washington, D.C., 2021).

87 UN-Women, Tonga Department of Statistics, and Australian Aid, "Gender and Environment Survey 2022", report (n.p., 2023).

88 World Bank, *Gender Dimensions of Disaster Risk and Resilience: Existing Evidence* (Washington, D.C., 2021).

It has been widely recognized that **gender-based violence** against women and girls, including domestic violence, rape and sexual assault, escalates in both emergency contexts and slower-onset disasters such as pandemics and droughts. Temporary shelters in emergencies, that are not designed considering the needs of women and girls, often expose women and girls to an intensified risk of harassment and assault. Economic coping strategies, such as child and forced marriage, transactional sex and trafficking, and economic drivers of violence in the form of impoverishment due to disaster losses also emerge as significant concerns in post-disaster situations.⁸⁹

Women are largely disadvantaged **economically** in disaster contexts. In developing countries, agriculture is a critical economic sector for women's employment. Female farmers, often engaged in small-scale operations with limited resources and technologies, tend to be more vulnerable to disasters compared to their male counterparts. Moreover, women usually perform increased unpaid care and domestic work after a disaster, at the cost of losing other income-generating activities. Women's lack of access to bank accounts further implies that their assets are less protected than men's when disasters take place.⁹⁰ Globally, 74 per cent of women had an account at a bank or similarly regulated deposit-taking financial institution, including a mobile money service provider, compared to 78 per cent of men in 2021. In developing economies, the gender gap was wider, with 68 per cent of women owning an account compared to 74 per cent of men.⁹¹

Women's **ability to cope and recover** in the aftermath of a disaster is impeded by their restricted access to social protection, stable income and formal sources of finance. In developing economies, only 50 per cent of women could access emergency money within 30 days without much difficulty compared to 59 per cent of men in 2021. Women's most popular source of funds in emergencies is family, which can be unreliable.⁹²

Furthermore, discrimination in relief assistance disadvantages women. For example, female heads of households may experience direct discrimination when relief goods are distributed exclusively through male heads in some disaster-stricken areas. Some women may face indirect discrimination due to lack of access to essential documentation, for example, proof of title to marital property after the death of their husbands, making ownership challenging to prove.⁹³

Disasters pose heightened risks for population groups in vulnerable situations, such as women and girls with disabilities. They are often excluded from early warning, relief or emergency response programmes due to the inaccessibility of infrastructure, information and services. Women and girls with disabilities face increased vulnerability to gender-based violence, significant challenges in managing menstrual hygiene and additional barriers to accessing essential services in disasters, partially resulting from their exclusion from social networks and prevalent stigma and discrimination based on gender, disability and other identifiers.⁹⁴

Disaster risk exposures are fundamentally different among men and women, due to differences in their social roles and responsibilities, living environment, communication channels, and perceptions of risks.⁹⁵ Available data show that women remained more frequently affected by disasters and the gender data gap remains large and apparent. Sex-disaggregated data on disaster impacts need to be analysed in conjunction with exposure and vulnerability information to provide a full picture on why certain population groups are experiencing higher mortality, morbidity, or have their livelihoods and shelters more affected. Effective outreach initiatives and improved data collection methodology to include women and young girls in the data value chain are urgently needed to enhance data capacity and quality and to inform prudent gender-responsive policies and actions that reduce disaster risks and impacts for all.

89 UN-Women, UNFPA and UNDRR, *Beyond Vulnerabilities to Gender Equality and Women's Empowerment and Leadership in Disaster Risk Reduction: Critical Actions for the United Nations System*. United Nations Joint Study on the Status of Gender Equality and Women's Leadership in DRR (New York and Geneva, 2021).

90 World Bank, *Gender Dimensions of Disaster Risk and Resilience: Existing Evidence* (Washington, D.C., 2021).

91 World Bank, *The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19* (Washington, D.C., 2022).

92 Ibid.

93 UN-Women, UNFPA and UNDRR, *Beyond Vulnerabilities to Gender Equality and Women's Empowerment and Leadership in Disaster Risk Reduction: Critical Actions for the United Nations System*. United Nations Joint Study on the Status of Gender Equality and Women's Leadership in DRR (New York and Geneva, 2021).

94 UNDP, "Beyond disasters: How UNDP is addressing inequality and empowering women with disabilities for a resilient future", blog, 12 October 2023. Available at <https://www.undp.org/geneva/blog/beyond-disasters-how-undp-addressing-inequality-and-empowering-women-disabilities-resilient-future> (accessed on 16 July 2024).

95 Alice Fothergill, "The neglect of gender in disaster work: An overview of the literature," *International Journal of Mass Emergencies & Disasters*, vol. 14, no. 1 (January 1996) and Pamela Showalter, "The Gendered Terrain of Disaster: Through Women's Eyes", *Journal of Political Ecology*, vol. 6 (December 1999).

Climate change

The global mean near-surface temperature was around $1.40 \pm 0.12^\circ\text{C}$ above the 1850–1900 average in 2023 (data up to October), marking it as the warmest year in the 174-year observational record.⁹⁶ The decade 2011–2020 was the warmest on record for both land and ocean, and each successive decade since the 1990s has been warmer than all previous decades.⁹⁷ Human activities, primarily the release of polluting gases from burning fossil fuel, are the main causes of climate change.⁹⁸ The changes in temperatures and precipitation, the increased frequency and magnitude of extreme weather events and biodiversity loss profoundly affect the availability and quality of land, water and other natural resources. They also pose significant threats to human health, food security and livelihoods. **Importantly, climate factors are often associated with worsening gender-related outcomes.**⁹⁹

The accelerated pace of climate change carries significant implications for **health outcomes**. Climate hazards, including extreme heat, are linked to heightened risks of developing complications that result in adverse maternal and perinatal outcomes. These include a range of causes of maternal and neonatal morbidity and mortality, such as gestational diabetes, hypertensive disorders of pregnancy, preterm birth, low birth weight and stillbirth.¹⁰⁰ The effects of exposure to climate hazards during and after pregnancy may also affect women's mental health and lead to intergenerational trauma.¹⁰¹ In addition, without additional adaptation measures, the burdens of several food-borne, water-borne and vector-borne diseases are projected to increase due to climate change.¹⁰² Women often participate in agriculture and other household work, such as fetching water, placing them at great risk of contracting climate-sensitive diseases. Older women often experience high poverty rates and have limited access to resources, increasing their risk of health complications and mortality during climate-induced weather events, such as extreme heat, cold spells and air pollution.¹⁰³

Empirical evidence from five Asian countries¹⁰⁴ suggests that temperature rises are linked to the increased prevalence of **child marriage and adolescent births** in Cambodia, Bangladesh and Nepal, countries where child marriage remains a pervasive practice. More frequent drought episodes correlate with the **lack of access to basic drinking water sources** in Bangladesh and Cambodia, as well as **clean fuel for cooking** in Bangladesh and the Philippines. Moreover, increases in relative aridity are associated with deteriorating gender-related outcomes, such as higher rates of child marriage and adolescent births in Bangladesh and Nepal, while the effects are relatively small. In Timor-Leste, instances of **intimate partner violence**, difficulties in accessing basic water sources and reliance on unclean fuel intensify notably in arid clusters.¹⁰⁵ It is essential to note that the diminishing availability of natural resources resulting from climate change clearly affects women's and girls' **unpaid care and domestic work**. They are compelled to cope with resource scarcity by dedicating more time and effort to resource collection for the household or by reducing consumption in many contexts.¹⁰⁶

Climate change exerts substantial impacts on women's **employment and livelihood** across sectors. For example, female smallholder farmers tend to be more exposed to climate risks than their male counterparts, as women have fewer endowments and entitlements, more limited access to information and services, and less mobility.¹⁰⁷ Women comprise the majority of workers in the post-harvest fishing sector, involved in fish processing and sales. The reduction of fish stocks due to climate change often results in women being edged out of the fish trade by local men and migrants.¹⁰⁸ Findings from an FAO study covering 24 low- and middle-income countries in five world regions indicated that female-headed households lost significantly more incomes than male-headed households on the occurrence of extreme weather events.

96 WMO, *Provisional State of the Global Climate in 2023* (Geneva, 2023).

97 WMO, *The Global Climate 2011–2020: A Decade of Accelerating Climate Change* (Geneva, 2023).

98 UNEP, "Facts about the climate emergency", web page. Available at <https://www.unep.org/facts-about-climate-emergency> (accessed on 16 March 2024).

99 ESCAP, "Advancing gender equality in Asia and the Pacific in the context of climate change", policy paper No. 2023/10 (Bangkok, 2023) and UN-Women, *Gendered Impacts of Climate Change: Empirical Evidence from Asia* (New York, 2023).

100 WHO and others, *Protecting maternal, newborn and child health from the impacts of climate change: A call for action* (Geneva, 2023).

101 WHO and others, *Protecting maternal, newborn and child health from the impacts of climate change: A call for action* (Geneva, 2023).

102 International Panel on Climate Change (IPCC), "Climate change impacts and risks, fact sheet-health", fact sheet (Geneva, 2023).

103 ESCAP, *Climate Change and Population Ageing in the Asia-Pacific Region: Status, Challenges and Opportunities*, (2022).

104 Bangladesh, Cambodia, Nepal, the Philippines and Timor-Leste.

105 UN-Women, *Gendered Impacts of Climate Change: Empirical Evidence from Asia* (New York, 2023).

106 UN-Women, "The Climate-care nexus: Addressing the linkages between climate change and women's and girls' unpaid care, domestic and communal work", working paper (New York, 2023).

107 FAO, *Agriculture and Climate Change: Law and Governance in Support of Climate Smart Agriculture and International Climate Change Goals* (Rome, 2020).

108 UN-Women, *Women's Economic Empowerment in Fisheries in the Blue Economy of the Indian Ocean Rim: A Baseline Report* (New York, 2020).

Women often take on additional work and lost more income opportunities compared to men in the wake of such events. One day of extreme temperature or precipitation was associated with a 1.3 per cent and 0.5 per cent reduction, respectively, in the total incomes of female-headed households relative to male-headed households. This resulted in annual average income losses of 8 per cent due to heat stress and 3 per cent due to floods for households headed by women relative to households headed by men. Moreover, a 1°C increase in long-term average temperatures was associated with a 34 per cent reduction in the total incomes of female-headed households relative to male-headed households. Differences in climate vulnerability between women and men stem from social structures and discriminatory norms that shape gendered patterns in resource and service access, time use and income opportunities.¹⁰⁹

Migration decisions in the context of climate change are also influenced by gender and intersecting economic, political, social, demographic and cultural factors. Women often face limitations and increased risks at all stages of migration due to entrenched gender inequalities and discriminatory norms, but migration can be part of an adaptation strategy to build resilience and reduce exposure to climate hazards. For many women, the decision to migrate in the context of climate change is often associated with the scarcity of natural resources, as women generally share the primary responsibility for supplying resources for their families.

Gender, coupled with other socioeconomic factors, plays an essential role in shaping the length and experience of migration. For example, in Bangladesh, short-term migration is common in climate change-affected areas. Most of the workers migrating internationally were men. Women who migrated internationally to engage in short-term contracts in the Gulf States and other countries had lower socioeconomic status and were poorer than women workers who migrated internally. While migration can bring an opportunity for increased autonomy and independence for some women, it also exposes them to risks, such as gender-based violence and trafficking. Specifically, women in vulnerable situations tend to have constrained adaptive capacities due to limited resources and access to legal, policy and decision-making processes.¹¹⁰

Women and girls are among the most affected by climate change due to their socioeconomic roles and discriminatory factors, which further amplify their vulnerability to climate-related risks. In response to climate crises, there is a growing demand for strengthened adaptation and resilience-building mechanisms that are tailored to the needs of women and girls.

7.3.2 Women's and girls' participation in disaster risk reduction and climate action

Disaster risk reduction

Women's and girls' participation and leadership is critical to managing disaster risk and designing, resourcing and implementing gender-responsive DRR policies, plans and programmes.¹¹¹ The Asia-Pacific regional report on the Midterm Review of the Implementation of the Sendai Framework indicated that **women and youth are increasingly engaged in DRR decision-making and are being recognized for their crucial roles at national, subnational and local levels. However, many disaster management institutions are still predominantly led by men in most countries across the Asia-Pacific region.** There is a great opportunity to enhance participation and leadership of women in risk governance institutions at all administrative levels.¹¹²

A 2022 study on career barriers and motivations for women and men working in DRR in Asia and the Pacific suggested that obstacles to women's career advancement, well-being and retention include care demands placed on women with children, organizational constraints on women's workplace authenticity, lower work-life balance and lower quality professional relationships with co-workers, especially senior colleagues, compared to men. Women also exhibit a lesser inclination than men to sacrifice personal time and relationships for their career advancement in DRR, potentially influenced by the perception of limited rewards for such sacrifices. To improve women's and men's career outcomes in DRR, efforts are needed to increase the diversity of leaders and role models, improve work-life balance and address burnout, and foster an enabling environment that encourages a sense of belonging and the authentic expression of valued social identities.¹¹³

109 FAO, *The Unjust Climate: Measuring the Impacts of Climate Change on Rural Poor, Women and Youth* (Rome 2024). For detailed methodologies in calculating gender differences, please refer to annex 2 of the publication. Available at <https://openknowledge.fao.org/items/80b4a374-42de-4340-bdc8-d4132a069c55> (accessed on 14 July 2024).

110 UN-Women, *Ensuring Safe and Regular Migration for Women and Girls in the Context of Climate Change* (New York, 2023).

111 UNDRR, *A Review of Gender and the Sendai Framework* (Geneva, 2023).

112 UNDRR, *The Midterm Review of the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030: Regional Report for Asia-Pacific* (Geneva, 2023).

113 UNDRR, *Career Barriers and Motivations for Women and Men Working in Disaster Risk Reduction: A Snapshot in the Asia-Pacific Region* (Geneva, 2023).

Climate action

Women and girls are becoming more involved in climate action. Nevertheless, their participation and leadership still fall short of achieving gender parity or attaining a critical mass to influence decision-making.¹¹⁴ Analysis of the gender composition of decision-making and technical bodies, also known as constituted bodies, under UN Climate Change showed that female representation averaged 38 per cent in 2023 compared to 39 per cent in 2022, having increased in 12 bodies from 2013 to 2023. In addition, at the 27th Conference of the Parties of the United Nations Framework Convention on Climate Change (COP 27), the 17th Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 17) and the fourth Conference of the Parties Serving as the meeting of the Parties to the Paris Agreement (CMA 4), the representation of women was 37 per cent, remaining the same as COP 26, CMP 16 and CMA 3. Female representation among heads and deputy heads of delegation increased from 26 per cent (COP 26/CMP 16/CMA 3) to 29 per cent (COP 27/CMP 17/CMA 4).¹¹⁵

Women's participation and leadership in climate action requires continued enhancement at the national level. As of January 2023, global data indicated that women held only 32 per cent of cabinet minister positions in charge of environment; 13 per cent in agriculture, food, forestry, fishing and hunting; and a mere 11 per cent in energy, natural resource fuels and mining.¹¹⁶ A comparison of the first- and second-generation Nationally Determined Contributions (NDCs) under the Paris Agreement revealed notable progress in generic gender reference (46 per cent to 96 per cent) and gender-responsive targets, policies and measures (13 per cent to 55 per cent). However, only 24 per cent of countries identified national gender institutions as part of national climate change governance structures, and 27 per cent noted the importance of women's participation in decision-making on climate action.¹¹⁷ In the Asia-Pacific region, 37 out of the 49 countries with NDCs developed and updated by 2023 have mentioned gender, although the majority of them made minimal references. Among these 37 countries, eight identified women as vulnerable to climate change and 10 acknowledged women as agents of change and decision-makers

essential for driving climate action. A comprehensive approach to mainstreaming gender into climate policies and actions is imperative across the region.¹¹⁸

7.3.3 Promoting gender-responsive disaster and climate risk governance

Disaster risk reduction and response

Addressing gender-differentiated impacts of disasters and promoting women's participation in DRR require active interventions. **Good practices taken by Asia-Pacific Governments on integrating gender perspectives into DRR efforts have been identified across all four priorities of the Sendai Framework**, namely, understanding disaster risk; strengthening disaster risk governance to manage disaster risk; investing in disaster risk reduction for resilience; and enhancing disaster preparedness for effective response and to "build back better" in recovery, rehabilitation and reconstruction.

A number of Governments in the region have demonstrated a steadfast commitment to increasing the understanding of how gender intersects with disaster risk and enhancing the integration of specific expertise to inform DRR practices (Priority 1 of the Sendai Framework). Advancements in integrating gender equality and social inclusion into national DRR frameworks or broader legislative and planning frameworks for DRR have been widely documented. Additionally, some Governments have harnessed a whole-of-society and multistakeholder approach (Priority 2). Despite limited overall progress, a few countries have set financial targets and budget allocations for gender equality and social inclusion and invested in social protection measures, targeting underlying economic risk factors (Priority 3). Furthermore, many Governments have tackled gender and other social inequalities in disaster preparedness and response and integrated the needs of women and girls into efforts to "build back better" (Priority 4).¹¹⁹

There are several examples of recent positive actions in line with the Sendai Frameworks priorities in Asia-Pacific countries. **India's** Agenda on Disaster Risk Reduction highlights that "women's leadership and greater involvement should be central to disaster risk management" as one of its ten points.¹²⁰ In 2022, women were included for the first time

114 United Nations, "Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes, Report of the Secretary-General", E/CN.6/2022/3 (New York, 2022).

115 UN Climate Change, "Gender balance", web page. Available at <https://unfccc.int/topics/gender/workstreams/gender-action-plan/gender-balance> (accessed on 18 March 2024).

116 IPU and UN-Women, "Women in Politics: 2023", data sheet (Geneva and New York, 2023).

117 UNDP, *Nationally Determined Contributions (NDC) Global Outlook Report 2021: The State of Climate Ambition* (New York, 2021).

118 UN-Women, "Unpacking gender integration in Nationally Determined Contributions (NDCs) of Asia-Pacific countries", brief (New York, 2023).

119 UNDRR, *Accelerating Action on Gender Equality in Disaster Risk Reduction by 2030: A Cross-Cutting Analysis of Reports to the Midterm Review of the Sendai Framework Highlighting Good Practices and Areas to Strengthen for Gender-Responsive and Socially Inclusive Disaster Risk Reduction* (Geneva, 2023).

120 India, Ministry of Home Affairs, *Agenda on Disaster Risk Reductions* (New Delhi, 2023).

in National Disaster Response Forces teams.¹²¹ In 2022, **Japan** disseminated case studies on good practices concerning women's engagement in local disaster management activities. Local governments developed DRR guidelines that incorporated gender perspectives into the entire disaster risk management cycle. Following a 2021 proposal by Women's Association for Disaster Management, the Basic Disaster Management Plan was amended to include the percentage of female officials in local disaster management councils. In 2020, the Fifth Basic Plan for Gender Equality was formulated, promoting gender perspectives in disaster preparedness and recovery measures.

Nepal's Disaster Risk Reduction National Strategic Plan of Action 2018–2030 highlights gender-specific vulnerabilities and opportunities. Through an inclusive and multistakeholder approach to DRR, local capacities in risk monitoring and assessment were strengthened, with increased participation and leadership of women, youth, older persons and persons with disabilities in community resilience efforts. Moreover, formal committees, humanitarian clusters and task groups were established to facilitate collaboration among governments, civil society, the private sector and international organizations.¹²² Importantly, the country adopted the Gender Equality, Disability and Social Inclusion in Disaster Risk Reduction and Management Strategic Plan in 2024 to further foster inclusive disaster management.¹²³

In **New Zealand**, research was initiated to better understand the social elements of disasters, including well-being and vulnerability aspects. The Government also integrated indigenous and differing sexual orientation and gender identity voices into DRR frameworks. **Viet Nam** developed “a system of gender-, disability-, and other vulnerability-related indicators, along with sex, age-, and disability disaggregated data (SADDD)” from 2019 to 2022. It contributed to a better understanding of the intersection of vulnerability and disasters, including risks to marginalized groups and gendered impacts. In addition, guidelines were formulated in 2017 on gender mainstreaming in community-based disaster risk management programmes and projects. Viet Nam Women's Unions at all levels supported women

in disaster-prone areas by meeting their needs, enhancing their capacities in disaster preparedness, and facilitating access to technologies and sustainable livelihoods.¹²⁴

Climate risk governance

Regarding gender-responsive climate risk governance, some Governments stand out for their policy frameworks or institutional mechanisms that address the interlinkage of gender and climate change. For example, **Fiji** promotes gender-responsive climate action as a critical policy pillar across adaptation and mitigation activities. The National Climate Change Policy 2018–2030 calls for improved gender balance in decision-making processes and implementation arrangements. It also emphasizes that gender must be a key consideration when programming finance and capacity-building.¹²⁵ In 2022, **New Zealand** launched the International Climate Finance Strategy with the aim of reducing gender inequalities and addressing the impact of climate change. The Strategy has been supported by a climate finance commitment of \$1.3 billion NZD for 2022 to 2025. As of June 2023, 84 per cent of the funding had been approved for delivery, with more than half disbursed within the Pacific and dedicated to adaptation activities.¹²⁶

Cambodia developed the Master Plan on Gender and Climate Change 2018–2030 and the Action Plan on Gender and Climate Change 2019–2023, with the aim of mainstreaming gender into environmental and climate action.¹²⁷ The Climate Change Strategic Plan 2014–2023 includes a strategic objective of reducing “sectoral, regional, gender vulnerability and health risks to climate change impacts.” The Ministry of Women's Affairs has established a Gender and Climate Change Committee, which conducts studies on the impact of climate change on women and children and builds capacities of the ministry's departments.¹²⁸ **Indonesia** launched its National Action Plan on Gender and Climate Change in 2024, with the engagement of all relevant ministries as well as civil society organizations, including women's groups, indigenous community associations and disability organizations.¹²⁹ Furthermore, the Government has implemented gender-responsive budgeting for

121 Times of India, “In a first, eight women in team of NDRF rescuers”, news, 18 July 2022. Available at <https://ndrf.gov.in/news/gujarat-first-eight-women-team-ndrf-rescuers> (accessed on 7 August 2024).

122 UNDRR, *Accelerating Action on Gender Equality in Disaster Risk Reduction by 2030: A Cross-Cutting Analysis of Reports to the Midterm Review of the Sendai Framework Highlighting Good Practices and Areas to Strengthen for Gender-Responsive and Socially Inclusive Disaster Risk Reduction* (Geneva, 2023).

123 Nepal, Ministry of Women, Children, and Senior Citizens, *National Report on the Implementation of the Beijing Declaration and Platform for Action* (Kathmandu, 2024).

124 UNDRR, *Accelerating Action on Gender Equality in Disaster Risk Reduction by 2030: A Cross-Cutting Analysis of Reports to the Midterm Review of the Sendai Framework Highlighting Good Practices and Areas to Strengthen for Gender-Responsive and Socially Inclusive Disaster Risk Reduction* (Geneva, 2023).

125 Government of Fiji, *Republic of Fiji National Climate Change Policy 2018–2030* (Suva, 2019) and ESCAP and others, *Is 1.5°C within Reach for the Asia-Pacific Region? Ambition and Potential of NDC Commitments of the Asia-Pacific Countries* (United Nations publication, 2021).

126 New Zealand, Ministry of Women, *National Report on the implementation of the Beijing Declaration and Platform for Action* (Wellington, 2024).

127 Cambodia, Ministry of Women Affairs, *National Report on the implementation of the Beijing Declaration and Platform for Action* (Phnom Penh, 2024).

128 Government of Cambodia, *Cambodia's Updated Nationally Determined Contribution 2020* (Phnom Penh, 2020).

129 Indonesia, The Ministry of Women Empowerment and Child Protection, *National Report on the implementation of the Beijing Declaration and Platform for Action* (Jakarta, 2024).

climate change. This initiative aims to provide support to vulnerable communities, particularly women who perform heavy care responsibilities. For example, the gender-sensitive budget has facilitated improved access to water by funding the construction of a well, as well as enhancing food security through an agroforestry programme.¹³⁰

Pakistan's Climate Change Gender Action Plan, launched in 2022, mainstreams gender strategies in climate action across key sectors, including agriculture and food security; forests and biodiversity; integrated coastal management; water and sanitation; energy

and transport; and DRR. Priority measures centre on increasing women's participation in decision-making, strengthening coordination and institutionalization to address gender issues, and collecting gender-disaggregated data and investing in context-specific research.¹³¹ **Sri Lanka**, in its NDC revision process, proposed a multi-step approach to integrating gender into NDC implementation plans by sector. This includes conducting sector-specific gender analysis, developing gender-responsive actions, enhancing capacities to engage women in planning and monitoring of NDCs, and allocating resources for gender-responsive practices.¹³²

BOX 7.3 Climate financing for gender equality



Global climate finance has increased over the past decade, reaching \$632 billion in 2019-2020, but this falls short of the \$4.35 trillion needed annually by 2030 to limit global warming to 1.5 degrees Celsius. Despite this growth, only a small percentage of climate finance reaches women, with just 10 per cent flowing to the local level, 1 per cent of gender equality funding going to women's organizations, and 3 per cent of environmental philanthropy supporting women's environmental activism. Between 2017 and 2018, merely 4 per cent of bilateral aid was specifically dedicated to gender equality, and only 30–40 per cent of environmental aid incorporated gender equality aspects.

Recognizing the potential to address gender inequality and climate change simultaneously, efforts have been made by climate funds to systematize gender considerations in climate finance. For instance, the Climate Investment Funds (CIF) and the Green Climate Fund (GCF) have implemented gender action plans and require gender assessments for funding proposals. Nonetheless, challenges such as insufficient local stakeholder involvement, inadequate monitoring of gender impacts and limited reporting on gender benefits remain.¹

The private sector shows promise with innovative financing mechanisms. For example, Impact Investment Exchange (IIX) initiated the Orange Bond, a sustainable debt asset class for investing with a gender lens. To qualify as an Orange Bond, transactions should align with three overarching principles: gender-positive capital allocation, gender-lens capacity and diversity in leadership, and transparency in the investment process and reporting. While the primary purpose of an Orange Bond is to advance gender equality and the empowerment of women and girls, in many cases, Orange Bonds are also expected to create additional co-benefits and positive impacts on climate action and sustainable development. Orange Bonds represent a cross-cutting asset class that can qualify as Green Bonds, Social Bonds, Sustainability Bonds or Sustainability-Linked Bonds in accordance with the guidelines issued by the International Capital Markets Association (ICMA).² The sixth issuance of the Women's Livelihood Bond, the largest Orange Bond to date, mobilized 100 million United States dollars, empowering enterprises that prioritize women and girls across five countries (Cambodia, India, Kenya, the Philippines and Viet Nam) and six sectors (agriculture, water and sanitation, clean energy, affordable housing, small and medium-sized enterprise lending and microfinance).³

1 World Bank, "Placing gender equality at the centre of climate action", Work Bank Group Gender Thematic Policy Notes Series: Issues and Practice Note (Washington, D.C., 2023).

2 Orange Movement, "Orange Bonds: A cross-cutting asset class for investing in gender equity", web page. Available at <https://orangemovement.global/orange-bonds> (accessed on 25 July 2024) and Orange Bond Initiative, "Orange Bond Principles". Available at <https://iixglobal.com/wp-content/uploads/2023/07/Orange-Bond-Principles%E2%84%A2.pdf> (accessed on 25 July 2024).

3 Impact Investment Exchange (IIX), Impact Report 2023: Driving Collaborative Impact (Singapore, n.d.).

130 UNDP, "Climate crisis-affected communities in Indonesia benefiting from gender-sensitive budgeting", web page. Available at <https://www.undp.org/indonesia/news/climate-crisis-affected-communities-indonesia-benefiting-gender-sensitive-budgeting> (accessed on 31 May 2024).

131 IUCN Pakistan, *Climate Change Gender Action Plan of the Government and People of Pakistan* (Islamabad, 2022) and UN-Women, "Unpacking gender integration in Nationally Determined Contributions (NDCs) of Asia-Pacific countries", brief (New York, 2023).

132 Government of Sri Lanka, *Sri Lanka Updated Nationally Determined Contributions, September-2021* (Battaramulla, 2021).



An indigenous woman in Viet Nam uses solar drying systems provided by the EmPower project. Bắc Kạn Province, October 2022.
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7.4 CONCLUSION AND RECOMMENDATIONS

Women and men interact with environmental factors differently, as demonstrated by the gender dimensions of access to land, food, water, energy and other natural resources, as well as the gender-differentiated impacts of disasters and climate change. On the other hand, women and girls continue to face marginalization in their participation and leadership in key sectors related to natural resource management, DRR and climate action. Towards a joint gender and environment agenda, it is imperative to advance gender equality policies that give due consideration to environmental goals and to integrate a gender lens into environmental policies and strategies. Moreover, gender-environment considerations should also be incorporated into transboundary policies, such as trade, investment and development cooperation.¹³³ Despite some progress made in the past decade, entrenched social norms and stereotypes, as well as gendered power dynamics surrounding resource allocation and decision-making, result in persistent resistance from both male and female policymakers to acknowledging gender issues in the environmental field and implementing gender-responsive recommendations.

The availability of sex-disaggregated data is essential for assessing the differences in how women, men, girls and boys interact with and are impacted by environmental factors. However, according to a mapping of gender data availability in five Asia-Pacific countries in the period 2010-2020, among the six assessed domains, the environmental domain had the lowest proportion of indicators with sex-disaggregated data, standing at only 4 per cent at the national level.¹³⁴ This impedes the effective understanding of the gender-environment nexus. In addition to closing the gap in data availability, achieving environmental sustainability with gender equality at its core requires significantly increased public and private financing, especially for women's organizations and enterprises. Accessible and affordable funding for environment initiatives led by these organizations often yields direct benefits for the resilience of the broader community.

¹³³ OECD, *Gender and the Environment: Building Evidence and Policies to Achieve the SDGs* (Paris 2022).

¹³⁴ Open Data Watch, Data2X and ESCAP, "Bridging the gap: Mapping gender data availability in Asia and the Pacific", technical report (n.p., 2021).

Governments, along with other relevant stakeholders, should consider the following recommendations:¹³⁵

- + Adopt, strengthen and implement gender-responsive laws and policy frameworks across sectors that ensure equality in land tenure, inheritance rights and access to natural resources, and that foster equal opportunities for participation in managing the conservation and sustainable use of natural resources, including in conflict and crisis settings.
- + Integrate a gender lens into the design, implementation, monitoring and evaluation of environmental, DRR and climate change policies and programmes, including through the institutionalization of gender-responsive and transformative approaches at scale and the enhancement of coordination across sectors and all levels of government.
- + Conduct gender impact assessments of existing laws, policies and programmes in the environmental field; examine deep-rooted causes of resistance to gender-responsive and transformative approaches; and sensitize policymakers, women's groups and other stakeholders to the gender-environment nexus, including through challenging negative social norms and gender stereotypes.
- + Strengthen linkages between the CEDAW reporting mechanism and the Sendai Framework, including through the explicit and extensive use of General recommendation No.37 on gender-related dimensions of disaster risk reduction in a changing climate adopted by the Committee on the Elimination of Discrimination against Women, as a way to establish close connections between national gender and DRR institutions.¹³⁶
- + Build the resilience of all women and girls in the context of environmental degradation, disasters and climate change through the budgeting, financing and provision of accessible and inclusive infrastructure, public services and social protection.
- + Invest in girls' and women's education, training and lifelong learning in STEM-related fields and promote the equal access of women to decent work in environment-sensitive sectors, such as agriculture, water, energy, transport and other industries, especially by addressing occupational segregation and discriminatory social norms.
- + Achieve gender parity in decision-making bodies in both public and private sectors, including by adopting temporary affirmative measures such as quotas, to ensure the meaningful participation and leadership of women, particularly women in vulnerable situations, in environmental, disaster and climate risk governance.
- + Ensure that national statistical systems prioritize the production of data that accurately reflect the nexus between gender and the environment, including through the conduct of national specialized surveys on gender and the environment and the adoption of tools, such as the gender-environment indicators for the Asia-Pacific region¹³⁷, while promoting the use of data to inform gender-responsive policymaking and programming.
- + Mobilize financial resources from all sources, including public, private, national and international resources, to enhance investment in gender-responsive environmental, DRR and climate change policies and programmes. The focus should be on increasing capital flows to women's organizations in line with their needs and capacities; exploring innovative private sector financing instruments, such as environment, social and governance (ESG)-related bonds on gender, sustainability bonds and green bonds; enhancing concessional and blended finance mechanisms to attract private sector capital to areas perceived as high risk or low return; and investing in women-founded or led, green and climate businesses.¹³⁸
- + Build the technical and financial capacities of women's organizations and enterprises to proactively empower women and girls to access information, training, technology and financial services, enabling them to effectively participate in and lead efforts on natural resource management, DRR and climate change mitigation and adaptation.
- + Provide support and funding for a gender-responsive, just transition to regenerative green and blue economies that prioritize social protection and acknowledge women's and girls' undue unpaid care and domestic work, including through international and regional cooperation in financing, technology transfer and knowledge sharing.

¹³⁵ Adapted from key policy recommendations proposed in United Nations, "Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes, Report of the Secretary-General", E/CN.6/2022/3 (New York, 2022) and OECD, *Gender and the Environment: Building Evidence and Policies to Achieve the SDGs* (Paris 2022).

¹³⁶ According to a UNDRR study, from 2018 to April 2022, 73 countries submitted reports to the Committee on the Elimination of Discrimination against Women. Only 2 mentioned General recommendation No.37, 12 mentioned disaster-related terms, and 22 mentioned climate change. There is significant convergence between the criteria for CEDAW reporting and four priorities of the Sendai Framework. For more information, please see UNDRR, *Scoping Study on the Use of CEDAW General Recommendation No.37 on Gender-Related Dimensions of Disaster Risk Reduction in a Changing Climate* (Geneva, 2023).

¹³⁷ See annex in ESCAP and UN-Women, "Efforts towards measuring the gender-environment nexus in Asia and the Pacific", working paper (Bangkok, 2023).

¹³⁸ World Bank, "Placing gender equality at the centre of climate action", Work Bank Group Gender Thematic Policy Notes Series: Issues and Practice Note (Washington, D.C., 2023).

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Gender equality is key to sustainable development and a prerequisite to achieving peaceful and just societies and a healthy planet. But what progress has been made toward upholding this human right and empowering women and girls in Asia and the Pacific? What challenges remain and how should these be addressed in the light of climate change, demographic shifts and digital transformation?

Charting New Paths for Gender Equality and Empowerment: Asia-Pacific Regional Report on Beijing+30 Review provides an in-depth analysis of the progress and gaps in implementing the Beijing Declaration and Platform for Action, a global framework for advancing the agenda for gender equality and the empowerment of women and girls. The report identifies opportunities and forward-looking strategies to accelerate progress in a rapidly changing region.

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