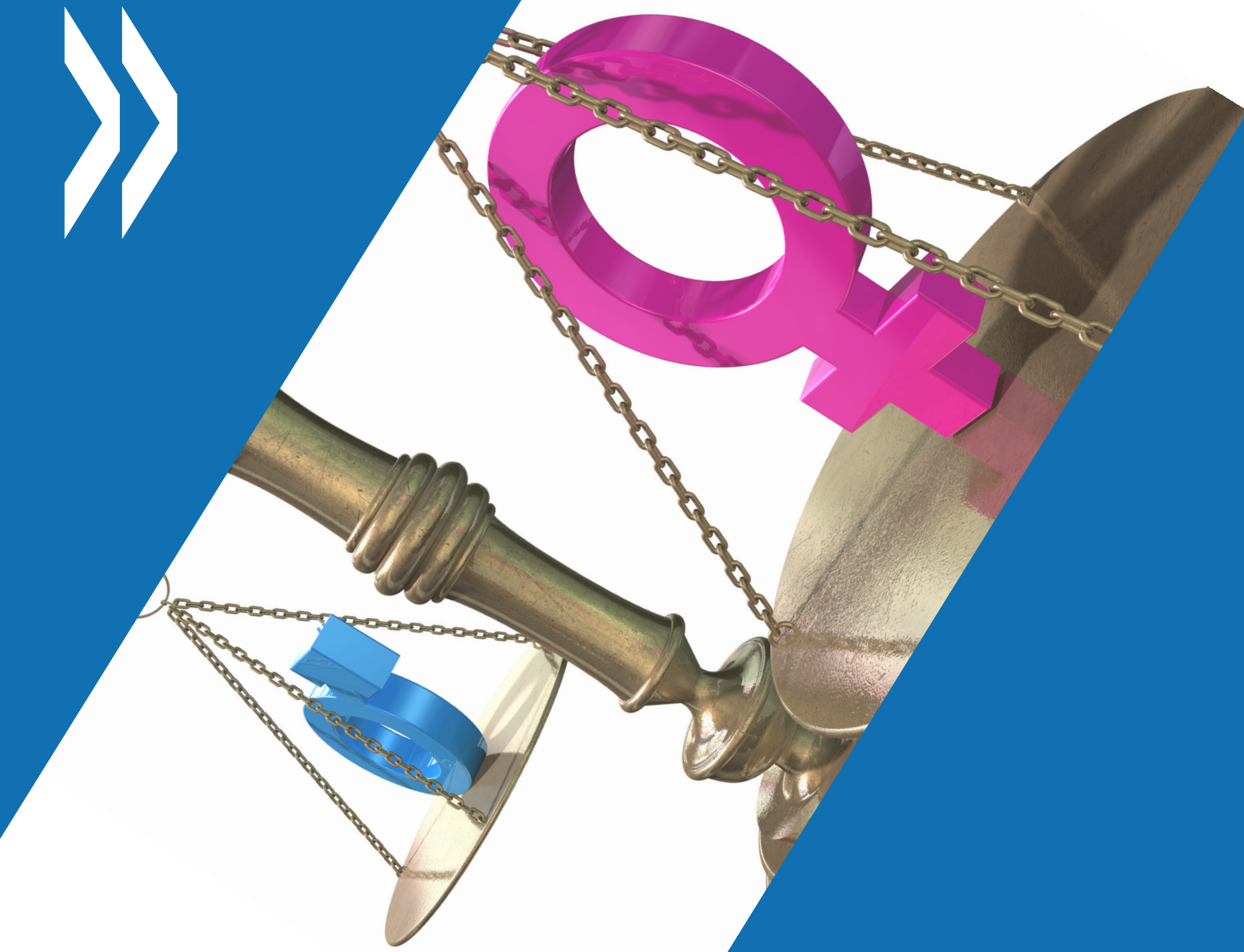
Policy Coherence for Sustainable Development and Gender Equality

Fostering an Integrated Policy Agenda



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Acknowledgements

The OECD is continuously looking at ways to promote gender equality in tandem with and in order to achieve the 2030 Agenda. This report is part of the ***OECD Gender Policy Platform: Accelerating Gender Mainstreaming***, an initiative launched in 2019, that aims to support and accelerate integration of a gender perspective into all decision- and policy-making processes. In particular, this report focuses on the interaction between gender equality and environmental sustainability, which are also two key goals in the Agenda 2030. The report provides evidence on the linkages between these two goals, showing many synergies, but it also brings to light the need for additional data gathering and analysis. It showcases an approach to mainstreaming gender and inclusiveness considerations in policies related to environmental sustainability and natural resource management, under the framework of the Sustainable Development Agenda**.**

The report was reviewed by the OECD's Public Governance Committee in November 2018 and also benefited from comments from Regional Development Policy Committee Working Parties on Rural Development and on Urban Development.

The report was directed by Sigita Strumskyte, Counsellor, under the overall guidance of the Director of the Public Governance Directorate, Marcos Bonturi. The study was prepared in close collaboration with Romina Boarini, coordinator of the OECD Inclusive Growth Initiative. Carina Lindberg, Toni Rumpf and Cayenne Chachati researched and drafted parts of the report, with inputs also provided by Michele Cecchini (ELS); Stina Heikkilä, Stefano Marta and Debra Mountford (CFE); Juliane Jansen, Scherie Nicol, Guven Pinar, Tatyana Teplova and Yola Thuerer (GOV); Cecilia Tam (IEA); Magdalena Olczak and Wei-Shieun Ng (ITF), Jennifer Schappert and Cristina Tebar Less (DAF) as well as other colleagues from DCD, DEV, ELS, and ENV. Marie-Claude Gauhier and Ricardo Sanchez Torres helped prepare the report for publication. Thanks go also to Guillaume Cohen and Michal Shinwel (SDD), Caitryn Guthrie (EDU), Jenny Hedman (DCD) and Gaelle Ferrant (DEV) for their valuable comments on drafts of the report.

Executive Summary

Gender equality and the empowerment of all women and girls are universal goals in their own right, as explicitly set out in Sustainable Development Goal (SDG) 5 in the 2030 Agenda. As highlighted in the 2015 OECD Recommendation of the Council on Gender equality in Public Life, achieving gender equality requires action across all policy dimensions, from education, social protection and labour markets to property rights, tax, infrastructure and governance. Conversely, due to different roles women and men play in households, the economy, and environmental sustainability in most societies, enhancing gender equality is integral to ensuring a balanced approach to the economic, social and environmental dimensions of sustainable development and to achieving all other SDGs.

While advancement towards gender equality has been made in recent decades, it has taken place in a context where overall inequalities in both developed and developing countries have been widening in tandem with escalating environmental degradation. The relevance of gender to environmental issues has been discussed since the early 1970s, when the growing debate on environmental changes intersected with the emergence of studies on women's roles in development and development policy strategies within the international women's rights movement. (GEF, 2009). Discrepancies in the advancement of gender equality and women's empowerment highlight the importance of moving away from an approach that targets gender issues independently of other SDGs and adopting instead a holistic approach to policy-making.

While a gender-focused lens could be applied to analysis of all the SDGs, this report focuses only on a selection to illustrate the methodology. In particular, it covers Goals 6 (Clean water and sanitation), 7 (Affordable and clean energy), 11 (Sustainable cities and communities), 12 (Responsible consumption and production), and 15 (Life on land). While these are only a selection of all the environment-related SDGs, they are determinant for other ones such as climate change (SDG 13), industry, innovation, and infrastructure (SDG 9) and life below water (SDG 14).

To acknowledge the multiple dimensions of and the interactions between gender equality and the environment, the report applies a ***policy coherence for sustainable development framework,*** taking into account both inclusive growth and environmental considerations. It looks at evidence and rationale for fostering *gender equality while considering economic, social, and environmental goals,* and identifies trade-offs and synergies among policies in the context of the 2030 Agenda. The policy coherence framework also allows for a *transboundary analysis* of gender policy and sustainable development that identifies and addresses the effects of domestic policies on broader international policies and gender equality objectives. As the interrelations between sustainable development and gender issues and their implications extend beyond the current generation, the report also applies an *intergenerational lens* to highlight the long-term effects of joint action on sustainability and gender equality.

The report reviews the available evidence, which is at times scant, but generally points in a similar direction. Girls and women are often affected more negatively by environmental damage, and poor women in low income countries are typically the worst affected. The report also elucidates how women's involvements in environmental decisions can bring about major improvements in advancing environmental objectives.

The report also identifies the need to advancing evidence-gathering on the gender-sustainability nexus. It also calls for further research that recognises the diversity of women's conditions and the great disparities between women depending on their income, education, race and ethnicity, age, family composition, etc. Hence, future work should consider further applying the ***OECD Policy Framework for Inclusive Growth*** in order to delve further into the necessary policies to achieve the SDGs. An ***inclusiveness framework*** will allow to identify approaches that enable all women to be integrated into political, social and economic processes and tools that could be used by countries to deliver on the Agenda 2030.

The report also builds on the OECD gender recommendations and work on gender equality governance and gender mainstreaming, including the recently launched ***OECD Toolkit on Implementing and Mainstreaming Gender Equality***.

Key Messages

- To address the intersection between gender equality and sustainable development, this paper analyses five sustainable development goals through a policy coherence and inclusiveness framework.
- The gender-sustainability nexus can be understood by gathering more evidence on the extent to which slow progress on sustainable development affects the condition of women and hampers gender equality (women as users) and also by recognising systematically women's positive impacts on sustainable development (women as contributors).
- Bringing together gender and sustainability goals requires a holistic and coherent analysis and policy approach, taking into account trade-offs and complementarities, from an individual to a global level, including transboundary and intergenerational implications.
- To address the gender-sustainability nexus, policy-makers should act at three levels simultaneously: (i) **individual -** by taking into account differences in the needs and behaviours of women, and advancing women's well-being objectives with sustainability goals in mind; (ii) **societal –** ensuring gender equality in public life, including labour markets, legislation, and all sectorial policies; (iii) **global -** adding a gender and sustainability perspectives in all transboundary policies such as trade, investment, migration, development cooperation, and environment, including the private sector.
- The OECD is addressing the gender-sustainability nexus through its ***OECD Gender Policy Platform: Accelerating Gender Mainstreaming*** initiative by expanding its data gathering, analytical and policy work.

Gender equality underlies sustainable development: Interlinkages for consideration

The **gender-sustainability nexus** can be understood by recognising, on the one hand, women's positive impacts on sustainable development, and, on the other hand, the extent to which slow progress on sustainable development affects the condition of women and hampers gender equality.

Women play a central role in community support, resilience building, and conservation efforts, thereby ensuring the well-being of current and future generations. As household decision-makers, they can influence energy and water-saving initiatives. The eco-feminist and "women and environment" approaches in particular reflect this unique understanding of nature and women's role as "volunteers" in protecting the environment (Rico, 1998).

Conversely, natural resource scarcity, environmental damage and climate change affect women's well-being the most, especially in developing countries, where women are typically responsible for gathering biofuel and water. They are also more likely to be the last ones to leave home (or stay at home) in cases of natural disasters, due to existing gender inequality in terms of access to resources and the gendered division of labour (Neumeyer, Plümper 2007; Islam 2012).

This report reviews the available evidence on the links between gender equality and environmental protection. In general, there is a lack of sex-disaggregated data in this area. The report therefore relies mainly on case studies for its analysis and recommendations.

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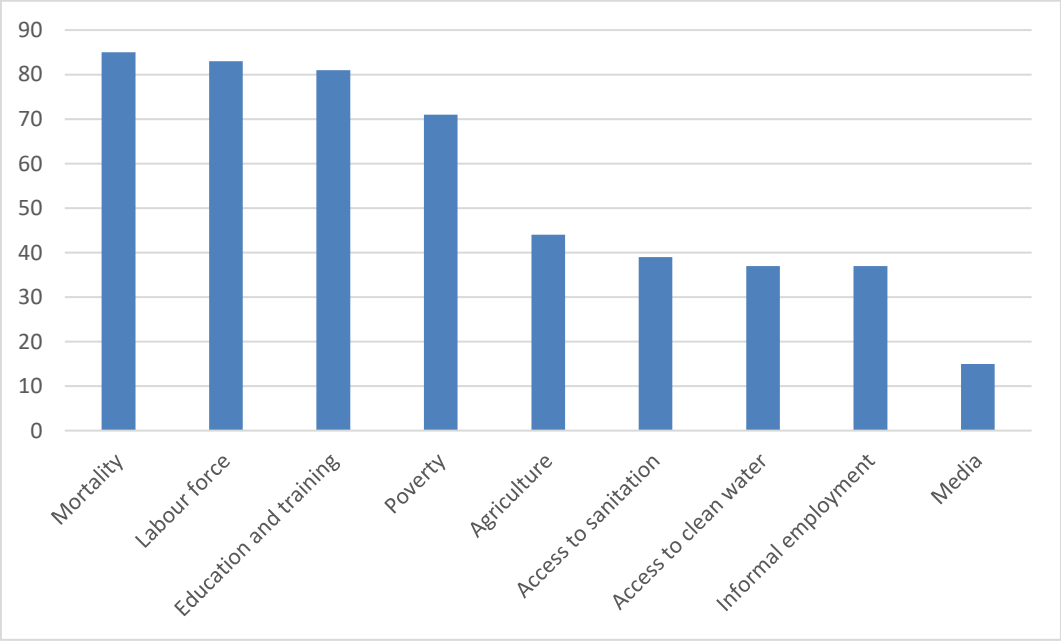
Women and SDG 6 - Ensure availability and sustainable management of water and sanitation for all

Gendered effects of inadequate access to water and sanitation

Access to clean water and sanitation (SDG 6) is critical to lift people out of poverty (SDG 1) and to foster gender equality (SDG 5), but the largest water consumers are farmers, which holds implications for SDG 2 (no hunger). As with other SDGs, the application of a gender equality lens to SDG 6 is hampered by the lack of readily available quantitative evidence. Nevertheless, there is many case studies and qualititative sources of evidence available. There is also an ongoing effort by UNESCO to address the data gap (World Water Assessment Programme).

In 2013, a report of the Statistical Commission of the United Nations Economic and Social Council (ECOSOC) on the state of gender statistics collected by national governments around the world revealed that sex-disaggregated water statistics are amongst the least available (see Figure 1). Overall, nearly half of countries do not produce any gender statistics related to water.

Figure 1. Percentage of countries "regularly" producing sex-disaggregated statistics on specific issues (%)



Source: Seager (2015), adapted from UN (2013).

Inadequate access to water

Social norms in many countries are more likely to impose a water management role for women. In a study of 48 countries, adult women and girls were found to be responsible for water collection more than twice as often as their male counterparts in Sub-Saharan Africa and Asia (UN 2010). Inequality in terms of water management was particularly high in rural Sub-Saharan Africa, where adult women fetch water in 63 per cent of households compared to 11 per cent of adult men (UN 2010). Women who take on the responsibilities

of household and family caretakers are often severely affected by inadequate access to water and sanitation. According to UN Women, in a single day in 25 sub-Saharan African countries, women spend 16 million hours collecting water – often to the detriment of education or paid work – compared to only 6 million hours spent by men and 4 million hours spent by children (UN Women, 2016). Women's health is also at risk where water work is concerned. In societies where women are responsible for collecting water, carrying heavy buckets of 30 to 40 kg on average has detrimental effects on the spine and leads to deformations and disease. Water collection requires 30% of daily calorie intake, thus putting women with poor nutritional intake at risk ("Women and Water", 2005).

Women also suffer disproportionately from desiccation and its consequences, as they are often left to take care of the household while men look for job opportunities elsewhere. For instance, water scarcity resulting from the Aral Sea Crisis has led to an increase in maternal morbidity and mortality, infertility, and pregnancy and foetal development complications (Ataniyazova, 2003). The chronic exposure to high concentrations of minerals and toxic pollutants through unsafe drinking water was found to cause dangerous concentrations of heavy metals and pesticides in the blood of pregnant women, umbilical cords and breast milk in the affected area (Wæhler, Sveberg Dietrichs, 2017).

Women are also primarily responsible for subsistence agriculture, which puts an additional pressure on their water needs and causes high levels of mental stress when water rights are insecure (Women for Water Partnership). As a result, mismanagement of water resources, including depletion due to climate change, disproportionately affects women who are already spending more time than men providing for their families.

Humanity faces a dismal future if it is unable to tackle climate change and properly manage water resources. An estimated 1.6 billion people will be at risks from floods by 2050, especially in coastal cities. Meanwhile, increasing droughts will generate tensions across users in particular urban dwellers, as in the recent cases of Rio de Janeiro, São Paulo and Cape Town.

Inadequate sanitation facilities

Access to sanitation facilities is also of greater importance for women due to both health concerns and cultural norms. Environmental sanitation plays a major role in the transmission of endemic diseases such as malaria that disproportionally affect women, and particularly pregnant women (Davies et al., 2016). Improved sanitation facilities have been shown to reduce mortality caused by diarrhoeal diseases by 65% and morbidity by 26% (Chancellor et al., 2003). Gender-specific preferences to sanitation are not limited to health concerns, however; in countries such as India, where sanitation facilities are not easily accessible and open defecation is more common, privacy concerns force women to wait until after dark, negatively affecting their well-being and comfort ("Women and Water", 2005). In addition, sanitation facilities influence school attendance. According to UNICEF, in 2011, only 45% of schools in least-developed and low-income countries had adequate sanitation facilities. The issue of inadequate sanitation, and particularly during menstruation, decreases the likelihood that girls attend school. In a study on the relation between access to adequate sanitation facilities, menstruation and school absenteeism in India, 40% of girls were found to remain absent from school during their menstruation due to lack of clean toilets, clean water, privacy, soap and sanitary supplies (Vashisht et al., 2018).

Transboundary implications of water management

There is also a need to better address the transboundary implications of water management and take into account different distributional effects by gender, in particular shared river flows, lakes and other sources of fresh drinking water and irrigation. Women's vulnerability to the water mismanagement across borders has been evidenced by the effects of numerous dam projects. The Mekong River is the 11th longest river in the world, flowing downstream through Thailand, Laos, Cambodia and Vietnam. The Chinese government has built seven hydropower dams, the latest in 2016, within China's Yunnan province, which made significant impacts on the Southeast Asian countries due to changes in tide. The change in the river flow has particularly affected women in Laos, where the river was an important source of Kai, a freshwater weed. Laotian women would collect up to 10 kilograms of Kai a day and sell it to the local market, making it their most important source of income during dry season. The gendered effects of the dam projects have driven women further into poverty and vulnerability (Harris, 2018). Well-studied gender specific impacts have been often disregarded in the assessments and plans for the river.

Similar transboundary gender implications can be observed in the Aral Sea Crisis. Formerly one of the largest inland seas in the world, the Aral Sea is located in Central Asia between Uzbekistan and Kazakhstan. The Syr Darya and Amu Darya transboundary rivers flow into the sea. Due to a combination of large-scale irrigation projects, overpopulation and an expanding cotton industry, water levels have dropped by 23 meters since 2005, almost entirely desiccating the sea. In turn, there has been a sharp increase in water and soil salinity levels not only in the area, but also in neighbouring countries through the rivers. Women are disproportionally affected by decreased water quality and soil erosion due to their role in agriculture and water collection. In addition, in the region and surrounding countries, there has been an increase in anaemia in women and infant and maternal mortality (Colombia University).

Box 1. OECD Framework for Better Governance of Infrastructure

Good infrastructure governance plays a major role not only maximizing available resources, but also ensuring that it delivers the expected socio-economic benefits, in line with other policies such as tax and property rights. Mainstreaming gender perspective throughout the governance cycle and financing, including strategic planning, consultations process, co-ordination across levels and entities of government, adequate use of data and operational quality - is key for sustainable economic and social outcomes of these projects such as increased labour market participation, reduced women's vulnerability, and greater environmental protection, leading to increased well-being for all.

Gender aware infrastructure governance can be a catalyst for having infrastructure projects that are responsive to social needs and create social added value by actually fulfilling their final objectives. In order to achieve this, infrastructure governance must not only ensure gender mainstreaming throughout the governance cycle, but also the direct involvement of women within local, national and international decision-making bodies and at all stages of policy-making. Infrastructure also tends to be a male-dominated industry, in part because of the still heavy manual input involved. An added advantage of women's involvement in the governance of infrastructure is their greater sensitivity to environmental risks.

There are five elements of the OECD Framework for Better Governance of Infrastructure that are particularly relevant to achieve this objective: (i) a strategic vision for

infrastructure; (ii) integrate a consultation process; (iii) co-ordinate infrastructure policy across levels and entities of government; (iv) generate, analyse and disclose useful data; and (v) asset perform throughout its life cycle (OECD, 2017).

Women's role in sustainable water management

The role of women in water management has been recognised in the global water fora for decades[1]. Enhancing women's access to safe water has positive effects on social inclusion, poverty alleviation, health, environmental sustainability and food security. Involving women in water and sanitation management, taking into account their needs, and including them in budgeting decisions can help orientate scarce funding towards sustainable solutions that benefit communities as a whole ("Women and Water", 2005). The knowledge women have due to their role in household water management can be leveraged to shape conservation efforts through awareness-building campaigns around family behaviours. Moreover, their experience in primary caregiving puts them in a unique position to instil water saving values in future generations. For example, a study on the effects of involving women in solid waste management in Harare, Zimbabwe found that the inclusion of women ensured proper sanitation behaviour. On a broader scale, among 122 projects studied by the World Bank, those that involved women were six to seven times more effective than others (Thompson et al., 2017). Despite this, women comprise less than 17% of the hygiene, sanitation and water force globally (Thompson et al., 2017). Surveys in industrialised countries show that women are more responsible water users than men in household settings (OECD, 2014c).

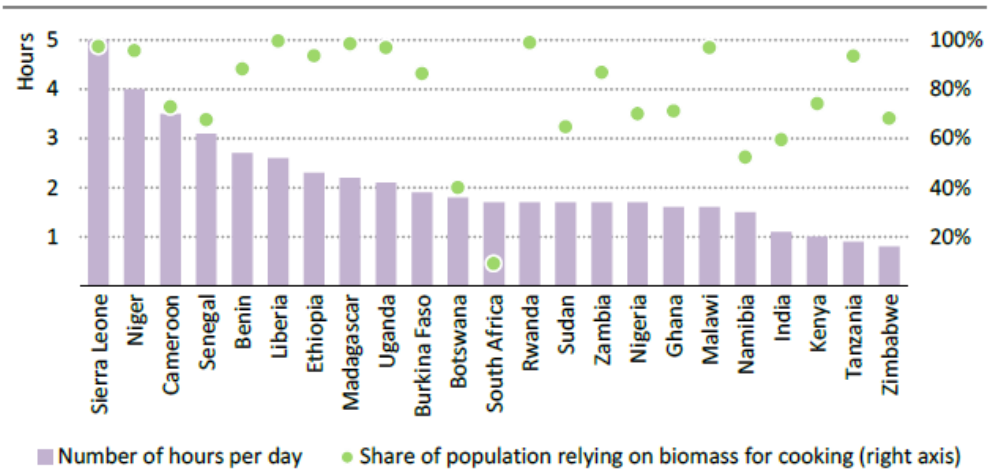
Women and SDG 7 - Ensure access to affordable, reliable, sustainable and modern energy for all

Gendered effects of energy poverty

As primary household caretakers in most societies, women are disproportionally affected by the lack of access to sustainable forms of energy. Women and men have distinct energy needs and consumption patterns as they typically occupy different social roles in most countries where men are often responsible for providing household income while women are responsible for domestic duties and sometimes for securing an additional income in parallel. In rural areas in developing countries, women and girls carry out the bulk of household work. Access to energy significantly affects their health and well-being, and in turn, those of their families and communities. In developing countries, girls and women spend long hours gathering biomass (mainly wood), which takes up valuable time and restricts their access to education and paid work.

[1] The importance of involving both women and men in the management of water and sanitation and access-related questions has been recognised at the global level, starting from the 1977 United Nations Water Conference at Mar del Plata, the International Drinking Water and Sanitation Decade (1981- 90) and the International Conference on Water and the Environment in Dublin (January 1992), which explicitly recognises the central role of women in the provision, management and safeguarding of water. Reference is also made to the involvement of women in water management in Agenda 21 (chapter 18) and the Johannesburg Plan of Implementation.

Figure 2. Average number of hours spent collecting fuel per day per household



Source: IEA (2017).

A study in India, Bangladesh and Nepal found that women spend up to 20 or more hours per week collecting fuel for cooking and heating (Green Alliance for Clean Cookstoves, 2015). Research in Brazil showed that girls in rural areas with access to electricity are 59% more likely to complete primary education by the time they are 18 years old than those without (Box 2) (O'Dell et al. 2015).

Box 2. Access to energy affects educational achievements

The implications of lack of access to energy extend to access to education and has adverse intergenerational effects. Women's lack of access to electricity and subsequent significant time spent for gathering biomass limits their access to education and affects their children. To begin with, studies have illustrated the correlation between education and mortality. A study of child mortality in 175 countries between 1970 and 2009 concluded that half of the reductions of child mortality can be attributed to improved women's education (Gakidou, Emmanuela et al 2010). Limited mothers' education is also correlated with higher infant stunting levels (Abuya et al. 2012) and lower levels of immunisation (Ozer at al., 2018). Finally, limited access to education discourages schooling in future generations, thus perpetuating the vicious cycle. On average, an additional year of education by a mother is correlated with 0.32 more years of schooling for her children (Bhalotra et al 2013).

As women generally spend more time at home than men, they are also more exposed to pollutant fuels and inadequate heating. According to the World Health Organization (WHO), over four million people – mainly women and children – die every year as a result of indoor air pollution (WHO, 2016). Introducing clean and efficient cooking facilities would go a long way towards addressing this problem, and also help achieve climate goals. Over 30 countries have included efficient cooking initiatives in their "intended nationally determined contributions" (INDCs) as mitigation pledges under the Paris Agreement (Box 3).

Box 3. Promoting women's access to renewable energy

Recent research by the International Energy Agency (IEA, World Energy Outlook 2017 and 2018) finds that the most cost effective strategy for providing universal access to electricity and clean cooking facilities in developing countries is compatible with meeting global climate goals, and would prevent millions of premature deaths each year. To provide universal electricity for all, decentralised systems, led by solar PV in off-grid and mini-grid systems, will be the least-cost solution for many regions. This shift would also benefit women the most, as it would free up billions of hours currently lost to gathering fuelwood.

Recently updated data on energy access shows the number of people with electricity access fell below 1 billion for the first time in 2017, down from 1.6 billion in 2000. While fossil fuels, mainly coal, have remained the main new source for electricity access since 2000, renewables are growing rapidly, providing more than a third of new connections in the last five years. This shift is expected to accelerate in coming years, and by 2030 renewables are set to provide new electricity access for three-quarters of the additional connections needed, according to the IEA report.

The report estimates that providing universal access to energy by 2030 would require an additional investment of USD 24 billion per year (on top of the USD31 billion invested under current and planned policies), equivalent to less than 2% of global energy investment. The overwhelming majority of this extra investment would need to be directed to sub-Saharan Africa, and most of it to renewables. Of this the investment required for clean cooking facilities, including liquefied petroleum gas, is modest and amounts to less than one-tenth of the total.

There are many benefits to achieving energy for all and doing so primarily via renewables. Women will save one hour per day when they do not need to collect fuelwood, freeing up the equivalent of a workforce of 80 million people. Increasing the share of renewables would reduce household air pollution, avoiding premature deaths, and limit carbon emissions.

Women and children are also more affected by energy poverty. As an average across Central and Eastern Europe, the poorest 10% of the population are also those who spend the highest proportion of their income on electricity, water and energy (Frankhausen et al.). These trends are also seen in high-income countries: in Australia, for instance, the bottom decile of the income distribution spends 7% of their income on energy, whereas the highest decile spends 1% (Azpitarte et al., 2015). According to the European Institute for Gender Equality (EIGE), energy poverty is a growing problem in industrialised countries, despite declines in oil prices. Energy poverty particularly affects single-parent households that are predominantly headed by mothers and are at significant risk of living in poverty (EIGE, 2016).

Effects of energy policies and labour market patterns

Gender energy inequality may be further accentuated by national energy policies and labour market patterns. Many countries still subsidise fossil fuel production and consumption. Production subsidies mostly benefit large energy producers, industries that are traditionally male-dominated. In developing countries, priority in energy access is often given to large industrial, export-oriented activities, which generally benefit men more than women as such businesses are typically owned by men. Women, on the other hand, are more likely to

work in the informal sector and therefore face greater difficulties in accessing energy grids for their economic activities. Woman-headed businesses also often have less access to finances and energy-related services than men, as shown by studies from Africa (UNDP, 2012). Energy consumption subsidies also tend to benefit men more in both developing and developed countries, as for instance they are bigger users of private transport. Due to their typically higher economic status, men are less likely to use public transport. In Sweden, for instance, 70% of cars are owned by men ("Gender and Transport", 2011). A study of men's and women's consumption patterns in four European countries (Germany, Norway, Greece and Sweden) found that men use considerably more energy than women for transport, ranging from 70% more in Germany to over 350% more in Greece, mostly due to higher operating costs for the use of cars (Räty, Carlsson-Kanyama 2009).

Women's role in sustainable energy solutions

As primary energy managers in households, women in both developed and developing countries can play a key role in promoting sustainable energy consumption patterns and accelerating the shift to renewable energy. Evidence suggests that women are more responsible users of energy than men. Recent studies in Europe have shown that single men directly or indirectly use up to 22% more energy than single women. Women have been found to be more receptive than men to energy conservation efforts and are more willing to change their everyday behaviour to save energy (Huang, n.d).

Yet the lack of women in energy policy and strategy planning[2] decreases the likelihood that women's interests and needs will be taken into account.

Box 4. Adopting gender perspective in energy policy making

To achieve "energy equality", all elements of energy planning and policy-making need to consider the gender perspective. There is also a need to promote the presence of women within local, national and international decision-making bodies and in the energy industry itself at all policy-making stages.

In addition, when designing policies for fulfilling developed country energy needs, policy-makers must take into account the implications of these policies on other countries, including how they affect sustainability goals and gender inequality. For example, the growing demand for biofuels in an attempt to reduce greenhouse gas emissions has affected land use in developing countries, in particular the marginal lands and small plots that are harvested by women. These lands went for corporate use, depriving households of their means of energy subsistence and often with no compensation mechanisms. (Clancy, 2013).

The IEA is working with the Clean Energy Education and Empowerment Technology Collaboration Programme (C3E TCP), which is part of the IEA's technology family to strengthen the role of women in the clean energy sector. Removing barriers toward women's active participation in sectors where they typically have been under-represented, such as the clean energy sector, requires the implementation of concrete actions in specific areas such as data collection and knowledge building, career development, awards programmes and dialogue. State-of-the-art knowledge represents a key point in the decision making process. The C3E TCP launched in May 2018 the Equal by 30 Campaign,

[2] According to EIGE, the EU energy sector workforce is composed mainly of men (77.9 %) with women representing only 22.1 %. The same trend applies to the renewable energies sector, where women are also under-represented.

a public commitment by public and private sector organisations to work towards equal pay, equal leadership and equal opportunities for women in the clean energy sector by 2030. The Equal by 30 Campaign is bringing together leadership from across the energy sector to galvanise action, and helps all players – from private sector companies to governments at all levels – take action together.

Women and SDG 11 - Make cities and human settlements inclusive, safe, resilient and sustainable

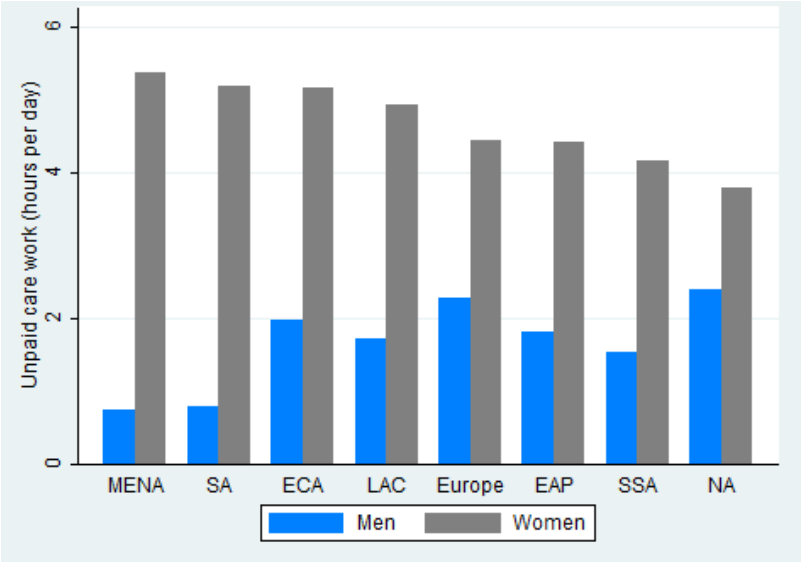
Urban life and design affects men and women differently

Segregation of working and residential areas and the 'triple burden'

Conditions in many cities hinder gender equality, even in better-off households. Typical city design, with segregated areas for residences, workplaces and shopping, reflects the one-earner household paradigm and smaller cities of 20th century; commute time between these areas makes it particularly difficult for a single individual to take on a double or triple burden of childcare, breadwinning and elderly care. While in some countries, policies and societal norms are adapting to improve burden-sharing, women's participation is still more restricted than men's because of the way urban areas are designed and how they have expanded over the years.

In developed countries, women more often than men find themselves with the double (or triple) burden of looking after their children and their parents while providing income to the household at the same time. In the United Kingdom, for instance, one in four women are responsible for taking care of an elder with a chronic illness or disability as well as a child, as opposed to one in six men. There are currently 2.4 million people who are "sandwiched" into providing for both generations.

Figure 3. Time spent on unpaid care work varies by gender and region



Note: This chart presents the average hours per day spent on unpaid care work by women and men by regions of the world: Middle East and North Africa (MENA), South Asia (SA), Eastern Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), East Asia and Pacific (EAP), Sub-Saharan Africa (SSA) and North America (NA).

Source: OECD (2014), Gender, Institutions and Development Database .

Due to this added pressure, women are twice as likely as men to give up their work and four times more likely to take on part time jobs instead (Holzhausen, 2014). Women are also more often than men obliged to combine multiple jobs. For instance, in the United States 6.7% of women aged 20 to 24 work multiple jobs compared to 4.6% of men in the same age group (Wilson, 2015). The burden is greatest for single mothers, who account for about 5% of all households in OECD countries – five times more prevalent than single father households (OECD Family Database). In the United States, 82.2% of custodial parents are mothers compared to 17.8% custodial fathers (Grall, 2011).

Easy access to affordable children and elderly care facilities are essential to facilitate women's participation in the economy, while allowing them to fulfil their family responsibilities. Yet, in many countries, access to such facilities is limited or out of reach because of their cost. Developing such services can bring about immediate benefits. For instance, in Hamburg, Germany, the abolishment of a range of fees associated with schooling and daycare and a guaranteed place in kindergarden for children over one year of age, crèche, or other day care institution, has led to more children staying in school until late afternoon. This had also had the effect of supporting women to participate in the labour force, and providing choice and flexibility to families (OECD, 2015).

The distance to such facilities can also be a major constraint to combine family caring and work. Furthermore, commuting is a major contributor to pollution and climate change. The world's cities account for 75% of global Carbon Dioxide emissions, with transport and buildings being among the largest contributors (UN Environment). This calls for a rethink of urban design, including transport networks.

Box 5. Sustainable city design with a gender perspective

A city design based on multi-functional neighbourhoods with short travel distances and proximity to work, childcare and schools, health care, shopping and services, along with safe pedestrian environments and frequent and easily accessible public transport would help parents combine work and family duties, increasing opportunities for working parents to access the labour market and reduce time loss to commuting. Easy access to such infrastructure would facilitate in particular women's access to work in cities and their wholesome participation in urban society and economic life. Speeding up corporate practices such as "teleworking", could also help facilitate women's access to (and possibly to stay in) full-time work, while reducing carbon footprint and pollution. Urban designers should also take into account the need for recreation spaces that are safe for women, men and children, including green commons.

More generally, there is a need to respond to the demographic and social change in cities: families have become smaller and single parent households are growing, while older people are increasingly removed from family and kinship-based care, including the extended family, religious congregations, and charitable organisations. Urban neighbourhoods need to recreate, as far possible, the various services available in community networks. Local support networks are particularly important in this context and can also bring about change in men's attitudes to childcare and household chores. A communal setting not only fosters mutual support but also validates changes in behaviour as men see their friends and peers taking up greater family caregiving responsibilities.

Gender differences in transport use

Access to reliable, safe and affordable transport is indispensable for people's participation in social and economic life, and is an integral part of human well-being. Men and women typically use transport differently, but in the past transport policies have not considered gender-specific patterns of transport use (Sarmiento, 1996).

Women on average travel less often and for shorter distances than men (Moriarty and Honnery, 2005) and are more willing to reduce vehicle use than men (Polk, 2003; 2004). Such trips could be easily facilitated by public transport services if they are available and women also tend to prefer public transport modes, such as bus or train, over driving a car or riding a motorcycle more than men in general. Shorter travel distance could also make women an attractive target group for shared mobility services, which are also more sustainable transport alternatives (Ng and Acker, 2018).

A study of eight European and Asian cities by Ng and Acker (2018) show that women travel shorter trips on average than men, use public transport more and travel more during off-peak hours. Since women have more complicated travel patterns, they tend to prefer more flexible modes but, at the same time, public transport modes are also more appealing to women than to men. This implies that flexible modes, especially emerging trends such as shared mobility or mobility as a service, could attract more female than male users. When given better alternatives, women may choose to give up driving altogether. If cities want to further encourage the development of flexible and sustainable modes of transport, policies to address women users' preferences should be implemented as women will be the dominating users.

Similarly, although women prefer to use public transport modes more than men, most cities do not have transport programs or policies that are focused on improving the user experience of women transit riders considering their off-peak time of travel and non-commute trip purpose. One city that does consider gender aspects in its urban planning is Vienna. Prompted by a survey in the late 1990s on the use of public transport by men and women, data is now collected to determine how different groups of people use public transport and spaces before an infrastructure project gets underway (C. Foran, 2013).

On the other hand, neglecting women's preferences of transport and mobility may limit women's economic participation. There is a negative correlation between commuting time and women's participation in the labour force.[3] An increase of 1 minute in commuting time in metropolitan areas is associated with an approximately 0.3 percentage point decline in the women's labour force participation – reflecting women's mobility patterns: they do not simply commute but do a lot of additional travel.

Women's security in transport

Safety is a concern that affects women's transport behaviour across all transport modes more than that of men and is the top priority insisted upon by women as a condition for their use of public transport (Bray and Holyoak 2015; Tjeendra et al., 2010; Ng and Acker, 2018). This is notably the case in urban areas where more women than men use public transport and heavily depend on these systems for their mobility needs.

Examples provided in the ITF's Compendium on Women's Safety and Security: A Public Transport Priority (2018) show that a large majority of women worldwide feel unsafe in public transport and have been victims of some type of physical or verbal harassment and other forms of violence in public spaces. As a result, women often prefer driving when faced with a modal choice, using taxis or other forms of for-hire ride services rather than walking, cycling or using public transport.

For instance, ITF (2018) reports a London survey that found that 28 per cent of women who have used public transport in the past 12 months say they experienced unwarranted staring, sexual comments, bodily contact, wolf-whistling and exposure. In Latin America alone, six-in-ten women say they have been physically harassed while using public transport. The statistiscs are alarming in many Asian countries as well. Women in Bangladesh face high levels of inequality in livelihood opportunities and access to economic assets. Women's participation in the workforce remains low, at an estimated 34%, while in rural areas women own only 8% of productive assets. According to estimates, around 94% women commuting in public transport have experienced sexual harassment in verbal, physical and other forms. In Jakarta, nearly 90% of women found the safety of trains to be poor or very poor, whereas only 35% of men held a similar concern for security (Turner, 2013).

If cities want to increase their public transport use and occupancy rates, the safety of their services have to be considered in order to attract more women passengers and also to improve the experience of the substantial share of existing women users.

[3] https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1129982

Gender-based urban crime

The risks of uncontrolled urbanisation, urban sprawl and slums are greater for women, in particular due to sex-based violence. Women are especially exposed to urban living risks in parts of cities, which lack safe public spaces (under-lit and under-policed) and are poorly connected to safe public transport, and where crime rates can be high. Poorer women are particularly exposed. In both developed and developing countries women represent the largest share of victims of criminal deaths, assaults, kidnappings and sexual harassment. It is estimated that 35% of women worldwide have experienced either physical and/or sexual violence at some point in their lives (WHO 2017). Furthemore, in some countries, sexual harassment and violence against women is not criminalised (OECD, 2019). Victims of sexual assaults are also often afraid to seek justice.

While sprawling metropolises cannot simply be razed and rebuilt with a gender lens, a number of measures can be taken to make streets feel safer and to keep women more secure when moving around the city. And more than ever, women are being consulted in planning new urban developments. For example, in India, SafetiPin was founded in 2013. This is an application ("app") that aims to help women stay safe by letting users rate streets and areas for safety criteria such as lighting, visibility, people density, gender diversity, security and transportation. It also aggregates safety data, partly provided by its users, for use by local government and planners. SafetiPin now has 51,000 points of data for Delhi alone, and offers users "safest routes", helping them navigate the city with less risk. In Barcelona, Collective Point 6 is a cooperative of feminist architects, sociologists and urban planners who have been trying to build equality into Barcelona's streets for a decade (Fleming, 2018).

Economic insecurity

Women are significantly over-represented among the most low-wage workers in cities such as domestic workers, cleaners of public facilities, and sex workers. According to a study by ILO from 2015, more than 42 per cent of the domestic workers worldwide are not covered by minimum wage regulations despite the fact that they live in the countries where minimum wages are set for workers in other sectors (ILO, 2013). Considering that female labour force participation of women living in urban areas is considerably lower than that of women in rural areas in many countries, including India and Indonesia, economic insecurity is particularly high for urban-dwelling women (ILO, 2013). Often employed in low-wage or non-remunerated sectors, these women often have no or limited access to social security and other social benefits, despite some improvements over recent years. Migrant women with low skills are among the most vulnerable in cities and are more likely to become targets to criminal attacks (see section above). Leaving behind family and community networks and related subsistence agriculture deprives poor city migrants from fall-back options in case of economic or psychological distress (O'Neil et al., 2016). Some may even leave their young children behind, which contributes to mental stress and vulnerability.

Health hazards

The chronic stress and trauma that women are exposed to in urban settings has been found to influence the physical, behavioural and cognitive well-being of their offspring in both developing and developed countries. This "intergenerational transmission" of trauma can occur due to lasting epigenetic changes in a mother's biological system, or due to inadequate early postnatal care as a result of trauma and stress (Mallory et al 2015). Recent

studies have also highlighted the prevalence of intergenerational trauma. The offspring of mothers in the United States with unresolved trauma are more likely to develop insecure attachments and suffer from behavioural challenges (Udita et al 2014).

Women's health is also particularly sensitive to the lack of sanitation and clean water (developing countries), smog and other forms of pollution during times of pregnancy. Obesity and related diseases such as diabetes and cardiovascular problems are also more likely to arise in an urban setting. People's sedentary lifestyles and eating habits in cities are key drivers of such health effects. Among other policies, better access to sports and recreation facilities for both children and adults is necessary.

Studies of the impact of natural disasters have also shown that on average they kill more women than men (Neumayer and Plümper, 2007; Islam 2012). Women are more likely to be the last ones to leave home (or stay at home) in cases of natural disasters, due to existing gender inequality in terms of access to resources and the gendered division of labour.

For instance, in an Oxfam study on deaths resulting from the 2004 Tsunami in coastal Indonesia, women and girls accounted for more than three-quarters of deaths in most of the surveyed villages (Oxfam 2005). The disproportionately high female death rate resulted from women staying in risk-prone zones to pursue domestic duties, while men were protected from the waves being either at sea or otherwise away from home. These impacts are even larger for the most vulnerable women, highlighting the importance of applying an inclusiveness perspective in the design of policies to address these risks.

Box 6. Well-designed urban environments can promote active lifestyles

Insufficient physical activity are risk factors for a range of chronic diseases, including heart disease, stroke, diabetes, osteoporosis and cancer. Chronic diseases caused by these risk factors also lead to significant economic costs, including for medical treatment; reductions in productivity and increases in work-related absenteeism.

In OECD countries, there is a significant gender gap in physical activity levels, as 30% of men and 37 % of women do not meet the WHO physical activity recommendations. This is mostly because women are less likely to do sports than men. For example, women are 10% less likely to report sports participation in Germany and the United States, 16% less likely in Canada, and up to 36% less likely in France. There is also a sizeable socioeconomic gradient in sports participation. For example in France, women with post-secondary education are almost 6 times more likely to participate in sports compared to women without such education. Many causes underpin increasing levels of sedentary behaviours including, particularly in the case of women, perception of safety.

Effective public health actions can help increase total physical activity. Taking France as case study, the OECD SPHeP-NCD (Strategic Public Health Planning for NCDs) model was adapted to asses 6 policy actions targeting different groups in the adult population. The interventions comprised public spending on sports and recreation, prescribing physical activity in primary care, mass media campaigns, mobile apps, public transportation and workplace sedentarity interventions.

All the interventions were found to reduce the number of new cases of diabetes, cancer and cardiovascular diseases. Public spending on sports and recreation was found to lead to the largest reductions in health spending compared other modelled interventions, with 1.2 billion Euros saved in France compared to the baseline scenario within 32 years after the start of the intervention in 2019. Overall, three interventions- spending on sports and recreation, mass media campaigns and mobile apps- were found to be cost-effective within 10 years since the start of their implementation.

Women's role in promoting sustainable cities

While women are more exposed to the risks of urban living they are also in a unique position to make urban life more inclusive and safe. As more vulnerable users, they can help identify and support better policies for all.

While women account for a large proportion of employment in the public sector in regional and local governments, they are underrepresented in decision-making responsibilities. There is a growing number of female mayors, such as Barcelona, Madrid, Paris and Singapore, but there is no internationally available data. Fewer than one in five of big-city US mayors are women.

Making settlements safer and more peaceful

Until recently, the role of women in safeguarding settlements and cities had not been acknowledged or much researched. However, new research and case studies reveal how, for instance, women in particular can make settlements safer and more inclusive when they participate in the police force and peacekeeping operations. Many communities have adopted the community policing approach that stresses the importance of involving the

community in a practical way so that the police and public can co-operate to prevent and solve crimes. Through this framework, more women have entered the police force. Women officers have been shown to use less physical force and to better promote co-operation and trust. With a shift in the perception of good policing as being less about physical force and more about preventing violence, women are particularly suited for the position. In Sierra Leone, for instance, increasing the participation of women in the police force has made lawmakers more conscientious of gender violence, and has enabled more women to be informed about their human and legal rights (Center for Development & Security Analysis, 2008).

Women account for only 17.5% of the workforce in EU urban public transport for example, and hold less than 10% of technical and operational jobs. In the United States, women comprise only 15% of transport and related occupations and only 4.6% of commercial truck drivers are women (OECD Observer 12 June 2015). Having more women on boards of transport companies can help focus more on women's needs such as the availability of public at off-peak hours and personal safety.

Women passengers also feel safer when they ride with women drivers, who are also safer drivers (World Bank, 2013). This is especially critical in developing cities, where efficient, equitable and safe public transport modes play an important role in regulating the growing share of private vehicle use, including motorcycles.

There is also evidence that women's engagement in peace processes contributes to their success and durability, thereby contributing to the security and resilience of cities. The Geneva Graduate Institute's Broadening Participation Project studied over 180 peace agreements across countries and found that women's involvement in the peace process increased the probability of reaching a peace deal and its duration. (O'Reilly et al., 2015).

Greening cities

Cities can help champion a place-based and territorial approach to global agendas, and rethink policies for sustainable development from the ground up. They are well-placed to experiment, pilot and replicate ambitious policies that can be tailored to the places where people work and live, and generate complementarities, co-benefits and synergies.

The transition to a low-carbon economy is an opportunity to leverage the potential of cities to advance environmental quality, while fostering inclusive growth. For instance, improvements in air quality (by reducing CO^2 emissions from private cars) which is called for under SDG 11 (cities and communities) also helps minimise health cost as targeted by SDG 3 (good health and well-being).

Examples of cities led by female mayors who have embarked in major greening campaigns include Paris and Singapore. In the City of Kitakyushu, Japan, a historical example shows how the active role of women's associations led the city on a new path of sustainable development, due to their heightened apprehension about the health risks caused by the city's industrial structure (Box 7).

Box 7. Women's activism to reduce pollution in the City of Kitakyushu, Japan

The City of Kitakyushu developed as a manufacturing city in the beginning of the 1900s and soon became one of the four main industrial zones in Japan, focusing on industries like steel, chemicals, ceramics and cement. Although these heavy industries had a positive impact on the economic development of the city, as well as on Japan as a whole, they also resulted in negative externalities on the environment, generating high levels of air and water pollution, which reached their peak in the 1960s.

Civil society, and in particular associations of women concerned about the health of their families, started a protest against the high level of pollution in the city and launched the slogan "We want our blue skies back". The movement later involved universities, business community and local government to seek for common solutions to overcome pollution. The campaign achieved remarkable results, with joint efforts contributing to clearing up both the skies and sea water around Kitakyushu in only a couple of decades (end of 1970s).

The movement towards a more environmental friendly economy, combined with the need to rethink the industrial structure of the city due to the crises of the steel industry, brought the City of Kitakyushu towards new industries, including assembly and automobile industry, renewable energy and recycling industry.

Women and SDG 12 - Ensure sustainable consumption and production patterns

Consumption patterns differ by gender

Consumption patterns differ by gender, with women spending more on perishables and men more on durables. This is a result of the traditional work-home division of responsibilities, which to some extent persists in dual-earner households. Estimates from Canadian companies show that women make over 80% of consumer purchasing decisions, but men spend over 80% of household income, although this balance is changing as women's economic and social situation advances (Yaccato, 2007). This pattern has been confirmed in other studies (Kelan, 2008).

Surveys also show that women tend to be more sustainable consumers and are more sensitive to ecological, environmental and health concerns (Johnsson-Latham, 2007; Heinzle and Känzig, 2010; Khan and Trivedi, 2015; OECD, 2008). Women are more likely to recycle, minimise wastage and buy organic food and eco-labelled products. They also place a higher value on energy-efficient transport and in general are more likely to use public transport than men. Men, on the other hand, are more likely to go into debt than women, contributing to overconsumption and risky indebtedness. For instance, a survey of 2,500 adults across the US found that men have, on average, triple the amount of debt as women (Huddleston, 2017). According to credit agency Experian, women also have higher credit scores than men – 675 compared to 670 (LaMagna, 2018).

Women can therefore be key actors to move consumption towards more sustainable patterns. In this regard, public policies and new approaches to influence consumption decisions, such as behavioural insights should take into consideration a gender perspective (Box 8).

Box 8. Behaviourally-informed solutions to promoting sustainable choices

Behavioural insights (BI) are lessons derived from the behavioural and social sciences, including decision-making, psychology, cognitive science, neuroscience, organisational and group behaviour. BI takes an inductive and experimental approach to policy-making, challenging established assumptions of what is thought to be rational behaviour of citizens and businesses. This methodology informs decision makers with evidence of what are the "actual" behaviours and biases of citizens and businesses. If applied responsibly and effectively, these insights can strengthen the efficiency and impact of public policies. The OECD has been at the forefront of studying the application of BI to public policy, including releasing the first-ever collection of over 110 case studies across 11 policy domains and the results of a survey of 60 units applying BI to public policy around the world (OECD 2017).

As highlighted in the 2018 Western Cape Government-OECD Behavioural Insights Conference in Cape Town, South Africa, BI could be used to promote better outcomes in key policy areas such as improving education and youth policies; creating safer communities; making better choices in water, energy and transport; and delivering better health services and results. Given women's role in consumption decisions, their sensitivity to sustainability concerns and the different roles women and men play in the household, behaviourally-informed policy solutions may help promote sustainable choices that provide better outcomes for all.

Sources: OECD (2017), *Behavioural Insights and Public Policy: Lessons from Around the World*, OECD Publishing, Paris, https://doi.org/10.1787/9789264270480-en; OECD (2018), *Key Messages and Summary*, WCG-OECD Behavioural Insights Conference in Cape Town, South Africa, http://www.oecd.org/gov/regulatory-policy/Behavioural-Insights-Conference-in-South-Africa-Summary-and-key-messages.pdf;

Gender-specific attitudes to waste management

The demographics of the households also affects domestic waste management. Studies from Africa show that across cultures, women are usually assigned domestic waste management roles, as part of their unpaid activities, even when these activities extend beyond the home to community cleaning. Men, on the other hand, tend only to handle waste generally only as part of their paid activities (Muller and Scheinberg 1998, Poswa 2004). Women and men also treat solid waste differently. Studies have shown that women bring unique knowledge and skills in managing natural resources and solid waste.

Women are worst affected by unsustainable production patterns

Women are more likely to have inacceptable working conditions in global value chains

Women are overrepresented in assembly-line type jobs in developing countries, which tend to be low-pay, have bad working conditions (long and irregular working hours) and weak employment and social protection. Much of this employment is located in export processing zones (EPZs), in which between 70-90% of workers – around 50 million - are women (Wick 2010). Sectors with a particularly high representation of women include textiles, clothing, food processing, horticulture, pharmaceuticals, household goods and toy production.

Recent reports on the conditions in textile factories and the garment sector particularly highlight the vulnerability of women. In Vietnam, 80% of the 700,000 garment factory workers are women. They work for longer hours than men, are less likely to receive training and benefits, and earn only 85% of men's wages (Rees, 2014). Even in factories that supply some of the best known companies in the world, working conditions have sparked human right violation allegations. In the span of three days in November of 2016, 360 workers collapsed in Cambodia. They reported working in 37 degree Celsius heat, being overworked and underfed (McVeigh, 2017). Human Rights Watch similarly revealed that women were refused bathroom breaks, denied sick leave and suffered from sexual and physical abuse (Talaga, 2015).

Weak labour conditions not only negatively affect women's well-being but are also linked to sectors that are responsible for unsustainable production practices (e.g. cotton). Due to public pressure, companies increasingly report on social and environmental aspects of their activities. Through initiatives such as the UN Global Compact, the Global Reporting Initiative, the OECD Guidelines for Multinational Enterprises, and the OECD Due Diligence for Responsible Business Conduct, multinationals are increasingly being held accountable for their operations in developing countries, including their carbon footprint, broader environmental impact and the labour and human rights conditions of their employees. But a stronger effort is needed to improve national economic accounting and enhance awareness about the real cost of global products, with a specific focus on the impact on women and the environment. More also needs to be done to improve transparency and corporate accountability for environmental impact and human rights and workplace conditions along global supply chains.

Box 9. Promoting responsible business conduct along supply chains

The OECD Guidelines for Multinational Enterprises (the Guidelines) calls on companies to avoid causing or contributing to adverse impacts through their own activities and to seek to prevent and mitigate adverse impacts in their supply chains.

As part of its work to promote the Guidelines, the OECD has developed guidance for supply chain due diligence across a number of sectors, including specific recommendations that promote the well-being of women. In particular, the guidance for the garment and footwear sector addresses sexual harassment and sexual and gender-based violence in the workplace and includes recommendations on mainstreaming a gender perspective into company due diligence approaches. The guidance on mineral supply chains addresses widespread sexual violence and child labour. In this regard, while most jobs in the large mining companies are held by men, approximately 30% of the world's artisanal miners are women. Agriculture also has a large percentage of female labour; the guidance for agricultural supply chains calls on companies to end discrimination against women and enhance their participation in decision-making and access and control over natural resources.

Under the Guidelines, adherent countries (48) are required to establish National Contact Points (NCPs) whose role is to promote the Guidelines and provide a non-judicial grievance mechanism in cases of alleged violations (e.g. relating to environmental, labour and human rights standards).

Some countries have also introduced legislation to ensure that companies control their supply chains more closely. The UK Modern Slavery Act, Section 3017 of the United

States Tariff Act and the California Transparency in Supply Chains Act all include expectations related to supply chain transparency.

Environmental effects of unsustainable production by gender

Women are more likely to experience the negative side-effects of unsustainable production, such as pollution and the destruction of rural communities and public commons such as forests. In low-income countries, girls and women are often responsible for collecting water and gathering biofuel and food from forests, which makes them more exposed to climate change and environmental change.

The operation of multinationals in developing countries is of particular concern, as often labour, health and environmental standards are less stringent or less effectively applied. Multinational companies may move their operations abroad in search of less onerous regulations and, despite initiatives such as the UN Global Compact and the Global Reporting Initiative, they are not applied the same controls and reporting standards as in their home countries. Multinational enterprises are responsible for some of the most egregious damage to the environment, in particular the ongoing deforestation in countries within the tropical region to open up land for grazing and farming, much of which is export-oriented.

Waste management practices also disproportionately affect the poorest populations across borders via rivers, oceans or directly exported landfills. Women, in particular in rural communities, are among the most affected, because of their role in the household (Scheinberg, 1999). Landfills also bring major health risks, and women tend be the bigger casualties because of their role as waste pickers. In two major landfill collapses that took place in Addis Ababa, Ethiopia in 2017 and Maputo, Mozambique in 2018, more than 65% and 75%, respectively of the hundreds of casualties were women.

The role of women in sustainable consumption and production

The development of more economically and environmentally sustainable value chains is interlinked with achieving gender equality. Women's social responsibilities make them ideally positioned to manage natural resources and contribute to local and global value chains. Since they usually collect water and biofuel and grow subsistence crops, women have a unique repertoire of knowledge and skills. However, the gender gap in access to resources, assets and decision-making undermines women's ability to efficiently contribute to the economy

Engaging women in the circular economy

There are numerous examples of successful initiatives engaging women to promote sustainable consumption. For example, in a study of households in Harare (Davies et al., 2016), the inclusion of women in solid waste management was found to ensure proper sanitation behaviour across the community.

Box 10. Women and the circular economy

The OECD RE-CIRCLE project provides policy guidance on resource efficiency and the transition to a circular economy and aims to identify and quantify the impact of policies to guide a range of stakeholders in OECD member countries and emerging market economies through quantitative and qualitative analysis. The project is a successor to CIRCLE, an OECD project quantifying the feedbacks from environmental challenges on long-term economic growth.

One aspect of the research focuses on new business models, such as sharing and service based models, that are emerging and scaling-up very quickly. While some of these models seem to hold opportunities for resource productivity and the environment, their potential impacts areinsufficiently researched. Even less is known about the policy measures that governments can use to encourage the business models that appear to be virtuous from the perspective of resource efficiency.

One aspect that deserves further evidence gathering and research is both the role of women in the development of such new business models as well as the different gender impact that such models may have, taking into consideration women's preferences and needs and different labour market patterns.

Women as decision-makers to promote sustainable global production patterns

With the development of global value chains, production and sourcing take place on an increasingly global scale. Women generally have less of a say in production, as they have fewer assets and less access to leadership positions, especially in manufacturing activities and the natural resource sector. In 2013, only 10% of employees in large-scale extractive industry were women. Furthermore, studies show that in countries with high dependence on mining, oil and gas extraction, women were much less likely to be in leadership positions than men (World Bank 2015).

Improving gender equality and sustainable economies is mutually reinforcing. For instance, closing the gender gap in agriculture (by increasing access to assets, land and opportunities) would enable women to increase their yield by 20 to 30%, thus reducing the number of food insecure people worldwide by 12 to 17% ("Developing gender-sensitive value chains", 2016). Improving efficiency in agriculture also helps women free up time for other responsibilities and alleviates the triple burden. In addition, the integration of women in local value chains enables regional suburban development, thereby reducing urban resettlement and the pressures of urban living.

Women and SDG15 - Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Environmental degradation has more intense effects on women

Deforestation and overfarming increase the likelihood of droughts and are major contributors to global warming. Understanding how these factors affect men and women differently, as well as the important role omen can play in changing the course of human action, are central to protecting our ecosystems and supporting biodiversity.

Given women's role in ensuring water and fuel supplies in developing countries, deforestation, land degradation and desertification can affect them first and foremost, as they are often charged with making up shortfalls in supplies. Deforestation and the extension of mass farming can thus reduce water supplies, forcing women to travel further to collect water for household use.

Women in rural and traditional communities are also directly affected by deforestation as they are often charged with collecting wild edible and medicinal plants. Women are also particularly affected by the destruction of 'marginal' land, which is often perceived as less important and less useful than agricultural land. Marginal lands perform key subsistence functions and are of particular importance to women.

Policy action to protect such commons can vary from the establishment of national parks to autonomous areas for indigenous populations. Managing forests, nature reserves and in general protecting biodiversity also requires a transboundary perspective, as nature does not follow human frontiers.

The role of women in environmental preservation

Women's limited ownership of land – driven in large part by discriminatory practices – reduces their incentive to adopt sustainable farming practices and their capacity to change how land is used, hampering their ability to deal with environmental damage. Their knowledge about traditional practices that are inherently sustainable and their attitudes to conservation are often excluded from decisions about sustainable ecosystems, as most infrastructure and natural resource management projects at both local and national levels are often dominated by men, who are not necessarily knowledgeable about particular local areas. Other constraints to engaging women in sustainable land management include insecurity of tenure, the lack of value assigned to labour and subsistence farming, and the lack of financial resources, technical knowledge and means for sustainable land management practices.

The role of women in environmental preservation is an area with little mainstream research, but there is a growing evidence that they play a key role in environmental preservation agenda.

Environmental treaties more likely to be endorsed

Environmental treaties are more likely to be endorsed in countries with a more equal gender balance. Studies show that states with higher proportions of women in Parliament are more likely to endorse environmental treaties and policies. Women were found to be more risk-averse than men in terms of environmental risk, have a more negative perception of nuclear

power and waste, and represent the vast majority (60 to 80%) of membership in mainstream environmental organisations (Norgaard, York 2005).

Women's role in the management of the commons

Research shows that including women in forest and fishery management groups can result in better resource governance and conservation outcomes (Leisher et al. Environ Evid, 2016). In Rwanda, land tenure reforms that reduce gender barriers to land ownership have led to a significant increase in soil conservation investment by female-headed households. (Daniel AyalewAli et al).

The role of women in the management of commons requires much greater focus than has been the case up to now. The importance of this issue was at the core of the research of Elinor Ostrom, the only woman ever to win the Nobel Memorial Prize in Economics for her "analysis of economic governance, especially the commons". She researched how humans interact with ecosystems to maintain long-term sustainable resource yields, developing institutional mechanisms to share the use, management and monitoring of commons, while avoiding ecosystem collapse. Her work emphasised the multifaceted nature of human-ecosystem interaction and argued against any singular solution for individual social-ecological system problems. Sustainable development requires a decentralised approach to governance that is community-focused and would thus empower women and indigenous populations to participate and take on leadership positions.

Box 11. Women in indigenous communities and their ecosystems

The lives and survival of indigenous communities are intrinsically linked to the ecosystem that surrounds them. Indigenous communities draw much of their subsistence food, water and energy from the surrounding environment. They also accumulate a vast wealth of traditional knowledge about the medicinal properties of plants and other benefits that can be drawn from ecosystems as well about the sustainable management of natural resources.

On the other hand, their close links to and dependency on well-functioning ecosystems makes indigenous Peoples highly vulnerable to environmental damages and climate change. Deforestation and pollution caused by mass farming, industrial activities and expanding urbanisation all pose grave and growing threats to the livelihoods and survival of such communities.

Indigenous women have played a fundamental role in environmental conservation and protection throughout the history of their peoples. Historically, in traditional societies, indigenous women and men have often had equal access to lands, animals and resources. Many of these societies are matriarchal, providing a strong role to women as managers of the household and the family, the founding pillars of their societies. But this has been changing as 'modern' practices and legislation were introduced, in with the more patriarchal, capitalist system of Western-culture countries (UN, 2010).

As indigenous peoples increasingly interact with 'modern' economies and societies, it is often indigenous men, rather than women, who participate in the decision-making and planning of projects related to natural resource management in their communities. As a result, the valuable knowledge of women and their attitude towards their environment are often ignored. Furthermore, the move from collective ownership and responsibility to titled land and inheritance laws often leads to the discrimination of women, which reduces

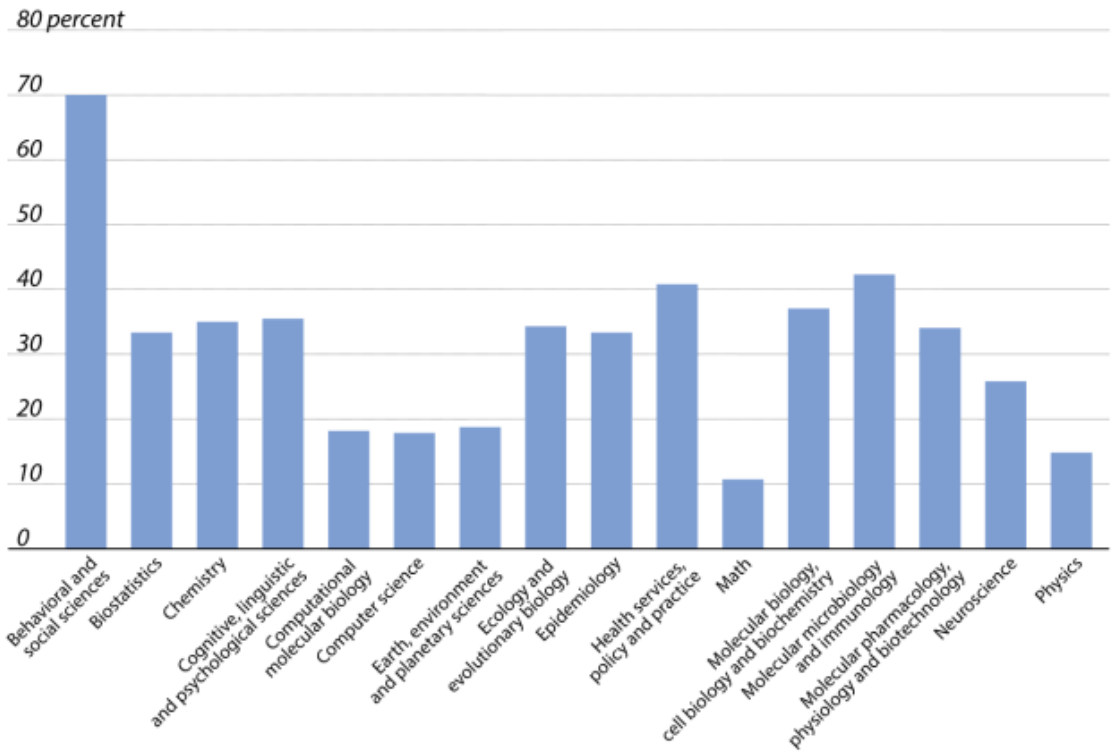
incentives to protect the environment. All these negative effects can create cycles of declining productivity, environmental degradation and growing food insecurity.

Recognising the specific importance of Indigenous Peoples and their communities, in 2002, the Permanent Forum on Indigenous Issues (UNPFII) was established as an advisory body to the Economic and Social Council (ECOSOC). The United Nations Environment Programme (UNEP) has a dedicated part-time Focal Point on indigenous issues since 2004. Indigenous Peoples can contact the Focal Point at any time regarding UNEP's work programmes. In 2012 UNEP produced policy guidance on Indigenous Peoples, which covers the role of women and the involvement of communities in UNEP sustainable development projects.

Women in science

Ensuring the sustainable management of ecosystems will require massive progress in science and innovation. Yet, the contribution to scientific research is sometimes hindered by social norms. For example in the US, women often make up nearly half of the biology faculty, and within the department of behavioral and social sciences, 70 percent of faculty members are women. Yet, more often than not women are dissuaded from following the more technical subjects related to environmental management, which may hamper the quality of overall biodiversity research and managment.

Figure 4. Proportion of women in STEM faculty



Source: Brown University website.

What has been done? What needs to be done?

Recent progress

In line with the 2030 Agenda, countries have made progress at the national level in addressing gender inequality. Countries approach this agenda in various ways, from tackling discrimination to encouraging girls to study STEM subjects and improving early childhood care and parental leave. The OECD has placed gender equality as a priority in its agenda; through its 2013 and 2015 Gender Recommendations, the OECD encouraged adherent countries to enhance gender equality in all aspects of society (see Box 4). The 2017 OECD Ministerial Council meeting identified three urgent gender equality issues: violence against women, unequal wages and unequal sharing of household tasks. Since then, countries have taken various measures to tackle these issues (OECD, 2017). For example, Austria and France, among other countries, have introduced and reinforced their anti-harassment laws. Other countries, such as Greece and Korea, are increasing their awareness-raising campaigns regarding sexual harassment, its prevention, and the rights of victims (OECD, 2017). Spain has extended the length of paternity leave. To address economic inequality, the G20 agreed to the 25 x 25 goal of reducing the gap in labour force participation rates between men and women by 25% by 2025. Following the OECD Gender Recommendations, two-thirds of the countries have implemented new equal pay policies, including transparency measures and analyses of wage gaps. Nine member countries have also introduced compulsory gender quotas in board membership positions, and many other countries have also implemented quotas to increase female participation in politics (OECD, 2017).

However, while the 2030 Agenda has laid out mainstreaming gender in the interlinkages between gender equality and all other SDGs, in practice the gender perspective is these two agendas are still not fully integrated at the national level. Further efforts are needed to integrate gender and sustainability goals systematically. Governments around the world are stepping up their sustainability actions, but the implications for and role of women are not being addressed sufficiently in this agenda. For example, gender perspectives are rarely a priority in infrastructure or urban development, despite the recognition of women's important role in governance[4] to deliver more sustainable outcomes.

Empowering women is essential to achieve the 2030 Agenda

First, recognise the link between gender and environmental sustainability

As this paper has shown, the relationship between gender equality and environmental sustainability is still an emerging area of research, which lack systematic collection of evidence and monitoring of initiatives and is often overlooked by policy makers, businesses and sometimes women themselves. Yet, the existing evidence clearly shows that in both - advanced and developing - countries women are generally more directly affected by environmental harm, are more conscious about environmental risks and more sensitive to a sustainable management of natural resources.

As highlighted in the previous section, the intersection between gender inequality and the SDGs that this report covers lies ultimately in the fact that women are disproportionally

[4] This issue has been recognised, among others, in UN HABITAT's Policy and Plan for Gender Equality and the Empowerment of Women for 2014-19.

vulnerable and affected by energy poverty, unsustainable production, inadequate access to water and sanitation and environmental degradation, as well as crime and chronic stress in urban environments. At the same time, women are more responsible users of energy and sustainable consumers and are more sensitive to ecological, environmental and health concerns. These differential gender effects and needs are particularly evident in low income countries, where girls and women have the added role of provisioning water and fuel for the household.

The main conclusion from the analysis on the gender-sustainability nexus is the need for an integrated approach to gender equality and sustainability that, on the one hand, takes into account the specific needs, preferences and well-being of women and, on the other hand, ensures their involvement in decision-making. The two recommendations are mutually reinforcing: the more women are consulted regarding projects that have an environmental impact and the more positions of responsibility they take up, the more likely will policies and investment projects take into account both gender and environmental considerations. A key policy implication from this analysis is that women must be empowered in a fundamental way to achieve the 2030 Agenda.

Second, collecting data on women as users and take their needs and different patterns into account

When making economic policies, designing cities, housing, infrastructure, making trade agreements, or using natural resources, the differential impact on women must be reported and collected. The evidence collected in this paper is based largely on case studies across sectors and countries. But, in general, there is no systematic data collection that would allow governments and private companies to define their strategies and projects in a more gender-conscious way. Similarly, there is very limited information on transboundary gender and environmental effects.

Some initiatives like the Global Reporting Initiative go in the right direction, but set a relatively low minimum standard of disclosure on companies. For instance, there is no specific gender standard, nor any joint reporting on gender-sustainability impact. The main GRI standard relating women, GRI 405 on diversity and equal opportunity, calls for reporting on the share of female workers performing the organization's activities, their relative remuneration, and their participation at the highest governance level. On climate change disclosures, the bar has been raised by the Task Force on Climate-related Financial Disclosures (TCFD). The 2018 TCFD report of the surveyed over 1,700 companies and found that a majority of companies were already disclosing aligned with one or more of the TCFD recommendations published in June 2017. Again, there is no specific link made to the gender-specific impact of climate change.

Reporting initiatives such as the GRI also tend to blindly encourage greater economic opportunities for women in the form of higher labour force participation, without considering the potential challenges that women can face when they lack the necessary infrastructure and support from their family. As the example of transport shows that working women tend continue to dedicate more time to child and elderly care and therefore have specific needs regarding the frequency of public transport off-peak hours.

Third, giving women equal resources and voice in decision-making processes at all levels

Based on the evidence reported, involving women more in decision-making processes that affect the environment is likely to improve the sustainability of decisions. At a minimum,

women groups should be consulted regarding urban and settlement design, transport and other major infrastructure decisions. Gender diversity should also be promoted in leadership and decision-making positions at all levels of government, and in the private sector.

But there is still a long way to go. For example, in city governance, in OECD countries, women make up only 5% of mayors and thus lack voice in designing local policies (OECD, 2017a). In addition, women only hold 22.8% of national parliament seats worldwide, a slow increase from 11.3% in 1996. As of January 2017, only 18.3% of government ministers were women worldwide (UN Women, 2017). This contrasts with the important role that women and indigenous populations play at the local community level – voluntary community initiatives such as conservation and waste management actions are more likely to be led by women and indigenous populations (see Box 5).

Through case studies and experiments, it has become evident that the inclusion of women in national and international decision-making significantly improves all aspects of government effectiveness. Women are more co-operative and more willing to work alongside members of the opposite political parties (Paxton and Hughes, 2007). They are also more likely to adopt different approaches to problem solving and explore innovative solutions (Iwanaga, 2008). Women are more concerned with the public good than concentrating political power in government. As such, they oftentimes support an increase in government spending on health care and social policies (Swiss et al., 2012). Their concern with different social topics leads to more extensive public policies and legislation. A study in India found that when the village council was comprised of at least one-third women, the council was more likely to invest in infrastructure projects (Swiss et al., 2012). Similarly, with the increase of female representation in Sweden, the government passed more pieces of legislation, thereby leading to greater and faster social change (Iwanaga, 2008).

Increasing the participation of women in leadership roles and decision-making entities, whether it be in politics, business, or at the local level is also essential to ensure that gender and sustainability perspectives are well integrated into urban planning, including transport and social infrastructure, natural resource management, cross-border business, and other activities with an environmental impact. To deliver impact, women must be empowered directly and also develop a collective, representative voice. For example, women in leadership roles were essential in delivering the Paris Agreement. The UNFCCC is implemented a Gender Action Plan approved in Lima, which promotes the mainstreaming of gender into climate policy and action at all levels, including ensuring greater female participation in climate negotiations. The gender composition report prepared for COP 24 revealed that for the first time since reporting began in 2013 and six years after the COP adopted a goal of gender balance in technical and decision-making bodies established under the UNFCCC, more than half of these bodies have female representation of 38 per cent or more. Furthermore, there was is a record number of female delegates elected to the position of Chair or Co-Chair of these bodies – nine out of a possible 28 positions.

Women in leadership positions in business can also help transform their approach to environmental risks and impact. The GRI has documented evidence showing that the more women work in management positions within an organization, the more sustainability reporting tends to be done. Since the launch of the online GRI Standards exam, in July 2017, 65% of successful Exam takers have been female.

Box 12. The OECD Gender Recommendations

The OECD Gender Recommendations are rooted in the OECD Gender Initiative, which started in 2010; the All on Board for Inclusive Growth initiative, launched in 2012; and the understanding that, despite existing policies, "significant gender disparities and biases nevertheless remain in educational and occupational choices; earning levels and working conditions; career progression; representation in decision-making positions; in public life; in the uptake of paid and unpaid work; in entrepreneurial activities; in access to finance for entrepreneurs; and in financial literacy and financial empowerment" (OECD, 2013).

The "Recommendation of the Council on Gender Equality in Education, Employment, and Entrepreneurship" was adopted on 29 May 2013. It sets out a number of measures that members and non members who adhered to it should consider implementing in order to address gender inequalities in education, employment and entrepreneurship (OECD, 2013). In particular, it recommends that adherents should – through appropriate legislation, policies, monitoring, and campaigning – provide equal access to education, better enable female labour force participation, promote family-friendly policies, foster greater male uptake of unpaid work, work toward a better gender balance in positions of public and private sector leadership, and promote entrepreneurship among women.

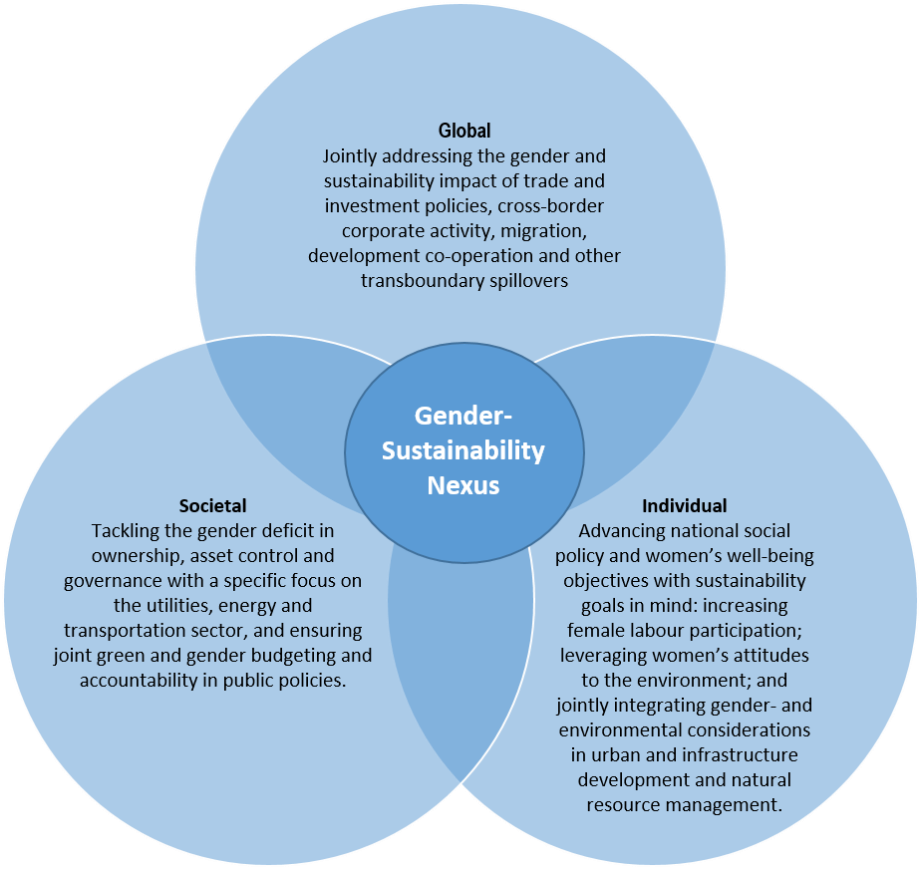
The 2013 Gender Recommendations inspired and informed the development of the "Recommendation of the Council on Gender Equality in Public Life", adopted by the Council in 2015 (OECD, 2015a). It is grounded upon the understanding State actions have an enormous capacity to strengthen or weaken gender equality and diversity in OECD economies and societies. It focuses on effective governance and the implementation of gender equality objectives and gender mainstreaming measures, including gender budgeting, inclusive public procurement and regulatory cycles. It recommends that Adherents strengthen accountability and oversight mechanisms for gender equality and mainstreaming initiatives across and within government bodies. It also provides actionable guidelines to enhance women's equal access to public leadership opportunities in parliament, government, the judiciary and the civil service. The 2018 "Toolkit on Implementing and Mainstreaming Gender Equality" presents a palette of policy options, tools, self-assessment questions and good practices as a practical road map to support countries in the implementation of the 2015 Gender Recommendation.

Developing a holistic policy approach to tackling the gender-sustainability nexus

Bringing together gender and sustainability goals requires a holistic and coherent policy framework, taking into account the trade-offs and complementarities at the local, national and international levels (global spillovers). Gender equality policies must recognise the role that women play in maintaining ecosystems and in promoting responsible consumption and production patterns. Similarly, sustainability policies must include a gender perspective and mainstream gender goals.

The graph below provides a summary of the policy vectors that can help align the gender and sustainability agenda and design policies in an integrated manner. Policy-makers should act on all three pillars simultaneously and through cross-cutting policies: adjust national policies to gender and environmental goals, taking into account gendered economic accounting and multinationals activities and systematically scrutinising transboundary spillovers.

Figure 5. Gender-Sustainability Nexus



Source: Author's own illustration.

An integrated policy framework must consider these inter-linkages systematically, including international engagements, assess domestic and international impacts and apply an intergenerational timeframe. In addition, other institutional and political mechanisms need to be in place, including political commitment and leadership, policy and institutional co-ordination, local and regional involvement, stakeholder participation as well as monitoring and reporting.

Transboundary effects are of particular importance in tackling gender inequality and sustainability. Stronger monitoring of the activities of companies in developing (and to some extent developed) countries is essential to ensure that corporations promote labour practices that are respectful of women's rights and the environment. Ensuring decent work and social security to migrant workers in developed countries should also be accompanied by efforts to improve their awareness about environmental footprints. A gender and sustainability lens should also be applied to imports, requiring importers to carry out due diligence on their supply chains. The effective implementation of existing international recommendations, such the OECD Due Diligence Guidelines, however, requires a stronger sanctioning mechanism than is currently available.

Intergenerational effects are also inherent to both gender and sustainability goals. Gender inequalities tend to be 'sticky' and perpetuate themselves across generations, e.g. in

environments where women's empowerment is restrained such as low income households where priority tends to be given to boys over girls whether in education, health or inheritance. This is of particular concern as generational social mobility has been decreasing in OECD countries over recent decades (OECD 2017c). Environmental damage is also by nature an intergenerational process that can take many years to reveal its true cost.

At a global level, there is a clear need for a global governance mechanism to ensure that transboundary gender and environmental effects of policies are adequately addressed. In particular, gender and sustainability should be mainstreamed into trade, investment and migration policies and strong mechanisms must be put in place for promoting responsible business conduct.

Adopting an inclusive growth approach to focus on the most vulnerable women

The OECD policy framework for inclusive growth provides a structure and methodology to bring about improvements in women's well-being broadly defined (including environmental sustainability). It does so by focusing public policies on the most vulnerable in society (across different dimensions of well-being), tailoring policies for maximum impact, promoting the role of business in inclusiveness and sustainability, and ensuring that public governance is fit for purpose.

Neither women nor men are a uniform group and hence a basic condition for better policies is obtaining more granularity on women's needs and preferences and better understanding the local conditions they face, including how they are affected by environmental changes. There is also a need to map policies to different indicators of women's well-being, including health, personal safety and ability to deliver children and elderly care. Finally, the policy framework must address the interaction between goals and policies, and propose actions that ensure policy coherence, addressing trade-offs and complementarities.

Towards a whole-of-government vision and action plan to jointly deliver gender equality and sustainability

In order to bring about lasting and impactful change that tackle the environmental concerns affecting women, there is a need for a whole-of-government vision that brings together these goals that are at the core of the 2030 agenda. The adoption of joint gender-sustainability mainstreaming mechanisms and tools, including fiscal policies is crucial to ensure that administrations build the culture and the capacity to identify differentiated gender needs within their population in relation to the management of natural resources and environmental risks, and to respond to them with gender-sensitive policies, services and budgets (Box 13).

Box 13. Budget initiatives to help achieve sustainable policy goals

Understanding the differentiated impact of public policies, programmes and budgets on the economy, society and the environment is crucial for advancing equitable and inclusive outcomes across all policy sectors. For example, gender budgeting is an increasingly common practice utilised by OECD member and partner countries, both at the national and sub-national levels, to ensure that women's and girls' concerns are addressed in policy-making and resource allocation. Over half of OECD countries report that they have introduced, plan to introduce, or are actively considering introducing gender budgeting.

Another example is environmentally responsive or "green budgeting", which introduces innovative ways to help governments establish a process to record and communicate its policy progress to achieve environmental objectives through budgeting processes. Green budgeting aims to drive improvements in the alignment of national expenditure and revenue processes with climate and other environmental goals. This is a crucial step in achieving a central objective of key international agreements, including the Paris Agreement, the Aichi Biodiversity Targets, and the SDGs – aligning national policy frameworks and financial flows on a pathway towards low greenhouse gas emissions and environmentally sustainable development.

Both of these initiatives could be brought together in a "SDG-budgeting process" to pave the way for a comprehensive assessment of how all the sustainable development goals can be embedded in the budget process. The way governments choose to spend their money will be decisive to achieve these commitments. The opportunity for progress is enormous given the existing misalignment between the SDGs and current public expenditure and taxation practices.

Working in partnerships to deliver transformative change

Neither gender equality nor environmental sustainability will be achieved "automatically". Clear progress can only be achieved by a transformative vision and determined policy action, leadership, commitment, resources and engagement of all stakeholders. Tools for monitoring also need to be further developed, including more disaggregated data on the determinants and the impacts of women's contribution to SDGs, including with specific evidence on policies that enable women to be full actors of sustainable development.

A number of partnerships have been launched by UN agencies such as UN Women and UN Environment, the UNFCCC, which address more specifically the gender-sustainability nexus than older initiatives such as the UN Global Compact or the Global Reporting Initiative. However, none of these initiatives provide the necessary integrated, holistic approach to the nexus, nor do they ensure effective evidence gathering, which is the basis for decision-making. Together with a number of partners, the OECD is establishing the "***Gender Policy Platform: Accelerating Gender Mainstreaming***" to bring together stakeholders from the public and private sector and civil society to deliver on gender equality, inclusiveness and sustainability agendas in an integrated manner. Initially building on existing work on gender and SDGs as part of the gender initiative, the platform will engage stakeholders in a dialogue to advance evidence gathering and policy analysis, and identify actions and measures that can be taken at global, regional, national and community levels to:

- Fully integrate gender, inclusiveness and sustainability dimensions in policy-making in a holistic and coherent manner, while taking into account transboundary and intergenerational effects.
- Enhance the role of women in promoting sustainable development via women's full participation in political, social and economic life, while also ensuring the achievement of inclusiveness and sustainability goals.
- Engage the private sector in advancing gender equality and sustainability objectives.

Using this report as a stepping stone, the Platform aims to expand its research and as next steps will deliver a follow up report that expands the analysis on the gender-sustainability nexus to all SDGs and develops further the methodology proposed in this paper. It will also deliver a report on gender equality and sustainable and quality infrastructure.

The Platform will also build up its awareness raising activities and engage in partnerships with other international organisations, business and civil society to support a better understanding, evidence gathering and effective reporting on the gender-sustainability nexus. In addition, it will extend the study "Measuring Distance to SDG Targets" (OECD, 2019) to outline the statistical agenda ahead for greater granularity in the measurement of the SDGs as well as to provide an overview of key strengths and challenges faced in meeting the SDG targets for women. It will also engage with companies via the Business Platform for Inclusive Growth to improve their reporting on how their activities aiming to improve sustainability specifically impact the well-being by gender.

Annex: Gender in the Sustainable Development Goals (SDGs): mapping interlinkages

SDG	Explicit links with gender equality	Other entry points and trade offs
SDG 1 No poverty:	Gender sensitive development strategies and equal rights and access to resources (1.b, 1.4, 5.1)	Economic activities should take into account environmental impact
SDG 2 Zero Hunger:	Nutritional needs adolescent girls, pregnant and lactating women; increase female small scale producers (2.2, 2.3, 5.1) Volatile or rising food prices have a detrimental impact on women's access to food, which underlines the importance of policies to prevent food price hikes, and the need for governments to ensure the affordability and accessibility of food (2.3).	Food production should respect environment
SDG 3 Good health and well-being:	Universal access to sexual and reproductive health services and rights (3.7, 5.6) Further, women's critical roles in the global health workforce, comprising 67 per cent across 123 countries, provide a strong link between investing in the health workforce (3.c), recognizing and valuing unpaid care and domestic work (5.4) and achieving full and productive employment and decent work (8.5).	Responsible corporate practices in use of medicine
SDG 4 Quality education:	Eliminate gender disparities in education (4.3, 4.5, 4.6, 4.7, 4b, 5.1) elimination of violence against women and girls, including through promoting a culture of peace and non-violence (4.7)	
SDG 6. Water:	5 With special attention to the needs of women and girls(6.2)	
SDG7. Affordable and clean energy:		Accessible clean energy can empower women
SDG 8. Decent work and economic growth:	Equal pay for equal work, female migrants, recognise unpaid work **(8.5, 8.8, 5.4)**	Industrialisation and rural-urban migration policies need to take into account women's role in families, communities and the environment.
SDG 9. Industry, innovation and infrastructure:	Women's access to decent work (8) is often hampered by the disproportionate share of time devoted to unpaid care and domestic work (5.4), thus linked to lack of available infrastructure and technology (9.1 and 9.4). Supporting enterprise growth, generating employment and promoting sustainable industrial development (9.2) requires financial services, including affordable credit, and women's integration in value chains and markets (9.3).	
SDG 10. Reduced inequalities:	Social, political and economic participation irrespective of sex **(10.2, 5.1, 5.5)**	
SDG 11. Sustainable cities and communities:	providing safe public spaces (11.7) and transport (11.2) with special attention to women **(11.2, 11.7)** Women's access to decent work (8) is often hampered by the disproportionate share of time devoted to unpaid care and domestic work (5.4), thus linked to lack of available infrastructure and technology (9.1 and 9.4).	
SDG 12. Responsible consumption and production:		Women make more purchasing decisions on household perishables but have less of a say in production chains
SDG 13. Climate action:	Raise capacity climate-change related planning and management including focusing on women **(13.b)**	
SDG 14. Life below water:		Women could help to reduce pollution in oceans as household waste

		management is often their responsibility
SDG 15. Life on land:	Women's full and equal participation is also critical to contribute to climate-change related planning and management (13.b) and the sustainable use and management of terrestrial ecosystems (15.1 and15.2), taking into account the specific knowledge of indigenous women.	Shrinking commons traditionally benefited women
SDG 16 Peace, justice and institutions:	Achieving the water goal and targets is critical to reducing conflicts and exploit transboundary benefit sharing in river basins.	
SDG 17 Partnerships:	International cooperation is essential to manage shared water resources	

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