1 Gender equality and sustainable development

Progress towards achieving the Sustainable Development Goals calls for targeted responses. Gender equality and environmental goals are mutually reinforcing, yet their complementarities and trade-offs are not adequately presented nor considered in the 2030 Agenda. Acknowledging and addressing the gender-environment nexus could provide for policy coherence, a focus on well-being, and a turn to green and inclusive growth.

1.1. Key findings

This chapter presents the interlinkages between gender equality and environmental sustainability, and the extent of their inclusion in the Sustainable Development Goals framework. The key messages raised are:

- Gender equality and environmental goals are mutually reinforcing. Women experience
 differentiated effects from environmental factors, and are often most affected by environmental
 degradation due to socio-economic and discriminatory factors. At the same time, women express
 more "green" attitudes in their personal choices, and could greatly contribute to the transition to a
 low-carbon economy.
- The gender-environment nexus can be understood by recognising, on the one hand, the extent to
 which slow progress on environmental goals affects the condition of women and men differently
 and hampers gender equality; and on the other, how gender equality and women's empowerment
 can deliver positive impacts on the environmental aspects of the 2030 Agenda.
- The SDG framework provides adequate coverage on gender equality (SDG 5) and on environmental goals (the five Planet goals), while gender- and environment- related issues are also separately present in other SDGs. However, the gender-environment nexus is not sufficiently present in the SDG framework overall.
- The OECD Policy Coherence for Sustainable Development Framework and OECD's work on Going for Growth could provide a basis for identifying trade-offs, complementarities and links between gender-environment policies and outcomes in terms of well-being, in line with the SDGs and the OECD's Well-being framework.
- There is a need to apply a gender equality lens to the nine environment-related SDGs (SDGs 2, 6, 7, 9, 11, 12, 13, 14, and 15). This is provided in this report through analysis, case studies and policy recommendations.

1.2. Gender equality and environmental goals are mutually reinforcing

Meeting the Sustainable Development Goals (SDGs) requires urgent, targeted action. Addressing multiple objectives in the context of the gender-environment nexus is therefore key in advancing towards a fairer and more sustainable form of development. Environmental factors have gender-differentiated effects, due to men's and women's different roles and behaviours in various societies, as well as their different physiological characteristics. Whether one looks at energy, water, transport, urban design, agriculture, or consumption patterns, a gendered lens is key to understanding differences in environmental impacts.

Gender inequalities have increased as the COVID-19 pandemic has continued to deteriorate economies and populations' overall well-being. The recovery process is a crucial and timely opportunity for countries to embark on a more sustainable and gender-equal development path (OECD, 2019[1]).

Gender equality and women's empowerment are central to development, environmental sustainability and achievement of the SDGs, as discussed in Chapters 6 to 14 of this report. Globally, women play a central role in community support, resilience building and conservation efforts, thereby ensuring the well-being of current and future generations. Eco-feminist and "women and environment" approaches in particular reflect this unique understanding of nature and women's role as stewards of the environment (d'Eaubonne and Paisain, 1999_[2]); (Dankelman, 2010_[3]); (UNDP, 2019_[4]). Men and women do not necessarily have the same experiences and responses to environmental occurrences. The integration of gender equality matters when it comes to expressing grievances about, as well as defining, framing and prioritising, environmental issues and what policy prescriptions are chosen (Taylor, 2002_[5]).

The green economy affords great potential for women to engage in green jobs and participate in green innovation, but only if there is an enabling policy and social framework in place. More generally, giving

women greater access to leadership positions in both the public and private sectors and at all levels of decision-making can help focus priorities on environmental goals (Bonewit and Shreeves, 2015_[6]); (Hossain et al., 2017_[7]); (Ben-Amar, Chang and McIlkenny, 2017_[8]).

To help build a coherent approach to the 2030 Agenda, these and other interlinkages between gender equality and environmental sustainability requires analysing possible trade-offs and complementarities between different goals and policy interventions. Achieving gender equality calls for looking beyond social and economic inequalities and diving deep into the disproportionate effects of systemic issues – including environment-related inequalities – which could further exacerbate the former. This requires an integrated policy framework that brings together the three facets of inequalities: economic, social and environmental.

The gender-environment nexus can be understood by recognising, on the one hand, the extent to which slow progress on environmental goals affects the condition of women and men differently and hampers gender equality, and on the other, how gender equality and women's empowerment can deliver positive impacts on the environmental aspects of the 2030 Agenda (Figure 1.1).

Gender-specific impact of environmental changes

Environmental / sustainability goals

Figure 1.1. The Gender-Environment Nexus

Source: OECD

1.3. Gender equality and the environment in the SDG Framework

The United Nations' 2030 Agenda for Sustainable Development provides an overarching set of goals, targets and indicators to track humanity's progress towards fundamental well-being for all. The SDGs encompass economic, social and environmental ambitions, and to some extent identify inherent complementarities and trade-offs among different goals as well as transmission channels.

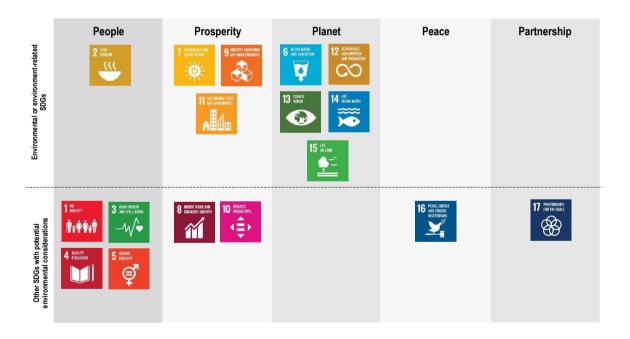
The SDGs are grouped into five main categories: People, Planet, Prosperity, Peace and Partnerships. Gender equality and empowering women and girls (SDG 5) is a goal in and of itself in the People category. The legislative conditions for gender equality are referenced in the Peace, People and Prosperity categories (SDG 16, SDGs 1 to 4 and SDGs 7 to 11 respectively). Women's and girls' empowerment is

referenced in five Planet goals and their targets and indicators (SDG 6 and SDGs 12 to 15), all of which are directly related to the environment. But two Planet goals (SDGs 14 and 15) have no gender-related indicators, despite many links.

With respect to environmental sustainability, five goals comprise the Planet category: SDG 6 (Clean water and sanitation), SDG 12 (Responsible consumption and production), SDG 13 (Climate change), SDG 14 (Life below water) and SDG 15 (Life on land). The environment is also an important aspect of three Prosperity goals: SDG 7 (Affordable and clean energy), SDG 9 (Industry, innovation, and infrastructure) and SDG 11 (Sustainable cities and communities). In addition, promoting sustainable agriculture is part of SDG 2 (Zero hunger). Thus, a total of nine SDG goals are linked to the environment. (Figure 1.2).

Both gender equality and environmental sustainability have a prominent role in the 2030 Agenda. Yet, as described in detail in Chapter 2, the SDG framework only recognises a few of their interlinkages and is silent on many important ones. Annex A maps the SDG indicators that are considered gender-related, environment-related or both. Across all the SDGs, only 20 unique indicators (out of a total of 231) incorporate both gender and environment. Only 14 of these cover the 9 environment-related SDGs analysed in depth in this report. Effectively, the SDG framework includes a strong but largely separate focus on gender equality and environmental sustainability, only marginally touching upon the interplay between these two objectives.

Figure 1.2. Environmental SDGs in the SDG framework



Source: OECD

1.4. Policy Coherence for Sustainable Development and its application to the gender-environment nexus

Identifying and understanding the interactions between SDGs and targets will help policy makers maximise synergies and exploit win-wins (pursue multiple objectives at the same time); avoid potential policy conflicts (pursue one policy objective without undermining others); manage trade-offs (minimise negative impacts

on other policies); and ultimately design policies that generate multiple co-benefits for sustainable development (Figure 1.3).

SDG 17 (Partnerships for the goals) includes Target 17.14, to "enhance policy coherence for sustainable development". Policy coherence for sustainable development (PCSD) is an approach and policy tool to integrate the economic, social, environmental and governance dimensions of sustainable development at all stages of domestic and international policy making.

The OECD PCSD Framework identifies three interactional impacts of the SDGs: immediate (impacts on people's well-being today); transboundary (impacts of domestic actors on the population of other countries, e.g. as a result of trade, foreign investment or multinational firm operations); and intergenerational (impacts affecting natural, human or social capital, and thereby future well-being). To assess these interactions, the OECD's work on Going for Growth and the Policy Framework for Inclusive Growth (OECD, 2018[9]) provide approaches for identifying trade-offs, complementarities and links between policies, as well as possible outcomes in terms of well-being, in line with the SDGs and the OECD's Well-being framework.

Figure 1.3. Mapping goal and policy interactions in the PCSD framework



Source: (OECD, 2015[10])

1.5. The need to apply a gender equality lens to the environment-related SDGs

This report provides an overview of the available evidence on the gender-environment nexus. It applies an integrated policy framework to better understand the trade-offs and complementarities between gender and environmental goals, including transboundary and inter-generational effects. All 17 SDGs are interrelated; hence, all could be considered relevant for the gender-environment nexus. However, for the sake of analysis and advancing research and the policy agenda, this report focuses on the nine SDGs that have direct environmental implications.

Progress on SDG 5 and other SDGs in the People category, such as equal access to quality education (SDG 4), can boost actions to achieve all the environmental SDGs, especially if such education integrates

an environmental focus that acknowledges all subjects in society as agents of change, including women (Melero and Solis-Espallargas, 2012_[11]). Women impact natural resource management through their various roles in households, the economy, and society. Therefore, gender equality is crucial to ensuring a balanced approach to the economic, social and environmental dimensions of sustainable development and achieving all SDGs. Furthermore, given women's role in many societies, progress made on the nine environment-related SDGs can boost women's well-being, particularly their health (SDG 3) and economic opportunities (SDG 8).

Understanding the interlinkages between gender equality and the environment via these SDGs helps uncover a number of underlying systemic and structural gender inequalities and biases, generally related to ownership and use of natural resources, energy, transport, water, digital, urban design, housing, landuse, environment and agriculture in both advanced and developing countries (Table 1.1). When such ingrained biases are not disclosed or addressed, they perpetuate in environment-related decisions and policy design, further exacerbating gender inequalities.

Table 1.1. Interactions between SDG 5 and the nine environmental SDGs

Interactions between SDG5 and the nine environmental SDGs		
Goal	Links with SDG5	
SDG 2. Zero hunger	Eliminating gender discrimination (in particular in land ownership and inheritance rights) and promoting women's engagement in sustainable agriculture could help drive action to meet all the relevant targets under SDG 2, in particular 2.3 on small-scale farming, 2.4 on resilient and sustainable agriculture, and 2.5 on conservation of plant and animal genetic resources, especially those under extinction. Introducing gender-sensitive and gender-inclusive aspects in agricultural investment, trade and value chains, and rural infrastructure policies could support achieving Targets 2.a and 2.b. SDG 2, in line with the 2012 Rio+20 UN Conference on Sustainable Development, which sets the ground for promoting sustainable agriculture and transitioning to more sustainable agricultural production methods. The SDGs refer to women's (and other groups') role as small-scale farmers, acknowledge their knowledge (Target 2.3) and support equal ownership of and access to agricultural land (Target 5.a).	
SDG 6. Clean water and sanitation	Clean water and sanitation has a gender dimension in many developing countries, as women are the main resource gatherers. Ensuring easy, safe access to clean water would allow women more time to exploit economic opportunities and better access to education. Access to sanitation is critical to women's health and well-being (SDG 3), and also affects girls' schooling. Women can also contribute in the governance of water and sanitation at international, national and local community levels.	
SDG 7. Affordable and clean energy	Accessible, clean energy can empower women by reducing the opportunity cost of collecting biofuels and reducing barriers to child education in developing countries. Energy poverty also affects many women in advanced countries. Women's empowerment and leadership in the energy sector may play a catalytic role in promoting clean energy and more efficient energy use. The just transition should include a gender perspective to guarantee equal opportunities for both men and women in the workforce.	
SDG 9. Industry, innovation and infrastructure	Industrialisation and rural-urban migration policies need to take into account women's role in families, communities and the environment. Infrastructure is key not only to achieving environment-related objectives, but must include a gender dimension that secures access to all. Biases and other barriers that reduce access to STEM education, in particular in relation to sustainable development, hamper women's role in science and research.	
SDG 11. Sustainable cities and communities	Women and men relate to urban and settlement design and transport infrastructure differently due to different social roles, occupational patterns and preferences. Urban and settlement planning and transport infrastructure that do not take into account the needs of different users can significantly reduce the economic opportunities and well-being of these users by increasing the time and means spent on commuting, and, at the same time, contribute to air pollution and inefficient resource use. Urban and settlement development sectors - housing, transport, and land use – have marked implications on gender equality goals through three key dimensions: user patterns (accessibly, safety and affordability), labour market participation (employment and participation in decision-making), and spillover effects (social and environmental). Women's greater involvement in decision making in these sectors could help reduce the overall environmental footprint of infrastructure.	
SDG 12. Responsible consumption and production	Women make more purchasing decisions on household perishables but have less of a say in production chains. Unsustainable production, waste generation and pollution often have distinct harmful impacts on women, in particular on those who are socially disadvantaged, through various channels – from straining natural goods on which they depend for subsistence, to poor labour conditions in the "feminised" workforce, to an increasing amount of unpaid work related to waste management, and greater involuntary and uninformed exposure to harmful products and chemicals. At the same time, due to cultural norms, occupational and physical differences and distinct preferences and attitudes, men's and women's consumption patterns differ and have different environmental footprints.	

Interactions between SDG5 and the nine environmental SDGs		
SDG 13. Climate action	There are gender differences stemming from the cumulative economic, social and health impacts of climate change. Because of their role in recovery and household management, and their traditional knowledge, women are particularly impacted by climate change and related natural hazards such as the increased frequency of floods and droughts. Natural disasters disproportionately affect women and girls. Women and girls could be proactive and experienced agents, engaging in climate change action. UNFCCC discussions have been integrating gender equality considerations since 2001, and gender equality has been a stand-alone item in the COP since 2012. The 2015 Paris Agreement emphasised the contribution of gender equality and empowerment of women to fighting climate change as well as the specific impact of climate change on women.	
SDG 14. Life below water	SDG 14 is inherently related to the health of the environment; and progress toward its indicators can be buttressed by empowering and engaging women as agents of change. Women-led initiatives targeting the cleanup and protection of coastal areas demonstrate that women could contribute to more sustainable management of maritime ecosystems. Empowering women in the fisheries sector and building on their role as small-scale fishers could support sustainable fisheries. Yet, none of the targets of SDG 14 address gender equality or the relation of marine resources to the livelihoods of women and men, including the role they can play in food security, employment and poverty reduction.	
SDG 15. Life on land	Of the Aichi Biodiversity Targets, only Target 14 overtly addresses gender equality, calling for the needs of women, indigenous peoples and local communities, and the poor and vulnerable to be taken into account in the restoration and safeguarding of ecosystems. Yet Aichi Target 14 does not include a specific indicator on gender equality, and identified indicators are not sex-disaggregated. Only Aichi Target 18 (traditional knowledge) includes gender relevant indicators, in respect to trends in land use change and tenure in traditional territories of indigenous and local communities, differentiated by sex. These are the same indicators as for SDG Targets 5.a and 1.4. In addition, a gender-sensitive target could be added on ensuring access to "commons" such as forests, mountain resources and rivers for local and indigenous communities that depend on them for their living and manage them on a sustainable basis. Alternatively, this target could be included in SDG 1 (e.g. under 1.4).	

Source: Based on Authors' analysis of the UNstats Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development.

According to General Recommendation No. 37 of the Committee on the Elimination of Discrimination against Women (CEDAW), in many contexts, gender inequalities limit the control that women and girls have over decisions governing their lives, as well as their access to resources such as food, water, agricultural input, land, credit, energy, technology, education, health services, adequate housing, social protection and employment. As a result of these inequalities, women and girls are more likely to be exposed to disaster-related risks and losses to their livelihoods, and are less able to adapt to changes in climatic conditions.

The combination of gender inequalities, biases, and social norms dictating specific roles for women and men, lead to a differential impact of environmental factors by gender. In particular, some of women's biological markers, such as their reproductive role or their physical traits, can make them differentially and/or disproportionately impacted to environmental harm such as air pollution or toxic industrial chemicals (Arbuckle, 2006_[12]); (Street et al., 2018_[13]). Exposure to environmental harm can also vary between men and women, as well as their respective roles in addressing the consequences of natural hazards (Neumayer and Plümper, 2007_[14]).

The other aspect of the gender-environmental sustainability nexus is the role of women in promoting sustainable production and consumption, protecting biodiversity and ensuring climate—compatible human activity. Women already play an active environmentalist role at the community and grassroots level, yet a gap in knowledge and awareness of gendered consumption patterns linked to some of the most polluting activities (heating, eating, mobility) may lead to less effective climate policies which do not tailor the need of all genders (UN WomenWatch, 2009[15]).

In addition, women's contribution to the government and business sectors is hampered by a structural governance gender gap, with few women in leadership positions. Where they are able to reach such positions, women are likely to integrate sustainability considerations into their organisation's vision and strategy (Homsy and Lambright, 2021[16]). The gender gap is largest when it comes to governance and decision-making in the sectors most determinant for achieving the nine SDGs covered in this report. For example, the infrastructure sector (water, energy, transport, housing and digital, among others), both public and private, has the highest gender employment gaps and the lowest representation of women in senior

management positions (OECD, 2019[1]); (Wilson Center, 2018[17]); (IRENA, 2019[18]); (Kersley et al., 2019[19]). Given women's positive attitudes to conservation and environmental protection, this governance gap requires urgent attention if we are to accelerate progress towards the 2030 Agenda. Determined action is needed to tackle possible discrimination and bias. A greater effort to bridge gender gaps in the Science, Technology, Engineering, Mathematics (STEM) sectors is critical to its modernisation and 'greening'.

This report brings together several strands of OECD analysis to show that each of the environment-related SDGs has a different but complementary role in achieving gender equality as set out in SDG 5. It also identifies the reverse effects, i.e. how advances on gender equality, which require efforts across all SDGs, can help progress on sustainability related goals. By applying a gender equality lens, this report recognises the gender-environment nexus as a key component of the 2030 Agenda and its overarching goal of "shifting the world onto a sustainable path" and "leaving no one behind".

The report can be divided in two parts. The first part, consisting of Chapters 1-5, provides a general overview of the gender-environment nexus, looking into data and evidence gaps, economic and well-being benefits and governance and justice aspects, and includes tentative policy recommendations. The second part, consisting of Chapters 6-14, illustrates the nexus through a thematic lens by looking at each of the nine environment-related SDGs.

Each thematic chapter is structured as followed: (i) key complementarities and trade-offs that need to be taken into account to achieve gender equality and environmental sustainability goals; (ii) key challenges for gender equality due to lack of progress on environmental sustainability goals; (iii) how gender equality and women's engagement can boost environmental sustainability; and (iii) key actions to advance the gender-environment agenda and ongoing work.

Countries (OECD and non-OECD members) do not have a commonly agreed definition of "gender" nor specific categories that the term comprises. Providing such a definition is beyond the scope of this report. The report relies largely on available empirical analysis with reference to the differentiated rights, roles and attributes that women and men have in relation to environmental issues. Additional analysis on the differentiated impact of environmental factors on indigenous and other vulnerable groups are also included in some parts of the report, and stated explicitly in such cases. It is acknowledged that countries may use different terminology to describe sex- and gender- disaggregated data/statistics or indicators. For the purposes of this report, reference to sex-disaggregated data covers data acquired based on biological differences between sexes. Gender-disaggregated data refers to data that may require gender analysis beyond biological and physiological comparisons. The terms are used without prejudice to national or subnational terminology.

It is also worth noting that intersectionality has been considered while drafting this report, as women and girls may face diverse and multiple exclusions on the basis of disability, age, race, ethnicity, religion or belief, sexuality, location, socio-economic status or other characteristic. Certain case studies in the report cover such intersectionality challenges, delving at specific situations where multiple inequalities occur, which create an even tighter link with environmental factors, for example in the case of indigenous populations. However, due to limited data availability, an intersectional approach could not be applied in all of this report's analysis.

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