Selected stocktaking of good practices for inclusion of women in infrastructure

OECD

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Abstract

Infrastructure can have a major impact on women's access to resources and agency over their well-being, and thus on women's empowerment. Infrastructure itself is not gender-neutral: women and men have different needs and use infrastructure differently given their specific social roles, economic status or preferences. Poor infrastructure quality also poses differentiated threats to women's safety and well-being. Moreover, infrastructure has traditionally been a heavily male-dominated sector, leaving women little or no voice in investment decisions that affect their economic opportunities, day-to-day lives and well-being. Increasing women's participation in infrastructure policy and decision making is thus crucial.

This report explores the challenges policy makers face when mainstreaming gender into infrastructure and proposes a framework for incorporating gender considerations at each stage of the public investment process. The report also provides guidance on how to involve more women in infrastructure leadership and decision making.

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Executive Summary

Infrastructure is central to every country's pursuit of economic growth, wellbeing and sustainable development. It supports key policy priorities, for instance increasing access to jobs and markets, reducing poverty, closing income inequality gaps, addressing regional disparities and overall improving of quality of life. When poorly conceived, it can limit access to economic opportunities for certain groups, increase exposure to harmful pollution, and undermine conditions for health and safety. The COVID-19 crisis has had wide-ranging social and economic impacts globally, where men and women have been affected differently; for instance, women are over-represented as health care workers, continue to be the primary caregivers in households, and face high risks of economic insecurity, and increased risks of violence, exploitation, abuse or harassment during times of confinement. Even before the COVID-19 pandemic, some researchers had shown gains of up to 28 trillion USD globally if gender parity were to be reached globally (McKinsey and Co., 2015[1]), which can further support a sustainable recovery (OECD, 2021[2])

In response to the COVID-19 pandemic, governments' economic recovery packages involve significant infrastructure investments to stimulate economic growth and job creation. Benefits from these investments should be equitable to all, and informed by an understanding of gender impacts to effectively contribute to a fairer social and economic recovery while also progressing gender equality. Making well-informed decisions is critical as capital investments typically last for decades, defining our collective future by locking in the consequences of decisions that are being made now.

Robust governance frameworks provide governments with tools to align infrastructure planning, decision-making, and implementation with key targets on gender equality and eradication of violence against women and girls. By incorporating gender considerations into strategic planning and capital investment processes, setting objectives and measures, and involving more women in decision-making processes, governments can identify the gender impact of infrastructure decisions in budgets and prevent one group from disproportionally benefitting at the expense of disadvantaging others. The proposed framework for mainstreaming gender into infrastructure and capital budgeting identifies tools that can be used as part of the planning, selection and delivery processes to bring a gender lens to capital investment.

A life-cycle perspective is key to ensuring public investments are efficient and effective in progressing gender equality, and ensures that women's voices are heard at all stages of the investment and delivery process. Relevant changes will vary depending on the planning, formulation, prioritisation, approval, execution, evaluation and oversight of capital investments. The best opportunity to influence the decision-making process is during the early phases, although input during the evaluation phase can also be useful in terms of helping to formulate the budget for the following year.

The budget is also a central policy document in every government for setting and prioritising resources, and thus taking gender into account in the capital investment decisions is a critical dimension of infrastructure planning and sets the stage for the delivery of crosscutting priorities such as gender equality (OECD, 2021[2]). Gender capital budgeting, in particular, works best where parliament and the executive both play an active role in the selection and evaluation processes, and ideally, where civil society has an

active voice. A broad mapping of gender mainstreaming tools and country examples at each stage of the infrastructure life cycle is summarised in Table 1.

This selected stocktaking report includes material on G20 economies, including Australia, Canada, France, India, Mexico, Netherlands, South Africa and United Kingdom, as well as other OECD countries. G20 countries are encouraged to share additional examples and good practices on gender-responsive infrastructure decision-making in order to enrich the final version of this report.

Table 1. Toolkit for mainstreaming gender considerations into infrastructure and capital budgeting

Infrastructure life cycle phase	Tools and country examples
Long-term infrastructure vision for gender-responsive infrastructure	• Canada's long-term infrastructure plan's gender-impact assessment and alignment with gender objectives • Chilean Ministry of Transport and Telecommunications' Gender Commission • Colombia's methodology to mainstream gender considerations in public investment strategic planning • India's co-ordination efforts led by the Planning Commission • Iceland's gender-disaggregated data assessment report "*Mapping Gender Perspectives - Status Report 2021*".
Female voice and agency in infrastructure decision-making	• United Kingdom National Infrastructure Commission's Diversity and Inclusion Strategy • Gender perspectives to performance setting for capital programmes in Austria • The Australian state of Victoria's "Women in transport" programme • Mapping and targeting relevant stakeholders at different stages of the investment cycle • Sweden's, France's and the Netherlands' gender regulatory impact assessments
Gender considerations in project appraisal, selection, risk assessment and design	• Canada's Gender-based Analysis Framework + that takes into account gender considerations to accompany capital budget proposals • Australian state of Victoria's "Female Friendly Sport Infrastructure Guidelines" for infrastructure design and technical specification • Gender impact assessments for capital budget proposals in South Africa • Norway's large-scale project impact assessments
Gender-sensitive infrastructure procurement and delivery	• Switzerland's legal requirement on equal pay for men and women as a prerequisite for participation in public procurement • Iceland's equal pay certification legislation • Chilean central purchasing body's electronic registry for women-led or women-owned enterprises • Australian New South Wales' "Infrastructure Skills Legacy Programme" adopted an "Infrastructure Skills Legacy Programme" to increase diversity in infrastructure workforce • Canada's Women in Construction Fund to increase the participation of women in construction trades
Gender angle in monitoring and evaluation	• Key performance indicators and targets in gender equality along the different stages of the infrastructure life cycle

Introduction

Infrastructure is central to every country's pursuit of economic growth, people's wellbeing and sustainable development. It supports a number of key policy priorities, for instance increasing access to jobs and markets, reducing poverty, closing income inequality gaps, addressing regional disparities and overall improving quality of life. However, there is a common misconception that infrastructure is gender-neutral. For one, it is thought that women and men benefit equally from public investments, ignoring that both genders have different needs and use infrastructure differently due to their specific social roles, economic status or preferences (OECD, 2019[3]). Secondly, little attention is given to the fact that infrastructure is almost exclusively planned, designed and implemented by men (OECD, 2021[4]; UN Women, 2020[5]), even if it is meant for female end-users. As a key lever for sustainable and inclusive growth, benefits from infrastructure investment should be equitable to all and informed by an understanding of gender impacts to optimise benefits for both women and men.

Principle 5 of the G20 Quality Infrastructure Investment (QII) principles (Integrating Social Considerations in Infrastructure Investment) declares that infrastructure should be inclusive, enabling the economic participation and social inclusion of all. Good governance of infrastructure policy-making and implementation aims to support governments' ambitions for national and subnational sustainable and inclusive growth. Robust governance frameworks provide governments with tools to align infrastructure planning, decision-making and implementation with key policy objectives, such as gender equality and eradication of violence against women and girls. A life-cycle perspective is key to ensure public investments contribute to gender equality starting from the strategic phase all the way through monitoring and evaluation.

By incorporating gender considerations throughout the public investment process and involving more women in decision-making processes, governments can identify gender impacts of infrastructure decisions and prevent one group from disproportionally benefitting at the expense of disadvantaging others. Redrawing the frameworks for infrastructure planning, decision-making and delivery in order to follow a gender mainstreaming approach can facilitate governments' efforts to ensure an equal representation of women's and men's interests and needs.

This report explores the challenges that policy makers face when mainstreaming gender into infrastructure decision-making processes. It provides a framework and a broad mapping of gender mainstreaming tools at each stage of the infrastructure life cycle. Country examples help provide insights on how to adopt gender mainstreaming strategies to address various challenges governments face at each stage of the infrastructure life cycle. This selected stocktaking report includes material on G20 economies, including Australia, Canada, France, India, Mexico, Netherlands, South Africa and United Kingdom, as well as other OECD countries. G20 countries are encouraged to share additional examples and good practices on gender-responsive infrastructure decision-making in order to enrich the final version of this report.

The OECD Recommendation on the Governance of Infrastructure (2020) provides the basis for the analysis on how to meet QII Principle 5. The Recommendation is based on ten pillars for the governance of infrastructure that relate to how governments plan, prioritise, fund, budget, deliver, operate, and monitor infrastructure. It presents a whole-of-government approach, covering the entire life cycle of infrastructure projects and putting special emphasis on regional, social, gender, resilience and environmental perspectives.

1 Making the case for gender mainstreaming into infrastructure decision-making and capital budgeting

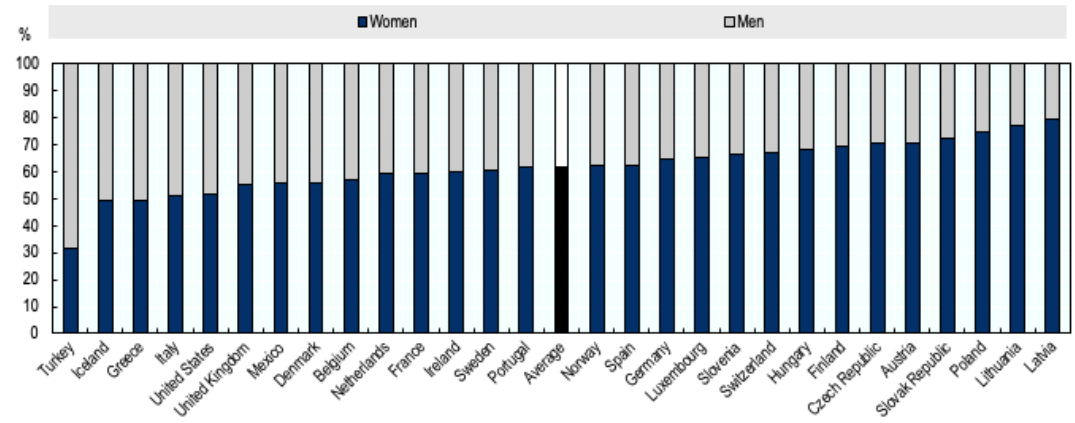
1. Gender mainstreaming in public investment is a strategy to achieve better outcomes for men and women by better understanding the issues that are at risk of going unnoticed during the investment and decision-making processes. Many believe that women will automatically benefit from infrastructure projects in the same way as men, without acknowledging possible distinct impacts on women and men. Women and men use and benefit from infrastructure differently, mainly due to the distinct challenges that they face in terms of poverty, unemployment and economic empowerment, safety and wellbeing, and political empowerment.

1.1. Poverty, unemployment and economic empowerment challenges

2. Women are disproportionately vulnerable to impoverishment and income inequality. Even before the COVID-19 crisis, women globally were 25% more likely to live in extreme poverty than men, and this gender poverty gap is expected to worsen due to the crisis' fallout (UN Women, 2020[6]; United Nations, 2020[7]). Poverty exacerbates gender inequality and restricts women's empowerment. Studies have found that economic constraints faced by poor households are often addressed at the expense of women's wellbeing (Duflo, 2012[8]). For instance, unequal income generation and labour opportunities foster unequal treatment and lower decision-making power within the household (Duflo, 2012[8]; Blumberg, 2005[9]). Rural, indigenous and migrant women are even more vulnerable. In addition to more limited access to employment and income generation opportunities, women inherently suffer from multi-dimensional discrimination and inequitable access to basic services and resources (OECD, 2019[10]).

3. The COVID-19 pandemic has had wide-ranging social and economic impacts globally, with different implications for men and women (OECD, 2020[11]). Women have been particularly affected by the crisis since they represent the largest share of employment in the long-term care sector. The high share of employment in long-term care has generally meant that women are at the front of the battle against the pandemic. As front-line responders, health professionals, and community volunteers, women are exposed to a greater risk of infection (OECD, 2020[11]). Women are also more likely than men to work in social sectors (see Figure 1.1) — such as services industries, retail, tourism, and hospitality — that require face-to-face interactions and which have been most impacted by containment measures and lay-offs, as well as the sectors with higher non-regular job contracts and informality (OECD, 2021[2]; UNOPS, 2020[12]). Prior to the COVID-19 pandemic, researchers had shown gains of up to USD 28 trillion if gender parity were to be reached globally (McKinsey and Co., 2015[1]), which can further support a sustainable recovery.

Figure 1.1. Distribution of employment in retail activities by sex

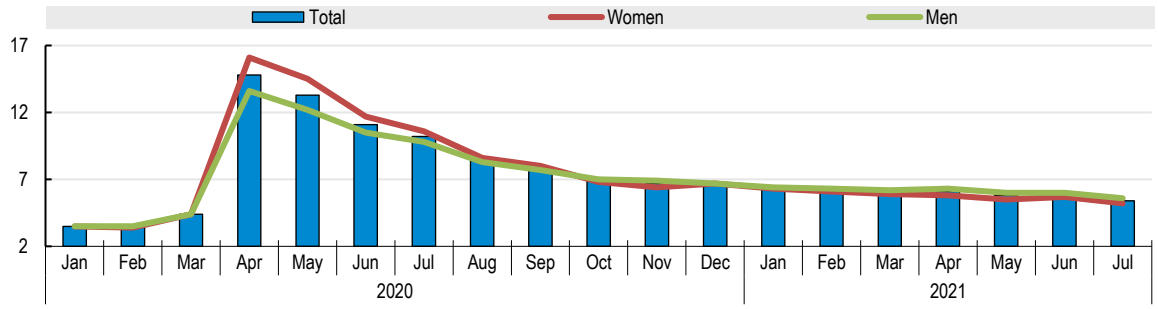


Note: Data refer to women's share of employment in ISIC Rev 4. category 47 (Retail trade, except of motor vehicles and motorcycles). Data refers to 2018.
Source: Queisser, Adema and Clarke (2020[13]), COVID-19, employment and women in OECD countries, OECD calculations based on data from ILO ILOSTAT, https://ilostat.ilo.org/data/.

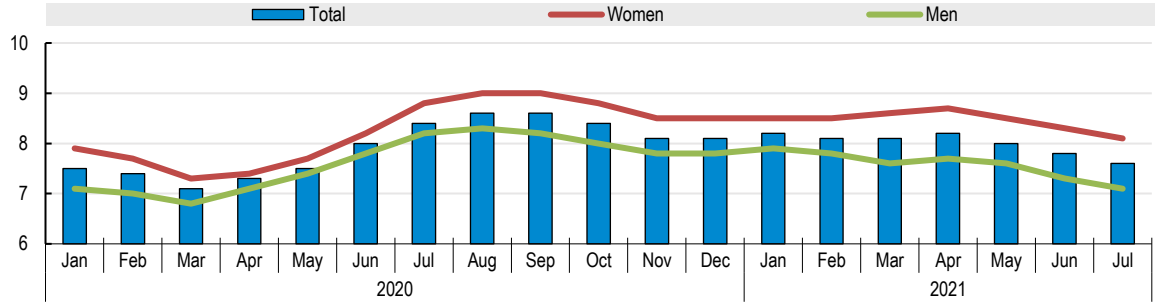
4. OECD data in Figure 1.2 shows that women have been hit hard in the United States where the female unemployment rate increased from 4.4% in March to 16.1% in April 2020. By December 2020, it had fallen to 6.7%, which was still three percent higher than the previous December. In comparison, the male unemployment rate also increased, but to a smaller extent. Since then, a massive rollout of vaccines in the US could have contributed to declining unemployment rates among women given their overrepresentation in nursing care. Similarly, in 2021, unemployment rates in the OECD have been declining, reaching 6.2% in July 2021, with the female unemployment rate remaining 0.4 percentage points higher than that of men (Figure 1.2, Panel C). The situation remains similar in the Euro area where unemployment rates of women did not yet reach pre-pandemic levels (Figure 1.2, Panel B). The impact of unemployment has been greater for women than for men, and reaching the pre-pandemic unemployment rates, especially for women, remains one of the main challenges in recovering from the COVID-19 pandemic.

Figure 1.2. Unemployment rate in times of COVID-19 – gender disaggregated data

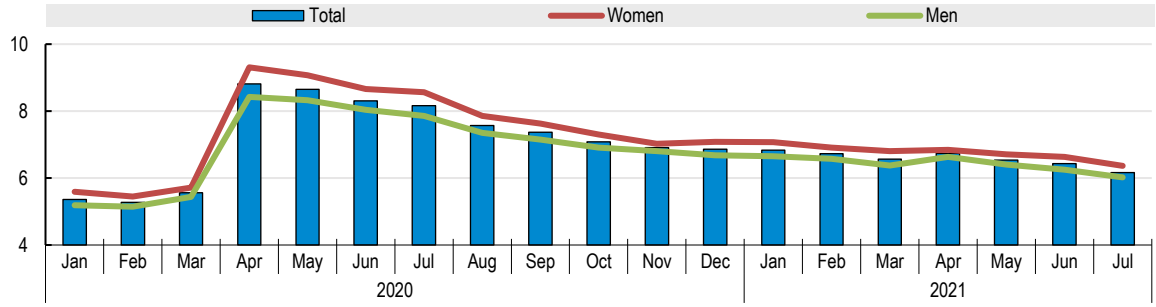
Panel A: USA: Unemployment rate, percentage of total workforce



Panel B: Euro-area (19 countries): Unemployment rate, percentage of total workforce



Panel C: OECD (total): Unemployment rate, percentage of total workforce



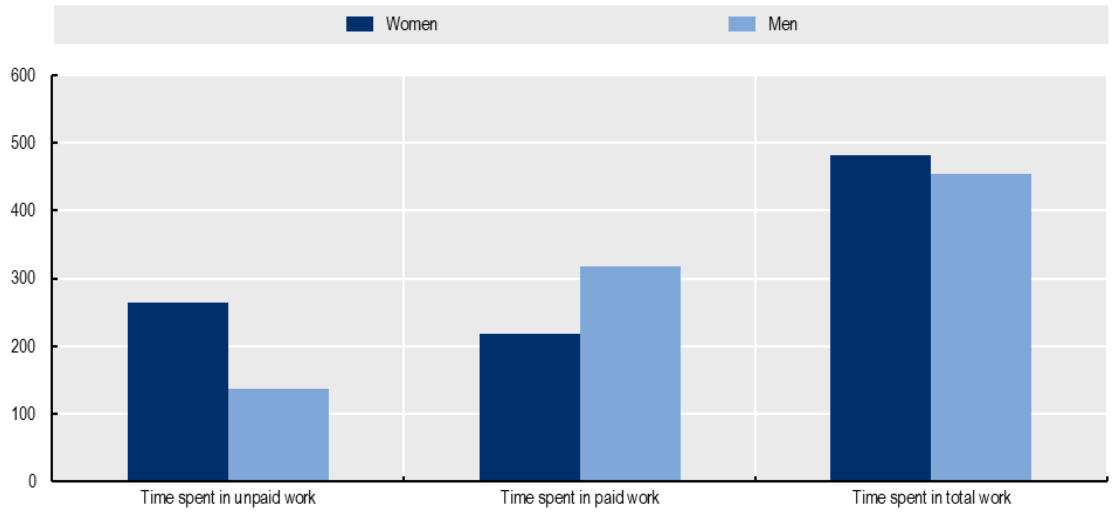
Source: OECD (2021[14]), Unemployment rate, https://data.oecd.org/unemp/unemployment-rate.htm.

5. Infrastructure investments can substantially improve women's economic empowerment by addressing barriers to female economic opportunities and access to labour markets that would otherwise be inaccessible to women (De Henau and Himmelweit, 2020[15]). Digital technologies, for example, have become essential to ensure access to job opportunities in the wake of the COVID-19 crisis. However, women and girls still enjoy less access to information technology than men and boys, especially in developing countries (OECD, 2019[10]). Overcoming the gender digital divide is crucial to ensure that they can harness the benefits of the digital transformation brought as a result of the COVID-19 pandemic crisis.

6. Globally, women spend a large portion of their time on unpaid work responsibilities (Figure 1.3) (OECD, 2019[16]; OECD, 2021[4]), making time poverty[1] a substantially gendered issue in both advanced economies and developing countries. In addition to the high share of unpaid work women already did at home prior to the pandemic, women are more likely to have taken on increased care responsibilities as the COVID-19 crisis progressed. While there is no region in the world where men devote the same amount of time to unpaid care work as women, gender gaps are most prevalent (from lowest to highest) in East Asia and the Pacific, Sub-Saharan Africa, Middle East and North Africa and South Asia (OECD, 2019[17]). Women tend to spend more time travelling and accompanying family members to schools, childcare centres, hospitals and other social services. In lower income countries, women also spend large amounts of time and energy fetching fuel and water, as well as preparing food without help of electronic kitchen appliances, due to poor coverage of basic services such as electricity, water and sanitation (Dutta, Kooijman and Elizabeth, 2017[18]).

[1] Time poverty has been understood as the lack of enough time for rest and leisure due to the allocation of long hours to work, both in the labour market and undertaking unpaid domestic work, either because an individual's household is under the poverty line or risks falling into poverty (Bardasi and Wodon, 2010[102]).

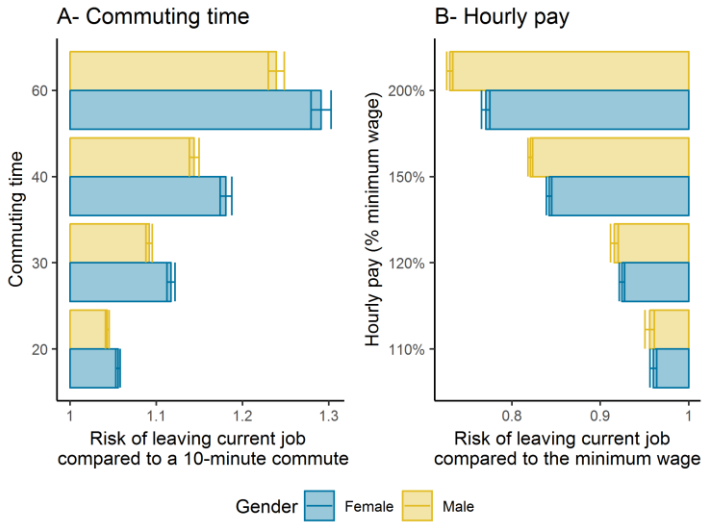
Figure 1.3. Time spent in paid and unpaid work by sex in OECD countries



Note: Information is presented in minutes per day. Average for OECD does not include data for Colombia, Chile, Costa Rica, Czech Republic, Iceland and Slovakia.
Source: (OECD, 2021[19])

7. Infrastructure can also have a significantly positive impact on the efficiency of time that women employ on both unpaid and paid work, more so when it is planned, prioritised and designed with women's specific needs and uses in mind. Failure to acknowledge this uneven distribution of unpaid work between women and men from different backgrounds during the formulation of infrastructure investment policies not only exacerbates women's time poverty, but also their productivity and income generation potential. Time poverty may deter many women from entering (or re-entering) the labour force (OECD, 2016[20]), accept lower paid jobs or influence their choice to enter the informal sector as it presumably provides more flexibility during their childbearing years (Gammage, Joshi and van der Meulen Rodgers, 2020[21]). In fact, recent studies have found that longer commutes increase the probability of leaving a job for both men and women, albeit the effects are greater for women (OECD, 2021[2]). Figure 1.4 shows that women who have an hour-long commute are 29.1% more likely to leave their current job than if they had a 10-minute commute, compared with 23.9% for men (Nafilyan, 2019[22]).

Figure 1.4. Women place more emphasis on their commute time when deciding whether to leave their jobs, while men prioritise pay



Source: Nafilyan (2019[23]), Gender differences in commute time and pay: A study into the gender gap for pay and commuting time, using data from the Annual Survey of Hours and Earnings.

8. Infrastructure services should aim to reduce the time burden brought by unpaid care or domestic tasks, whether it is through social or economic infrastructure assets; albeit, time saving gains from unpaid work are usually not considered in the assessment of infrastructure choices (UN Women, 2020[6]). Investments may even pay for themselves via increased labour force participation by women, and hence higher tax revenues. Public investment in physical infrastructure can create fiscal space in the long run by stimulating income growth and expanding the taxable income base (Seguino, 2017[24]). Neglecting women's needs in terms of transport and mobility can both limit their economic participation and decrease taxable income.

1.2. Safety and well-being challenges

9. Safety, security and wellbeing are also key factors in determining women's infrastructure preferences and choices. Across the world, women's mortality rate attributed to unsafe water, sanitation and hygiene is higher than that of men (OECD, 2021[4]). Access and quality of basic infrastructure services (e.g., electricity, water, sanitation and public toilet facilities) is essential for women's and girls' safety and satisfaction of basic needs, in particular related to menstrual hygiene, pregnancy and birth. Poor provision of these basic services can also become a significant barrier to women's and girls' educational and economic opportunities (UNOPS, 2020[12]). Women are systematically on the front line of natural hazards and poor environmental conditions. Dangerous levels of air pollution brought by the use of coal, wood and charcoal for cooking and heating purposes, for instance, represent a significant risk factor that contributes to premature death of women (OECD, 2021[4]).

10. Better infrastructure also plays an important part in reducing gender-based violence and harassment (GBVH), as well as workplace violence risks. One in three women worldwide have experienced physical and/or sexual violence in their life time, and data suggests an increase in domestic violence against women and girls during the COVID-19 crisis (Aponte et al., 2020[25]; World Health Organization, 2020[26]). The increase in violence against women and girls following the COVID-19 crisis is a highly infrastructure-related issue. The crisis has provided additional insight on its impact on women's

and girls' safety and wellbeing. Small size of public housing units, lack of access to broadband for education and public services and reduced mobility due to closure of public transportation are all factors that create additional pressure on primary caregivers, contribute to family stress and increase the risks of domestic violence and GBVH.

11. Fear of gender-based violence is, for example, a main barrier for women's and girls' access to public transport (Asian Development Bank, 2013[27]). In cities like Berlin, Copenhagen, Delhi, Helsinki, Oslo, Singapore and Stockholm, safety and security are identified as important factors in whether women use public transport or not (Ramboll, 2021[28]; OECD, 2021[2]). Infrastructure designs that take into account elements such as well-lit spaces, non-isolated public transit or accessible and modernised shelters can help reduce safety and security risks. Considerations around women's fear of harassment and assault and the need to create public spaces and facilities where women feel secure when traveling alone have to be prioritised (OECD, 2021[2]). These considerations should be factored in and analysed more when developing new public transport facilities and improving existing ones. When testing and developing autonomous public transport, it is important to factor in how public transport personnel could give women a sense of security.

1.3. Political empowerment challenges

12. Literature on women's social and political empowerment refers to the importance of increasing women's participation in all spheres of social life, including policy and decision-making, as a means to overcome some of the gendered institutions that hinder social development (Hill, 2003[29]; Chattopadhyay and Duflo, 2004[30]; Duflo, 2012[8]). Yet, globally the largest gender disparity continues to be women's political empowerment, as only 24.7% of the global gender gap according to the World Economic Forum's Political Empowerment sub index has been closed by 2020 and women's participation in politics remains limited (World Economic Forum, 2020[31]).

13. Infrastructure, in particular, has been traditionally a heavily male-dominated sector (OECD, 2019[17]; Lallement, 2013[32]; UNOPS, 2020[12]). Women are under-represented in key roles in infrastructure decision-making and workforce, which is partly explained by the fact that the skills involved are often associated with masculine identities (e.g., heavy manual input), but also because of how inadequate and hostile construction work environments can be for women (Grown, 2018[33]; Jeewooth, 2018[34]; OECD, 2021[4]).This is conducive to an implicit bias in favour of masculine sensitivities in the development of infrastructure, as opposed to female concerns which are only likely to appear in certain sectors of infrastructure that are tied to stereotypical gender roles (e.g., healthcare, education, water and sewage) (Siemiatycki, Enright and Valverde, 2020[35]). The lack of diversity in the sector obstructs a more inclusive view of the different needs and requirements that are needed to ensure infrastructure is beneficial to both men and women.

14. A more inclusive infrastructure decision-making process should enable female policy-makers, female infrastructure officials and female end-users to have voice and vote over relevant investment decisions that can impact their economic opportunities, safety, health and well-being. More participation of women in decision-making settings allows them to express different sets of priorities for the allocation of public resources (Kabeer, 2005[36]). Furthermore, it has also been observed that in contexts where women are more empowered in decision-making processes, they more likely to publicly speak up about issues regarding access to basic infrastructure (Pandey, Singh and Unni, 2020[37]). As such, infrastructure planning, decision-making and delivery has the power to become a platform for women to exercise their agency and overcome gendered institutions and social norms.

2 Gender-Responsive Infrastructure Decision-Making

15. A more inclusive infrastructure for women starts with two key issues that are not still fully addressed by infrastructure policy and decision-makers. First, the fact that women benefit differently from infrastructure investments than men and this should be reflected on how infrastructure is designed and implemented. Second, the question on what governance tools can be adopted to ensure infrastructure planning, decision-making and delivery processes progress gender equality policy goals, support women's empowerment and eradicate GBVH.

16. By incorporating gender considerations into strategic planning and capital investment processes, setting objectives and measures, and involving more women in decision-making processes, governments can identify the gender impact of infrastructure decisions and prevent one group from disproportionally benefitting at the expense of disadvantaging others. A life-cycle perspective is key to ensuring public investments are efficient and effective in progressing gender equality, and ensures that women's voices are heard at all stages of the investment and delivery process.

17. The proposed framework for mainstreaming gender into infrastructure and capital budgeting identifies tools that can be used as part of the planning, selection and delivery processes to bring a gender lens to capital investment. It is also aligned with the mandate set by principle 5 of the QII principles in terms of the adoption of practices of inclusiveness throughout the infrastructure project life cycle (Box 2.1). Examples from G20 and OECD countries provide insights on how to adopt gender mainstreaming strategies to face the different challenges that governments face at each stage of the infrastructure life cycle.

Box 2.1. Principle 5 of the QII principles: Integrating Social Considerations in Infrastructure Investment

Principle 5 of the QII principles provides a general mandate to make infrastructure more inclusive and accessible to all, in particular women. A specific emphasis on how infrastructure supports women's economic empowerment is also highlighted, as shown below:

"5.1 Open access to infrastructure services should be secured in a non-discriminatory manner for society. This is best achieved though meaningful consultation and inclusive decision-making with affected communities throughout the project life cycle, with a view to securing non-discriminatory access to users.

5.2 Practices of inclusiveness should be mainstreamed throughout the project life cycle. Design, delivery, and management of infrastructure should respect human rights and the needs of all people, especially those who may experience particular vulnerabilities, including women, children, displaced communities or individuals, those with disabilities, indigenous groups, and poor and marginalized populations.

5.3. All workers should have equal opportunity to access jobs created by infrastructure investments, develop skills, be able to work in safe and healthy conditions, be compensated and treated fairly, with dignity and without discrimination. Particular consideration should be given to how infrastructure facilitates women's economic empowerment through equal access to jobs, including well-paying jobs, and opportunities created by infrastructure investments. Women's rights should be respected in labor market participation and workplace requirements, including skills training and occupational safety and health policies".

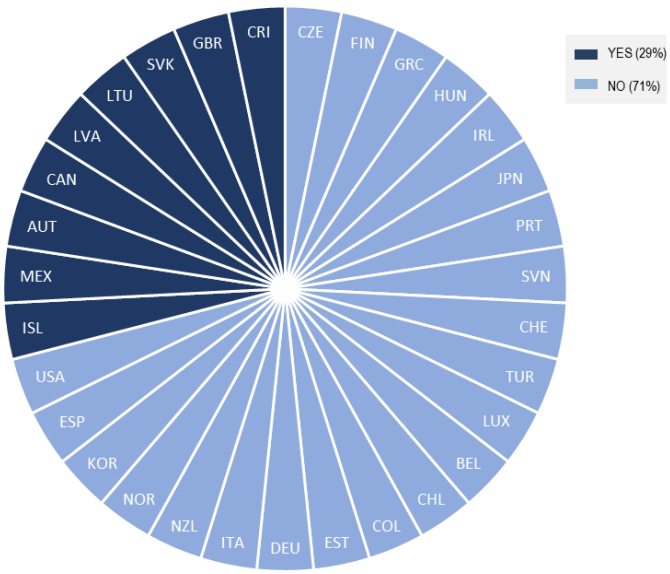
Source: (G20, 2019[38])

2.1. Towards a long-term vision for gender-responsive infrastructure

Challenges

18. A stark challenge faced by governments when mainstreaming gender considerations throughout the infrastructure investment process is the absence of a strategic vision that pays due consideration to gender equality concerns. Only 29% of the OECD countries surveyed on the 2020 Survey on the Governance of Infrastructure reported having an explicit alignment of long-term national infrastructure plans with gender mainstreaming policies (Figure 2.1). Without a clear vision to guide how to integrate gender considerations in infrastructure investment and delivery, governments face a number of risks. Countries may, for instance, fail to prioritise projects or areas of investment that are effectively in line with existing national policy goals on gender equality, eradication of GBVH and sustainable growth and development.

Figure 2.1. Explicit alignment of long-term national infrastructure plans with inclusion and gender mainstreaming policies in OECD countries



Note: Data not available for Australia, Denmark, France, Israel, Netherlands, Poland and Sweden
Source: OECD Survey on the Governance of Infrastructure (2020)

19. The lack of co-ordination between public entities in charge of progressing gender equality agendas, ministries of infrastructure and line ministries and subnational governments can hinder efforts to align infrastructure plans and investment targets with broader gender equality programmes. This is particularly important considering that stand-alone projects might not target the most pressing infrastructure needs of women and men from different backgrounds. This leads to a high risk of implementing different programmes and projects to address gender issues that are neither linked nor support each other, resulting in a disassociated approach to gender-responsive infrastructure investments. Additionally, it hinders a thorough analysis of trade-offs and complementarities across infrastructure sectors that can potentiate even further the impacts of investments on gender equality, women empowerment and eradication of GBVH. Absence of co-ordination across levels of government also increases regional disparities in access to infrastructure, which further exacerbate gender inequality among most vulnerable women (e.g., ethnic minorities, women in rural areas, women with migrant status).

20. Weak institutional capacity and insufficient data to support evidence-based analyses are also obstacles to the formulation of a strategic vision for infrastructure that is mindful of gender considerations. The lack of a gender focus during the planning stage can be attributed to the absence of diversity in decision-making instances as well as a lack of gender equality expertise and institutional capacity. For instance, few infrastructure programmes identify women's time poverty as an issue that should be targeted through public investments, which could be a result of a lack of methodologies or shared understanding of this gender-specific challenge (OECD, 2019[17]). The unavailability of reliable gender-disaggregated data on infrastructure access and use also continues to be a major obstacle in the introduction of a gender-lens to infrastructure planning and delivery of infrastructure (OECD, 2019[3]). In the context of the COVID-19 crisis, for example, more than half of OECD countries reported that the absence of readily available sex-disaggregated data hampered the incorporation of gender considerations in policy responses aiming to address the aftermath of the crisis (OECD, 2021[39]).

Policy solutions

21. The first step towards gender-responsive infrastructure is to have a clear vision on how to incorporate these considerations in infrastructure investment and a credible roadmap to achieve it. The choice of what to build should be framed within a vision for the future that is articulated through an explicit statement of long-term national development goals. As in the OECD Recommendation on the Governance of Infrastructure (2020), a long-term vision for infrastructure can help governments establish an adequate institutional framework, implement clear governance arrangements, define needs and targets, coordinate across stakeholders, and develop reliable action plans.

22. Explicitly aligning infrastructure plans with broader multi-disciplinary policies promotes policy coherence and facilitates the implementation of investments that actively contribute to the achievement of objectives such as improved gender equality and eradication of GBVH. Long-term infrastructure plans should then identify specific targets, for instance in terms of access and use of infrastructure services by women and men, and how can these targets be achieved through proposed investments. While the number of OECD countries that align their long-term national infrastructure plans with gender equality goals still remains low (see Figure 2.1), some countries like Canada, Colombia and Chile have already made efforts to incentivise the promotion of gender considerations in infrastructure strategic planning (Box 2.2).

23. Strengthening co-ordination across sectors and levels of government is key for a whole-of-government approach to gender-responsive investments, as they ensure that gender equality goals permeate all public activities instead being treated as a separated or siloed issue (OECD, 2019[40]). Stronger co-ordination across levels of government can close gender equality gaps across women from different backgrounds (e.g., urban-rural, under-served regions) and support the development of projects that are targeted to local needs and contexts. The OECD Recommendation on the Governance of Infrastructure and the OECD Recommendation on Effective Public Investment Across Levels of

Government (2014) invite countries to adopt effective instruments for co-ordinating across national and subnational levels of government to identify investment opportunities and minimise the potential for investments to work at cross-purposes. The OECD Recommendation on Effective Public Investment Across Levels of Government (2014) also calls for incentives and opportunities for co-ordination at the subnational level to match public investments with the relevant geographical area.

24. Better co-ordination is also key to identify trade-offs and synergies across sectors and projects than can progress gender equality. There is no one-size-fits-all solution that can successfully address gender considerations in infrastructure investment. Women's infrastructure needs and priorities vary greatly depending on the social, cultural and economic context (OECD, 2019[17]) and are not limited only to social infrastructure investments. It is also the case that infrastructure investments can bring unintended negative consequences[2] that can be counterbalanced or mitigated across projects or sectors. In order to formulate an overarching infrastructure strategy that is mindful of these interactions, it is necessary to develop co-ordination capacities across sectors and levels of government. Several OECD countries already have in place co-ordination agencies aiming to mainstream gender consideration in policy and decision-making, such as the Swedish Gender Equality Agency, the Mexican National Institute for Women and the Swiss Federal Office for Gender Equality. Following the COVID-19 crisis, several countries have also created specialised working groups or taskforces to address the impacts of the pandemic on women and men (OECD, 2021[39]).

Box 2.2. Alignment of public investment plans with gender equality goals in Canada, Chile and Colombia

Canada

Canada's long-term infrastructure plan "Investing in Canada" was prepared in alignment with policies and methodological tools adopted by the national department "Women and Gender Equality Canada". In order to ensure that infrastructure is leveraged to address vulnerabilities and inequalities across women and men, projects included in the plan were assessed using the Women and Gender Equality Canada's Gender-based Analysis Plus (GBA+) framework to understand their differentiated impacts on women. This seeks to ensure that the projects are targeted to communities in which investments are needed the most, acknowledging that some populations and groups face different disadvantages and have diverse needs. Some of the investments that aim specifically to address women's infrastructure needs include:

- Investments in child care and home care infrastructure to tackle barriers preventing women's return to the workforce, estimated at CAD 8 billion;
- Investments in public transport frequency, reliability, accessibility and safety to reduce social isolation and improve economic opportunities for women, especially low-income earners; and
- Investments in housing (CAD 5.1 billion) and climate change mitigation and adaption infrastructure (CAD 2.281 billion), which also have positive impacts on women in rural areas, low-income households and indigenous populations who are usually more vulnerable to negative health impacts and extreme weather events related to climate change.

Chile

In 2015, the Chilean Ministry of Transport and Telecommunications created a Gender Commission (*Comisión de Género*), with the purpose of incorporating a gender perspective into transport planning

[2] For instance, infrastructure projects can bring unintended negative consequences to women in relation to resettlements and GBVH. These examples are further discussed in sections 2.3 and 2.5 of this report.

and policy-making. As a result of this effort, the Ministry adopted the Gender Equality in Transport Policy (2018-2022). This policy identifies five gender-focused objectives aiming to reduce gender gaps and barriers in the access and use of transport systems in the country:

- Embed a gender-based approach within the Ministry of Transport, in order to strengthen institutional capacity in gender mainstreaming, as well as raise awareness and increase diversity across the Ministry's workforce;
- Adopt a gender lens in infrastructure assets' design to tackle gender gaps and barriers to access and use of transport infrastructure across urban and rural areas, through a comprehensive identification of challenges and corrective measures;
- Adopt a gender lens in infrastructure operation and ensure cross-sectoral synergies to positively impact women's mobility based on their travel patterns;
- Increase the participation of women in the transport infrastructure industry, both in public and private sectors, through recruitment and training strategies; and,
- Implement mechanisms to eradicate GBVH in the public transport system, by improving safety as well as mitigation and management of GBVH incidents in the transport system.

Colombia

Colombia has been working on tools to promote better alignment of future investment plans with gender equality targets. The Colombian Presidential Council for Gender Equality (CPEM), the National Planning Department (DNP) and the Ministry of Finance adopted a methodology in 2019 to identify, track and monitor public investments that have a gender equality component (*Trazadores Presupuestales para la Equidad de la Mujer*). The implementation guide prepared by the DNP includes practical tools for public practitioners to mainstream gender considerations throughout the investment life cycle, with a strong emphasis on the strategic planning stage. The guide puts particular emphasis on the following steps to mainstream gender considerations throughout the planning phase:

- Gender-sensitive needs assessment: use of key gender-disaggregated indicators and cross-sectoral data to get a better sense of invisible gender gaps in public investment. Guiding key questions and examples are provided to ensure a gender-sensitive needs assessment.
- Gender-focused objectives: definition of gender equality objectives that provide a clear idea of the baseline and targets to achieve. Guiding key questions and examples are provided for the adoption of gender-focused objectives.
- Gender indicators**:** definition of indicators that will allow to measure the impact of public investment on gender equality. The guide provides guiding key questions and examples of gender indicators.

India

India is taking a holistic approach to women's empowerment by focusing on social, economic and political factors, and gender equality should be reached by ensuring that it is addressed by each ministry Social ministries focus on issues like education, health, and the status of women within their families, while economic ministries focus on asset ownership, income generation, skills development, and appropriate technology. The Planning Commission has ensured that national and state plans are gender sensitive, the Department of Commerce identified gender implications of special economic zones, and the Ministry of Urban Development introduced measures for clean and safe public toilets and adequate street lighting.

Italy

Italy's National Recovery and Resilience Plan (NRRP) includes a large component on infrastructure investment to support a sustainable rebound from the COVID-19 crisis. The NRRP aims to maximise impacts on three overarching priorities: gender equality, young people and the South of Italy. The NRRP proposes the investment of EUR 11,2 billion towards social infrastructure, urban regeneration, housing, as well as recreational and sports infrastructure. It also proposes programmes to facilitate the participation of women in the labour market, including: active labour market policies and training (EUR 4,40 billion; strengthening of public employment centres (EUR 0.6 billion); dual vocational training (EUR 0.6 billion); decrease of skill mismatch and support to learning on-the-job programmes; strengthening the Women Entrepreneurship Fund and the set- up of a national system of certification of gender parity (EUR 0.41 billion).

Source: (Infrastructure Canada, 2016[41]) (Colombian National Planning Department, 2020[42]); (Chilean Ministry of Transport and Communications, 2018[43]); (Colombian Presidency Council for Gender Equality, 2019[44]); (The National Democratic Institute, 2013[45]); (OECD, 2021[2]); (European Commission, 2021[46]).

25. A necessary condition for mainstreaming gender considerations in strategic planning is to adopt an evidence-based approach. The OECD Recommendation on the Governance of Infrastructure (2020) has brought to attention how successful infrastructure programmes are generally strategic in nature; that is, that they are informed by a rigorous analysis of infrastructure needs. A comprehensive needs assessment is the basis for setting priorities, identifying trade-offs and defining how these will be addressed. It is crucial for governments to identify gaps in gender-disaggregated data and facilitate its collection, sharing and systematic use for planning and decision-making (OECD, 2021[39]).

26. Choices regarding infrastructure development should be based on a sound understanding of differentiated needs across women and men. The analysis should be based on gender-disaggregated socioeconomic data related to gender gaps in access to infrastructure, different patterns of use and preferences between women and men, as well as measurable benefits and risks that infrastructure poses to women and girls. National statistical offices can undertake the collection of key gender-disaggregated data on infrastructure investments' outcomes as well as socio-economic demographic data that should be taken into consideration during the strategic planning phase, for instance: ethnic or racial composition of the population, identification of minority or indigenous groups, urban-rural split of the population, household size, percentage of female-led households, gender control of assets, percentage of the distribution of productive and welfare tasks in the household, main productive activities in which men and women are engaged, time poverty or gender use of digital infrastructure and technology (Lallement, 2013[32]; OECD, 2021[4]).

27. Partnering with the private sector, academia and civil society could provide relevant data that are properly defined, measured, collected, analysed, synthesised and presented for decision makers and the public. As broad expertise in collecting, connecting and interpreting quality data might not exist across all sectors and countries (especially for capital investment), capacity building is a key enabler of data-driven approaches to the sustainable operation and planning of infrastructure projects (OECD, 2021[2]).

28. OECD countries like Iceland and Chile have put in place efforts incorporate the use of gender-disaggregated data for infrastructure strategic planning (Box 2.3).

Box 2.3. Gender-disaggregated infrastructure data in Iceland and Chile

Iceland

In 2021, the Icelandic Prime Minister's Office and the Ministry of Finance released the report "*Mapping Gender Perspectives - Status Report 2021*". One of the focus areas of the report was to address the availability of gender-disaggregated data to inform planning and policy-making. Iceland has an ongoing project to create a working group on gender-disaggregated statistical data, with the aim of improving its availability, harmonisation and use across public bodies. Initial results from the working group are expected to be published throughout the course of 2021. Especially in the transport sector, the report's findings were that differentiated travel patterns across men and women are generally not taken into account in transport plans and models in the country, for instance:

- Women are often more confined to the local environment due to unpaid domestic and care work, which limits their scope for work. They tend to live closer to their workplace and thus they use footpaths to and from work more often than men;
- Gender inequality is greater in rural and coastal areas. An important part of keeping the country inhabited is to strengthen the opportunities for women in the countryside. Shortening travel time to and from urban centres is therefore likely to expand women's work-seeking areas and increase employment opportunities.

Chile

For the formulation of Chile's Gender Equality in Transport Policy (2018-2022), the Ministry of Transport and Communications undertook a thorough assessment of gendered transport infrastructure needs and uses. The Ministry used data from an origin-destination survey conducted on 2012 and a qualitative analysis on women's perception of public transport conducted on 2017, which revealed that:

- 65.5% of public transportation trips for care purposes (e.g., health, grocery shopping, errands, leaving or picking up someone, visit someone) were performed by women, while 62.8% of commuting trips were performed by men. Additionally, 57.6% of the trips that last less than 30 minutes are also performed by women;
- Women use public transportation more often during off-peak hours and, due to safety concerns, the number of trips performed by women decreases considerably from 7:00pm onwards; and
- There is hesitation to use public transportation because of long waiting times, especially if considering that unpaid work is normally time-consuming and women prefer to save time when performing trips for care purposes.

Source: (Iceland's Prime Minister's Office, 2021[47]); (Chilean Ministry of Transport and Communications, 2018[43])

2.2. Strengthening female voice and agency in infrastructure decision-making

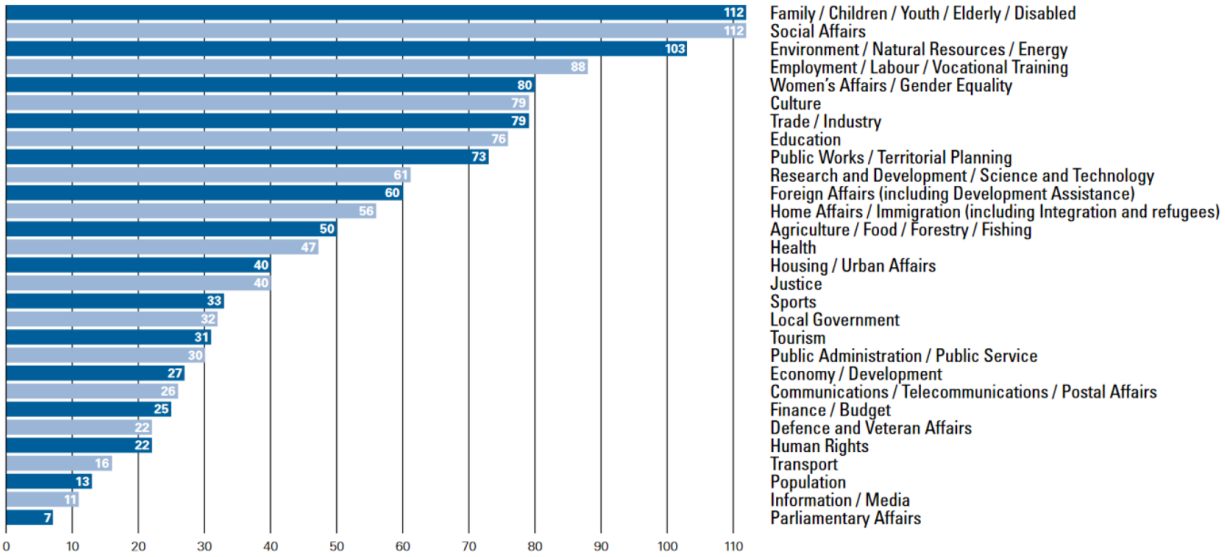
Challenges

29. For the most part, major gender gaps still persist in terms of gender-inclusive stakeholder engagement (OECD, 2019[40]). Women from diverse backgrounds, vulnerable or marginalised groups and territories often face unequal opportunities to participate in infrastructure decision-making processes. Women in rural areas and minority ethnic groups, in particular, are negatively affected by the marginalisation, lack of ownership and voice (OECD, 2021[4]). The poor targeting of infrastructure

stakeholder engagement and the late involvement of stakeholders in infrastructure decision-making limits stakeholders' ability to contribute to project selection, prioritisation and design. Furthermore, it can result on consultation processes that rarely have a strong impact on decision-making (OECD, 2020[48]). As stakeholder engagement and decision-making settings become systematically inaccessible to women and their views on infrastructure provision are thus not taken into consideration, women's political agency and political efficacy[3] can be diminished. Low levels of political efficacy amongst women could be concerning as they can negatively affect their political participation and their perceptions of legitimacy of public institutions (OECD, 2017[49]), deterring even further their participation in infrastructure decision-making.

30. The unequal participation in infrastructure decision-making can also hinder the incorporation of different sets of priorities for the allocation of public resources and the achievement of transformative impacts through public investment. Countries around the world still face challenges in terms of promoting gender equality in infrastructure public service leadership positions (See Figure 2.2). The number of portfolios held by women ministries is higher for energy, public works and territorial planning, albeit particularly low for the transport, telecommunications, finance, budget and housing sectors. Non-inclusive organisational cultures, unconscious biases and lack of inclusive leadership competencies across all levels of public sector entities are some of the key challenges to increasing diversity in the public sector workforce (Nolan-Flecha, 2019[50]).

Figure 2.2. Portfolios held by women ministers across countries



Note: Data refer to 1451 portfolios in 190 countries.
Source: (UN Women, 2020[5])

31. Laws and regulations can involuntarily formalise social norms that are deeply rooted on traditional gender stereotypes, perpetuating the limitations to the exercise of women's agency. Infrastructure projects, in particular, involve several layers of legislation and regulation at different levels of government. Regulation can have effects on the advancement of gender equality outcomes for better or for worse (OECD, 2019[40]). In spite of the adoption of infrastructure programmes aiming to support gender equality, new or existing regulation can hamper women's ability to fully reap the benefits from public investment or

[3] Political efficacy refers to the personal feeling of having a say on what government does, which generally involves an internal dimension (e.g., whether it is worthwhile to perform civic duties), as well as an external dimension (e.g., the feeling of government's responsiveness to people's political views (OECD, 2017[49]; González, 2020[105]).

even have a negative impact on gender equality. A classic example relevant to the infrastructure context are discriminatory laws and regulations on land and property that can hinder women's ability to receive compensation for resettlements (UNOPS, 2020[12]; Lallement, 2013[32]). In short, the lack of a proper understanding of these invisible impacts of regulation can ultimately inhibit women's ability to benefit from public investments.

Policy solutions

32. A more inclusive infrastructure decision-making process enables women to have voice and vote over relevant investment decisions. The OECD Recommendation on the Governance of Infrastructure (2020) provides guidance on how governments can facilitate the participation of users and impacted communities during the relevant phases of the project life cycle, ensuring debate and oversight on the main economic, fiscal, environmental, and social impacts of the project. Additionally, the OECD Recommendation on Open Government (2017) emphasises the importance of granting all stakeholders equal and fair opportunities to be informed and consulted in all phases of service design and delivery, putting specific efforts to reaching out to vulnerable, underrepresented or marginalised groups in society.

33. Stakeholder engagement is essential for legitimacy, transparency, and the identification of infrastructure needs that enhance the performance of infrastructure projects (OECD, 2017[51]). Effective stakeholder participation goes beyond simply providing information to affected citizens. It entails taking proactive measures to allow for continuous, inclusive and open dialogues on the main economic, fiscal, environmental, social and gender impacts of the project. Both women and men should proactively be involved in the infrastructure decision-making process, starting from the early stages of needs assessment and infrastructure planning all the way to the implementation and oversight of infrastructure projects.

34. A meaningful stakeholder engagement is a powerful platform to articulate women's infrastructure preferences and claims. It also provides an opportunity for women to get together to discuss their interests, interact with actors in positions of power and act collectively to seek solutions (UN Women, 2020[6]). For example, in environmentally-sensitive projects, such as major urban and transport projects, energy, water and other infrastructure development, the representation of women in public consultations enables them to voice their concerns and sensitivity to environmental risks (OECD, 2021[4]). Additional efforts should be made to map and target relevant stakeholders at different stages of the investment life cycle, disaggregated by gender, income brackets, minority groups, under-served population groups and territories.

35. Governments can also diversify the methods for engaging women in order to ensure more gender-balanced stakeholder consultation processes. Equal participation of women and men in on-going community-based consultation meetings or committees, consultations with gender equality specialists, gender focus group discussions and workshops are some examples of tools that can promote a more participatory stakeholder engagement in infrastructure planning, decision-making and implementation (UN Women/UNOPS, 2019[52]).

36. Identifying barriers for women of diverse backgrounds to get involved in infrastructure leadership is an additional way to support a more meaningful participation of women in infrastructure management and governance. The OECD Recommendation on Equality in Public Life (2015) encourages countries to achieve gender balanced representation in decision making at all levels of government. Some of the tools highlighted by the recommendation include facilitating capacity and leadership development opportunities, promoting female role models in public life and mainstreaming work-life balance and family-friendly work practices at the top level of public institutions.

37. A common practice across OECD countries is the adoption of diversity and inclusion policies to promote diversity across the government's workforce, which allows for civil servants that are more attuned to the diverse and preferences of citizens (Nolan-Flecha, 2019[50]). Behavioural insights are also increasingly being used to address unconscious biases and organisational norms in hiring, promotion and

working condition policies across public entities to support diversity and inclusion programmes (Nolan-Flecha, 2019[50]). The United Kingdom and Australia have adopted policy tools and programmes to ensure an equal participation of women in infrastructure leadership and workforce (Box 2.4).

Box 2.4. Involving women in infrastructure decision-making, management and governance in United Kingdom and Australia

United Kingdom

The United Kingdom's National Infrastructure Commission's Diversity and Inclusion Strategy 2020 – 2023 has set targets for staff representation across gender, ethnicity and disability to allow all communities to be equally represented in the infrastructure decision-making process. One of the strategy's main goals is to attract, develop, retain and engage with staff from a range of backgrounds as means to better represent the communities that are served by infrastructure. The UK National Infrastructure Commission aims to hit a target of 50% female staff representation by 2023.

Australia

The Australian state of Victoria has also adopted the "Women in transport" programme that aims to increase the number of women working in the Department of Transport and the entire transport portfolio. The programme offers a broad range of opportunities for women to get involved in the transport sector, including undergraduate scholarships, mentoring for engineers, as well as quotas for rail and infrastructure apprentices. Since its launch in 2017, the programme has achieved an increase of five percentage points in the number of women in senior management roles in public transport operator workforces (from 16% to 21%) and a four percentage points increase of senior women in the public sector (33% to 37%).

Source: (Victoria State Government, n.d.[53]); (UK National Infrastructure Commission, 2020[54]).

38. Evidence-informed regulatory decisions can enable women's agency and amplify the benefits that can be drawn from infrastructure projects. A thorough understanding of the practical effects of regulation on women's legal rights related to land tenure can improve women's chances to benefit from compensation claims and participate in decision-making processes on displacement or resettlement for infrastructure development purposes. Legitimate, coherent, efficient, and predictable regulatory frameworks also play a substantive part in supporting quality, reliability, and affordability of services in regulated infrastructure sectors. Similarly, regulation can also have a significant effect on people's behaviour, by acting as an enabler and a facilitator to achieve positive policy outcomes (Lunn, 2014[55]).

39. The OECD Recommendation on the Governance of Infrastructure (2020) invites countries to provide tools for evidence-based regulatory decisions, including stakeholder engagement, economic, fiscal, social and environmental impact assessment, and audit and ex-post evaluation. The OECD Recommendation on Gender Equality in Public Life (2015) also calls for the integration of evidence-based assessments of gender impacts at the early stages of all phases of the policy cycle, for instance through *ex ante* regulatory impact assessments. OECD countries are increasingly adopting tools for gender regulatory impact assessments as presented in Box 2.5.

Box 2.5. Country approaches to assessing gender-related impacts of regulatory impact assessments

Sweden

In Sweden, a gender analysis is performed as part of the process of drafting and preparation of legislation, by the actors responsible for the process. In bills and government inquiries, a separate section (or chapter) is presented on the assessment of impacts on gender equality. The analysis is performed in relation to the gender equality policy goals, where an assessment is carried out concerning whether proposals contribute to, or hinder, the achievement of the gender equality goals.

France

Impacts on gender equality are also included in France's regulatory impact assessment (RIA) guidance material's list of possible impacts to be examined in the RIA. This element is included in the documentation under social impacts: "Equality of treatment between men and women, and reduction of discrimination".

Netherlands

The Netherlands is working on developing the quality requirement "effects on gender equality". This quality requirement intends to map out the nature and scope of the consequences of intended policy and regulation for gender equality in the Netherlands. It consists of two parts: the first part reviews the effects of a proposal on equality between men and women. Effects must be mapped out and, when relevant, the assessment must include indications on how negative and/or restrictive effects are minimised and justification for not applying the intended policy or regulation. The second part is dedicated to the consultation of (the representatives of) parties that will be affected by the proposal.

Source: (OECD, 2019[40])

2.3. Incorporating gender considerations in project appraisal, selection, risk assessment and design

Challenges

40. Given the limited resources available for infrastructure investment, prioritisation is essential to ensure these resources are invested in the right projects (OECD, 2017[51]). Governments face a substantial task in determining which of the many identified investment possibilities are best able to contribute to the achievement of identified policy goals. The COVID-19 crisis has emphasised the already existing concerns around sustainable and equitable development, which represent additional requirements for infrastructure investments to address multiple economic, social, and environmental objectives beyond a narrow definition of costs and benefits. This creates challenges for decision-makers, who are required to weigh and balance different (and sometimes competing goals) in selecting and prioritising projects.

41. OECD countries typically apply some form of cost-benefit analysis (CBA) to appraise infrastructure projects (OECD, 2021[56]). CBA privileges monetary values or factors that can be easily converted into monetary values. Its weakness is that it is less able to accommodate values that are not easily expressed in monetary terms. While CBA is an important component of the evidence-based decision-making process, there are relevant elements outside its scope that should be considered alongside the CBA; for instance, a project's contribution to strategic policy goals and impacts that are difficult or even impossible to quantify

(e.g., gender equality goals, women's empowerment and eradication of GBVH). Appraisal methodologies that consider non-monetised impacts are less prominent, which can lead to potential shortcomings in the incorporation of gender considerations in project prioritisation and appraisal. It can also be the case that the analysis of gender impacts takes place after the project has been selected, making gender considerations an afterthought rather than a key criteria in project appraisal and selection.

42. Gender considerations are not always considered in the assessment of social impacts and risks during the project feasibility and design phases. Not incorporating gender-specific needs in the technical specifications of infrastructure projects can result in gender-blind infrastructure (UNOPS, 2020[12]). The absence of a thorough analysis of gender-specific risks that arise from infrastructure investments can also hinder a better distribution and mitigation of such risks by gender (Lallement, 2013[32]). Women's differentiated needs and uses of infrastructure can often go unaccounted for in the feasibility and project design phase, which can result in devastating impacts on women's lives. For example, women are disproportionately affected by resettlements due to infrastructure projects. Women in rural areas predominantly depend on their land as a source of livelihood; land property is often registered under men's names, leaving women without a legal claim for resettlement payments; and resettlement involves displacement and breaking community networks that are vital for vulnerable women in rural areas, migrants or single-mother households (Lallement, 2013[32]).

Policy solutions

43. Particularly in the earlier stages of the infrastructure life cycle, it is key to understand gender-disaggregated impacts in order to incorporate these considerations into the overall investment programme as well as into the design of each specific infrastructure project (OECD, 2021[2]). Complementing traditional project appraisal and prioritisation with methodologies that account for direct and indirect impacts of infrastructure investments on women and men can enable countries to undertake an evidence-based decision-making process. The assessment of gender impacts should not be restricted to the construction phase but should be conducted in all the stages of the infrastructure's life cycle (OECD, 2021[2]).

44. An increasing practice across OECD countries is to undertake *ex ante* evaluations to assess the likely impact on gender equality of proposed infrastructure projects, such as gender impact assessments (see Box 2.6). Gender impact assessments can allow governments to learn about invisible biases or assumptions about the possible impacts of projects on women and men, which can inadvertently influence the selection of a project over another without awareness of its negative impacts (Government of Canada, n.d.[57]; OECD, 2021[39]). The assessments aim to highlight the potential impacts in terms of relative distribution of resources, opportunities, constraints and power in a given context or project, fixed in the corresponding budget proposal (Box 2.6) (OECD, 2021[2]). To get a full picture of the projects' impacts, assessments should also consider additional factors beyond gender such as ethnicity, age, socio-economic characteristics, special needs (e.g., disabilities, migration status) and psychological wellbeing (OECD, 2021[2]; OECD, 2021[39]).

Box 2.6. Gender equality considerations in project appraisal processes in Canada, Austria, Norway and South Africa

Canada

Infrastructure Canada's gender-based analysis framework (GBA+) seeks to understand how infrastructure investments impact men, women, and gender non-binary people. The GBA+ framework is used to mainstream gender considerations throughout the early stages of the planning and decision-making processes. Key areas of analysis covered by the GBA+ framework to assess programmes and projects include:

- Target population: identification of intersecting identity factors across the target population, analysis of how programme or project components address needs of diverse populations and consultation of targeted populations;
- Programme's indirect impacts: identification of individuals outside the target population that might be impacted by the project and their socio-economic characteristics, consultation of key stakeholders, identification of the unintended impacts of the programme and formulation of strategies to mitigate such impacts;
- Data availability: adoption of data collection guidelines and processes that ensure sex-disaggregated data, including different factors and personal characteristics;
- Project evaluation: establishment of baseline indicators to assess impacts on targeted populations, data collection to measure projects' outcomes, analysis of gaps and unintended barriers in access and use of the service.

Austria

In Austria, investment projects at the federal level are also required to undergo a mandatory *ex ante* impact assessment on gender equality for projects that exceed 1 million EUR and meet pre-established criteria for the assessment. The analysis includes several components: the analysis of the problem that requires government intervention or investment; the formulation of goals in terms of impacts and outcomes; identification of indicators to measure results; *ex ante* impact assessment; and, *ex post* evaluation of project effects and results.

South Africa

In South Africa, a gender impact-assessment system, covering parts of the budget, has been implemented. The Women's Budget Initiative analysed six national ministries, as well as public sector employment and taxation, where gender issues in both social and economic sectors were highlight. Subsequently, the process was expanded to all ministries as well as how national, provincial, and local governments interacted in developing health policies and budgets.

Norway

When developing large-scale projects, two assessments are required. Firstly, during the preparation phase, a life cycle (gender) impacts assessment is to be undertaken. Secondly, when all work has finished, an assessment is required to evaluate whether the assumptions from the preparation phase were really implemented. To improve transparency, these assessments can be done by independent institutions and should be published. These assessments can be used to prioritise investments that progress gender equality goals.

Source: (OECD, 2021[58]); (OECD, 2021[2]); (Infrastructure Canada, 2020[59]); (Government of Canada, n.d.[57]); (Austrian Federal Ministry of Arts, Culture, Public Service and Sports, n.d.[60]); (Stotsky, Kolovich and Kebhaj, 2016[61]); (Elson and Sharp, 2010[62]); (Concept, 2021[63]); (OECD, 2021[2]).

45. Impact assessments should be applied systematically as early as possible in the infrastructure investment process – ideally during strategic planning – when alternatives and opportunities for risk avoidance and synergies are still politically, economically and technically feasible (OECD, 2021[2]). In the project design phase, measures to prevent and minimise negative impacts should be identified. Likewise, compensation measures for any estimated residual impact should be identified as early as possible, and be planned and budgeted. For this reason, gender impact assessments should look at impacts not just in the construction phase, but also over the course of the asset's use. Figure 2.3 illustrates the different phases of a capital project where gender impacts should be considered.

Figure 2.3. Considerations of gender impacts in capital project phases

scale of the project

timeline

Phase	Gender output	Gender outcome
1: preparation/procurement	Output: concerned actors/companies/workforce: gender impacts	Outcome: concerned actors/companies/workforce: gender impacts
		Outcome direct user
		Outcome indirect user
1st assessment	*planning: gender impacts arising during execution of the project and after getting in use of the asset - life cycle impacts*	
2: execution	Output: concerned actors/companies/workforce: gender impacts	Outcome concerned actors/companies/workforce
		Outcome: contract-(sub-) companies
		Outcome: materials
3: use/maintenance	Output: concerned actors/companies/workforce: gender impacts	Outcome concerned actors/companies/workforce
		Outcome: contract-(sub-) companies
		Outcome direct user
		Outcome indirect user
2nd assessment	*evaluation: did the asumptions from the first assessment entered into force as planned ?*	

Source: (OECD, 2021[2]).

46. One of the challenges with requiring gender impact assessments for capital budget proposals is that these projects are often outsourced to private companies, for example, through public-private partnership agreements (OECD, 2021[2]). In these instances, normal requirements for gender impact assessments may not apply. For example, in Austria, capital projects are usually included in framework agreements between the federal state and the private company. A gender impact assessment still has to be done but according to the framework agreement, it only includes macro-perspectives, not assessments for individual capital projects.

47. The constraints and opportunities identified through gender impact assessments can be addressed by specific actions detailed in a gender action plan (OECD, 2021[2]), and more importantly during the project design phase. The OECD Recommendation on the Governance of Infrastructure (2020) brings attention to the importance of ensuring asset quality through project designs that regularly integrate changing infrastructure needs. Applying a gender lens to pre-feasibility and feasibility studies can help to ensure projects are selected and designed bearing in mind specific social, economic and cultural risks, impacts and barriers associated with women's access to and use of infrastructure services. Some examples include time poverty, accessibility to job markets, number of female-led households, resettlements, land ownership and GBVH. Gender equality considerations can also be integrated into in project design and technical specifications to account for gender-differentiated uses and needs in terms of access to services, safety and affordability. For example, this might include making sure that streets, walkways and public spaces are well lit to facilitate women's use. Countries like Australia, Austria and Spain have adopted tools to mainstream gender considerations in the feasibility analysis and design of infrastructure assets (See Box 2.7).

Box 2.7. Infrastructure design and technical specification based on gender-differentiated needs in Australia, Austria and Spain

Australia

In 2017, the Australian state of Victoria adopted the "Female Friendly Sport Infrastructure Guidelines" that provide advice on how to develop gender equitable sports and recreation facilities. These guidelines were adopted to address the low female participation rates in sports, which is partially explained by the fact that sports facilities in Victoria have been historically designed to meet primarily the needs of male participants. The concept of female friendly infrastructure comes from including a number of factors and attributes into the design of the facilities that encourage its use by women and girls. Some examples include taking into consideration crime prevention and public safety in the design of public spaces, ensuring an adequate lighting around the facility, providing sufficient baby changing amenities and adopting a child-safe facility design. In terms of redevelopment or adaptation projects, the guidelines also encourage an audit of existing sports infrastructure to address gender equity issues in the infrastructure design.

Austria (City of Vienna)

Vienna is a city that has considered women's specific transport preferences. Initially 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 capital project gets underway (Foran, 2013[64]). In the context of the Gender Mainstreaming Model Districts project, Geo Information Service-based analytic maps were developed for all municipal districts of Vienna, comprising both qualities and deficiencies of the respective footway networks. For example, the 'network qualities' parts of the maps show sufficiently wide (projecting) pavements, while the 'network deficiencies' parts feature narrow pavements or dangerous spots for pedestrians (EIGE, 2017[65]). Important destinations within districts (e.g. public transport stops, and social and healthcare facilities) provide information about expected pedestrian volumes and any special requirements. These maps are regularly updated.

Spain

According to Constitutional Act 3/2007 for effective equality between women and men, the principle of equal treatment and opportunities between women and men will inform, on a horizontal basis, all public actions. As for capital investment, article 31 states that public administrations shall take gender perspectives into account in the design of cities, in urban policies, and in the definition and execution of urban planning.

Source: (Victoria State Government, 2017[66]); (Foran, 2013[64]); (EIGE, 2017[65]) (OECD, 2020[67]); (OECD, 2021[2])

48. Requiring the cost-benefit analysis of capital budget proposals to include gender considerations is an additional tool to be implemented during the project appraisal and selection phase (OECD, 2021[2]). The analysis of capital budget proposals should not only take into account financial costs and benefits based on market prices, but also social and environmental externalities with adjustments for risks and market imperfections. Social factors include gender equality impacts, where positive and negative impacts should be quantified so that trade-offs can be assessed objectively, based on a common framework of reference. Where this is not possible or appropriate, full account should be taken of measurements in qualitative terms. As with gender impact assessments, costs and benefits should be considered across the entire life of the asset. Gender equality impacts should include de-construction and renovating the asset after its useful life ends..

49. Understanding the cumulative impacts — both positive and negative — and the synergies and trade-offs between environmental, social, and economic costs and benefits, can help determine whether the overall mix of capital assets on a government's balance sheet provides the best solutions for meeting service needs, while also considering fiscal sustainability objectives (OECD, 2021[2]). Having information from cost-benefit analyses along with budget proposals can help inform decision-making. It may be that cost-benefit analysis show that capital projects that have gender equality benefits are not economically affordable when considered as stand-alone projects. In such cases, other more efficient projects may be able to cross-subsidise the costs.

2.4. Adopting gender budgeting frameworks

Challenges

50. Budgetary policy is central to the allocation of resources towards programmes and projects that successfully deliver expected policy outcomes. However, institutional capacities, skill-sets and organisational cultures found in central budget authorities are at times not keeping up with evolving social needs, such as gender equality for example (Downes and Nicol, 2020[68]). Without the appropriate tools, governments cannot adopt informed budget decisions that are coherent with strategic priorities in terms of gender equality. Governments can use gender budgeting to focus government-wide policy-making towards national gender goals (OECD, 2021[2]).

51. Even after adopting gender budgeting tools, there is a risk that these will fall into disuse, especially if the political momentum loses traction (Downes and Nicol, 2020[68]).Governments face a challenge in terms of adopting a strong strategic framework that clearly identifies where resources for gender equality should be allocated (OECD, 2020[69]). When budgeting is not aligned with the planning process, budgets focus exclusively on short-term issues and are driven by fiscal pressures instead of addressing social needs. Speaking of capital budgeting, the misalignment of budgetary and long-term infrastructure plans can hinder the successful achievement of gender equality objectives included in such plans.

52. Gender capital budgeting should be part of a broader infrastructure governance framework that pays due consideration to gender aspects in public investment (OECD, 2021[2]). Understanding the gender impact of projects is crucial in the early stages of capital projects (identification and planning) because those are the stages where the concept and structure is defined. OECD countries that consider gender dimensions at the planning stage of the infrastructure lifecycle include Belgium, Czech Republic, Iceland, Lithuania, Luxembourg, Spain and Sweden (OECD, 2020[67]). Neglecting gender impacts during this stage risks the success of the project and hinders the correction of deficiencies in later stages.

Policy solutions

53. Since infrastructure projects can be large and have long-term budget requirements, governments should align their strategic plans and budgets in a way that budget allocations readily correspond with gender equality goals and mobilise resources towards transformative investments (OECD, 2021[39]). The OECD Recommendation on Budgetary Governance (2015), the Recommendation of the Council on the Governance of Infrastructure (2020) and the OECD's Framework for Gender Budgeting (OECD, 2019[70]) look at how gender budgeting can be leveraged as a tool within a broader infrastructure governance framework to help make more informed capital decisions that progress gender equality. In particular, they bring attention to the need for close alignment of budgets with medium-term strategic priorities of government. This includes the alignment of budget tools with the gender equality objectives established in long-term infrastructure plans.

54. Many OECD countries have implemented some form of gender perspective into their budgeting practices. According to the 2016 OECD Survey of Gender Budgeting Practices, 15 member countries

reported having introduced these practices and 3 more reported actively considering its introduction (Downes, von Trapp and Nicol, 2017[71]). While practices vary greatly across jurisdictions depending on each country's budgeting system, some of the most common gender budgeting tools include (OECD, 2020[69]): gender impact budget assessments; gender dimension in performance setting; gender budget statement; gender budget tagging; gender perspective in evaluation and performance audit; gender perspective in spending reviews.

55. Key performance indicators are an essential tool for monitoring the gender impacts of budgeting decisions, including capital budgeting decisions (OECD, 2021[2]). Monitoring the performance and impacts of capital investment enables the use of adaptive management approaches that can respond to changing conditions over the lifespan of the investment. This allows continuous improvement in the sustainability and service delivery of infrastructure across the different phases of the lifecycle.

56. Box 2.8 presents examples of countries that apply a gender perspective when setting performance measures, including within capital programmes.

Box 2.8. Examples of countries that apply a gender perspective to performance setting

Austria

In Austria, a country renowned for its system of performance budgeting, which was implemented in 2013, each federal ministry must set five outcome objectives, one of which is to relate to gender equality. For example, the Ministry of Climate Action´s budget includes an objective that states:

"Ensuring gender equality in mobility…raising awareness with regard to gender-relevant aspects in the transportation system. As such, specific training courses are offered in the ministry to sharpen gender competence in everyday mobility. In addition, awareness raising among planners of the transport companies (…) is in particular important."

The objective is tracked by counting the number of people in traffic planning and control with gender competencies". The number of people trained is to increase by 100% in 2021.

India

India is taking placing more emphasis on the participation of women in decision-making and capital budgeting. India has included a column on gender outcomes in the budget to ensure that gender concerns are addressed and mandated ministries to identify three to six gender-mainstreaming programmes, and to undertake initiatives and special measures to improve women's access to services.

Mexico

Gender mainstreaming is a key principle in budgetary policy in Mexico. The country adopted a tagging and tracking system by which all federal spending allocated to progress gender equality should be clearly identified and visualised in an annex to the budget bill (*Anexo Erogaciones para la Igualdad entre Mujeres y Hombres*). In addition to the gender tagging system, entities must identify sex-disaggregated indicators to evaluate the impact of spending programmes on gender equality, eradication of GBVH and any form of gender discrimination. The federal budgetary law also establishes that the resource allocations aimed to progress gender equality cannot be reduced or reallocated to different programmes or projects, ensuring that the budget allocations that go towards gender equality are sustainable across time.

Colombia

In 2019, the Colombian Presidential Council for Gender Equality, the Ministry of Finance and the DNP put in place a gender equality budget tagging and tracking system (*Trazador Presupuestal para la*

Equidad de la Mujer) in order to identify and track investments that aim to support gender equality. The methodology identifies the following gender budget tags:

- Women's economic empowerment and access to assets;
- Participation in positions of power and decision-making processes;
- Health, sexual and reproductive rights; education and access to new technologies; and,
- A life free from any GBVH

For the implementation of this mechanism, the DNP and the Council, with the support of UN Women, provided online training on the use of the gender budget tagging to public officials at the national level, including Ministries of Information Technologies and Communications Health, Transport, Education, Housing and Energy. By the end of 2019, 66 entities at the national level reported information using the gender budget tags identified. With respect to infrastructure investment, the transport and energy sector in Colombia reported the lowest resource allocation to progress gender equality, as opposed to information technologies, education and housing which reported substantially higher levels of investment.

Source: (OECD, 2019[72]); (INMUJERES / ONU Mujeres, 2014[73]); (General Congress of the United Mexican States, 2006[74]); (Colombian Presidency Council for Gender Equality, 2019[44]); (The National Democratic Institute, 2013[45]); (OECD, 2021[2]).

57. The implementation of gender budgeting tools requires a supporting enabling environment that can ensure these measures are long-lasting (OECD, 2020[69]).Governments should pay close attention to the availability of gender-disaggregated data that can serve as an input for the assessment. Despite considerable scope for performance information to provide information on how capital investment is serving different parts of society, gender performance indicators in the area of capital investments tend to be scarce. A key challenge with implementing a gender perspective to performance setting, and specifically for gender capital budgeting, is that effective monitoring requires gender-disaggregated data, which is not available in all sectors in OECD or G20 countries, as has been discussed in section 1.1. of this report.

58. Undertaking a gender impact assessment of the overall capital investment programme in the budget is another approach that can easily be implemented by governments without legal changes and can be adopted as a pilot project (OECD, 2021[2]). Following its implementation, governments may decide if they want to institutionalise the approach into the budget process. On the other hand, this approach can also be used to complement an existing gender impacts assessment system by covering investment as a specialised part (Box 2.9).

Box 2.9. Iceland's gender impact assessment of its capital investment programme

This capital investment programme, designed for addressing implications of COVID-19, contained projects in transport infrastructure, building construction and maintenance, research and innovation, energy exchange and green solutions and digitalisation. All proposals from line ministries had to estimate the number of jobs created and their gender ratio, although this could not be achieved for all projects, due to lack of information, In total the Ministry of Finance estimated that around 85% of jobs created would be filled by men.

In the second phase of this programme – for the budget 2021 – the gender ratio of jobs created after construction was to be completed and general gender impacts on users analysed. In this second phase, improvements regarding the gender ratio were expected, as well as environmental impacts due to adjustments of project composition after impacts assessments.

Iceland used this experience to review its decision-making processes, and to increase the focus on ex-ante gender impact assessment of budget proposals. The plan is to include gender impact assessment as a routine part of all relevant decision-making, including budgetary decisions. Iceland has been at the forefront globally when it comes to gender budgeting and has in place a sophisticated system of gender budgeting that was implemented after the 2008 global financial crisis, Today, the investment-focus has been added and Iceland is expanding their assessments due to learnings from the current crises.

Source: (Birna, 2020[75]); (OECD, 2021[2]).

59. Another possible way to analyse gender impacts is to require gender impact assessments in budget execution for specific investment projects, which are generally included in budget proposals, but only get concrete enough to do assessments after the budget has been approved (Box 2.10) (OECD, 2021[2]). This approach can be used along with gender assessments already in the planning phase of the budget, or as a stand-alone approach. In the second case, this approach might be widened to include gender assessments and objectives already in budget planning. In the budget execution phase, public procurement is a key tool to advance gender considerations. A forthcoming paper on gender and public procurement provides different tools on how to embed gender considerations in the procurement processes ranging from users involvement and needs analysis to contract execution (OECD, 2021[76]).

Box 2.10. Gender impact assessments during budget execution in Austria

Austria uses an impact assessment during the budget-planning phase for projects exceeding 1 million EUR. Legal changes, on the other hand, are always subject to impact assessment. However, the gender impact assessment is conducted only if the project is considered gender-relevant according to additional criteria. Given the complexity and stringency of these criteria, only a few projects qualify for gender impact assessment.

In 2019, Austria assessed the impacts of rural development policy carried out by the Ministry of Agriculture and procurements conducted by the Ministry of Defence. The 2019 report shows that many procurements carried out by the Ministry of Defence have not been gender-relevant and thus did not enter the gender-impact assessment procedure. Nevertheless, the legal changes implemented by the Ministry of Defence to strengthen militia had been classified as gender-relevant. The documented impact was that the number of women who participated in militia training increased from 160 to 545 due to these legal changes.

The report also highlights that 18% of funds allocated to rural development had a gender-relevant impact. However, these were mostly related to training and were not directly linked to capital projects. Investments such as supporting the development of high-speed internet in rural areas have been not classified as gender-relevant and are not subject to gender impact assessment. During the budget planning phase in Austria, certain tools are in place to conduct impact assessments of projects, In the 2019 report, many capital investment and infrastructure projects have been assessed, such as by the Ministry of Defence (related to procurement) and the Ministry of Agriculture (related to rural development).

Source: (OECD, 2021[2]).

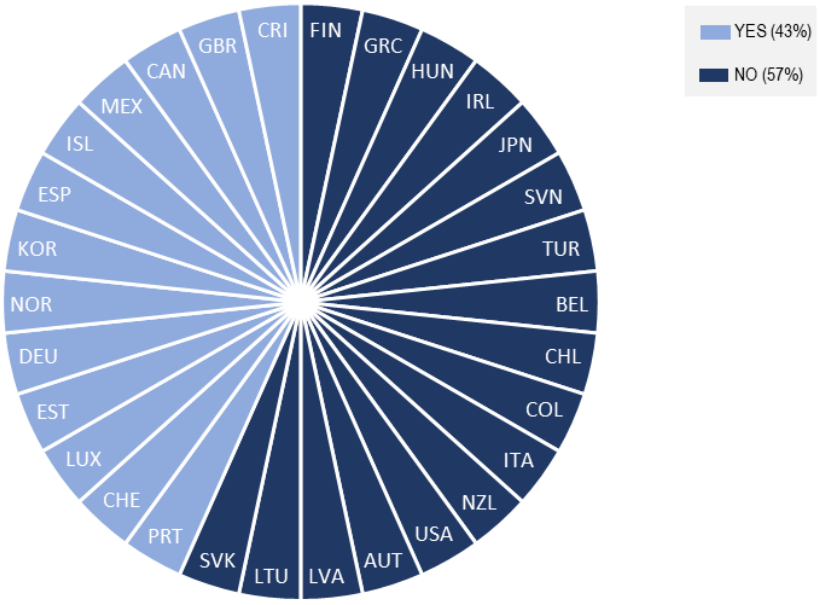
2.5. Ensuring gender-sensitive infrastructure procurement and delivery

Challenges

60. The increasing emphasis on ensuring that infrastructure delivers broader value in terms of economic, environmental, and social benefits places new demands on the procurement function. Public procurement processes that place an exclusive focus on cost may not be supportive of achieving broader policy goals. Developing strategic public procurement policies to enable and support contracting authorities to consider gender and social criteria in procurement processes is, therefore, key to ensure that the delivered infrastructure contributes to gender equality.

61. In order to support strategic goals such as gender equality, governments require robust skills and capacities in their procurement workforce, when in fact these continue to be lacking in most OECD countries (OECD, 2019[77]). With respect to infrastructure procurement, less than half of OECD countries provide support to procurement officers on how to promote gender equality (See Figure 2.4). The lack of understanding on how to achieve gender objectives through public procurement practices remains to be a top challenge for policy-makers (OECD, 2021[58]; OECD, 2020[78]). Without the adequate capacity and capabilities, it can be challenging for procurement officials to deliver the expected outcomes on gender equality.

Figure 2.4. Support to procurement workforce on how to promote gender equality in infrastructure procurement in OECD countries



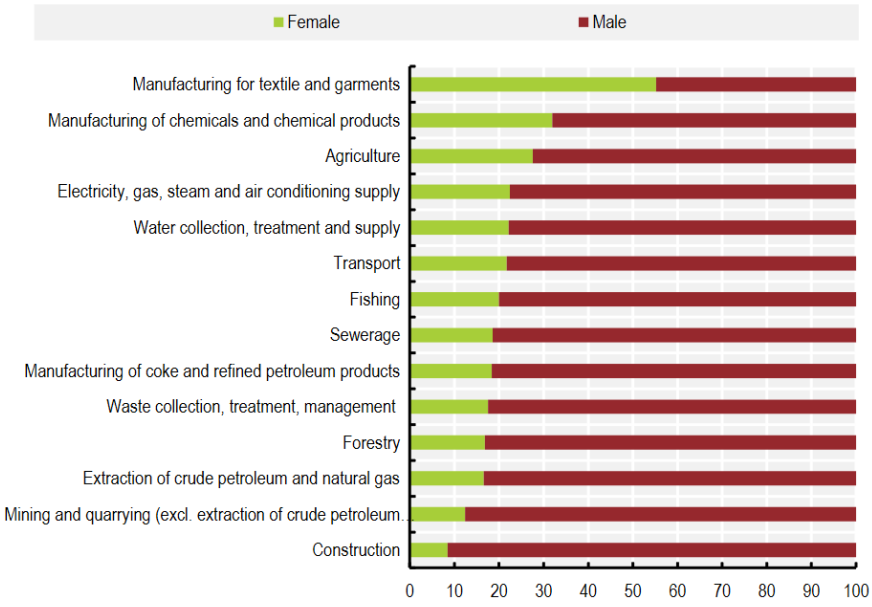
Note: Data not available for Australia, Denmark, France, Israel, Netherlands, Poland and Sweden
Source: OECD Survey on the Governance of Infrastructure (2020)

62. Numerous gender-related risks can be identified in value chains (OECD, 2021[58]). Given the labour-intensive nature of infrastructure, it is an area of frequent human and labour rights abuses. Gender-based occupational segregation in male-dominated sectors such as infrastructure and construction, is a factor that reinforces gender pay gaps and perpetuates pervasive sexual harassment and violence in the workplace (UN Women, 2020[6]). Equally important, infrastructure construction is considered a high-risk activity for GBVH and workplace violence, notably due to isolated construction sites, traditionally male-dominated working environments, as well as high influxes of male workers into local and rural communities that may increase the demand for sex work or the number of sex-related crimes (IFC / EBRD / CDC Group, 2020[79]; International Labour Organisation, 2013[80]; OECD, 2021[4]). During the land acquisition process, decisions over resettlements and compensations can further lead to abuses of power and sexual exploitation of women in order to secure compensations, particularly in the cases of female-headed households or women who have not been able to secure land tenure (IFC / EBRD / CDC Group, 2020[79]).

63. Procurement is critical to empower women and remove barriers to access in a heavily male-dominated field such as infrastructure (OECD, 2021[39]; OECD, 2019[40]; UNOPS, 2020[12]). Across different sectors, the share of female employees in the infrastructure workforce is very low (See Figure 2.5), but especially in senior positions in sectors such as transport, mobility, information and communication technologies and energy (World Economic Forum, 2016[81]). Women-owned businesses also lag behind businesses owned by men on most performance metrics: businesses tend to be smaller in revenue and number of employees, their average growth is significantly lower and their level of entrepreneurial activity is also low in comparison to men (Chin, 2017[82]). Similarly, only 24% of OECD countries have adopted public procurement strategies to support women-owned businesses[4] (OECD, 2019[83]).

[4] These data relate to public procurement strategies in general and are not specific to infrastructure procurement.

Figure 2.5. Labour by gender in specific economic activities in OECD countries



Note: Data is presented as an average percentage of OECD countries. Average does not include data for Australia, Canada, Japan, Korea and New Zealand.
Source: (OECD, 2021[4]), data obtained from ILOSTAT.

Policy solutions

64. Public procurement is a significant policy instrument, accounting for 29% of government expenditures and approximately 12% of gross domestic product (GDP) in the OECD area (OECD, 2019[84]). The OECD Recommendation of the Council on Public Procurement (2015) proposes concrete steps and encourages member states to evaluate the use of their public procurement policies and processes to pursue strategic objectives, for example gender equality and diversity. Gender-sensitive procurement is an emerging policy area that has the potential to support countries in mainstreaming gender considerations throughout the delivery and execution of infrastructure projects. Nevertheless, it is important to carefully analyse every project individually to make sure they are suitable for this approach not to hinder the procurement process.

65. Public procurement can be a powerful tool to drive demand for greater gender equality. Even if infrastructure projects do not explicitly consider a gender angle, public procurement is an important tool to mainstream gender equality in infrastructure contracts (Lallement, 2013[32]). If governments adopt gender-centric policies and incorporate gender-based conditions into their public contracts, it sets an expectation for the market and encourages the private sector to follow suit (OECD, 2021[58]). Adopting strategies to support procurement practitioners is crucial to ensure the delivery of gender-related outcomes through infrastructure procurement. The OECD Recommendation on the Governance of Infrastructure (2020) emphasises the need to provide tools to procurement officers to improve relevant skills and competencies in order to continually deliver value for money. Similarly, the OECD Recommendation on Public Procurement (2015) calls for the provision of regular trainings and set of tools to ensure that procurement officials improve their skills and competences and meet high professional standards.

66. The integration of gender considerations into public procurement processes can occur through different mechanisms and tools, and in different stages of the procurement cycle (OECD, 2021[58]). In the pre-tendering stage, comprehensive needs assessments (see Section 2.1), impact and risk assessments

(see Section 2.3) and market engagement are valuable inputs to mainstream gender considerations into the procurement process. Progressing gender equality in procurement can also be done through incorporating gender considerations into tender requirements, notably: embedding gender considerations in technical specifications; including gender-related qualification criteria or grounds for exclusion; and, in some jurisdictions, incorporating a gender angle to set-asides and bid preferences; and, mainstreaming gender considerations into contract performance clauses (OECD, 2021[58]). Finally, during the contract execution stage, appropriate means to monitor and enforce the contract performance conditions (see Section 2.6), are crucial to deliver on gender-inclusive procurement. Some examples of practices adopted by OECD countries in their public procurement systems to promote gender considerations are presented in Box 2.11.

Box 2.11. Public procurement strategies to mainstream gender considerations in OECD countries

Chile

The Central Purchasing Body (CPB) in Chile has introduced a programme to promote the participation of companies led by women in the public procurement market. It offers, for example, training programmes for women and guidelines to help officials include gender considerations in their decisions by incorporating gender-specific evaluation criteria. Women received 36% of government contracts in 2015. Many of the women that participated were from rural areas, with 64% being the family's main wage earner. To determine which companies were women-led or women-owned, ChileCompra introduced an electronic registry. This registry certifies "female enterprises" (sole proprietors) and includes this data in the civil registry. For more complex companies to be labelled "female enterprise" in the registry, additional criteria apply. Women have to own the majority of company shares and the CEO also has to be a woman.

Iceland

Iceland's equal pay certification legislation, passed in 2017, is aimed at closing the gender pay gap. All companies with 25 employees or more are obliged to obtain certification from a certifying body of Icelandic Standard ÍST 85 to prove that women and men receive equal pay for equal work. The Centre for Gender Equality oversees the certification process. The Icelandic Act on Public Procurement allows purchasing agencies to request bidders the equal pay certification or equivalent.

Switzerland

Switzerland's public procurement law requires equal pay for men and women as a prerequisite for participation in public procurement. Government agencies are empowered to carry out random controls to ensure compliance. Infractions may lead to sanctions, such as a contractual penalty or the exclusion from the procurement market. The aim of these regulations is to ensure social achievements and to avoid distortions of competition. The Swiss government developed an instrument named Logib to support the implementation of these requirements. Other things being equal, Logib shows whether there is a statistically significant gender effect on wage. The tool takes into account human capital related factors like level of education, years of service, potential working experience, and factors reflecting the performed function, like skill level and professional position. Companies can use Logib as a self-analysis tool. The tool is publicly available in various languages, anonymous, and free of charge.

Source: (OECD, 2020[78]); (OECD, 2019[40]); (OECD, 2021[58]).

67. Procurement strategies can also address the need for sustainable considerations in the execution of infrastructure projects. Public procurement strategies have strong potential as a tool to ensure supply chains that are mindful of gender considerations through the promotion of responsible business conduct (RBC) standards in contract implementation (OECD, 2020[78]).

68. In the pre-tendering phase, a comprehensive, gender-based assessment of risks associated with labour rights compliance and GBVH risks posed by construction sites can significantly reduce negative impacts of infrastructure development on women. The use of a gender lens to design the contract conditions and stricter measures throughout the infrastructure implementation phase are also crucial to address the risks posed by construction sites. Gender equality considerations that can be incorporated in contractual provisions to ensure contractors' contribution to gender equality and eradication of GBVH, include: compliance with labour law and regulations that protect female employees; equal pay regulations; adoption of codes of ethics and conduct that emphasise zero-tolerance for gender based violence; grievance mechanisms for project-affected groups and communities; training requirements on gender equality aspects of recruitment and employment for all line managers and the staff performing the contract; gender equality in labour opportunities during infrastructure construction and operation phases; and obligation for the contractor to ensure that accurate information about the working conditions of all people involved in the delivery of the contract is available throughout the duration of the contract.

69. Increasing women's representation in infrastructure is a key priority to ensure that the procurement of infrastructure projects generates equal labour and business opportunities for women and men (Lallement, 2013[32]). Encouraging a greater female representation in infrastructure delivery can also mitigate negative spill-overs on women and other vulnerable groups from project construction and operation (OECD, 2021[4]). Governments can adopt strategies to ensure equal chances of access to labour opportunities by incentivising the participation of women in infrastructure construction and operation, as well as removing barriers that exacerbate gender disparity. Some examples from Australia and Canada are presented in Box 2.12.

Box 2.12. Strategies to reinforce women's participation in infrastructure labour force in Australia and Canada

Australia

The state of New South Wales in Australia adopted an "Infrastructure Skills Legacy Programme" to support contractors in increasing diversity of their workforce and is a mandatory requirement for all infrastructure projects over AUD 100 million in New South Wales. The programme sets a number of skills, training and diversity targets that agencies and construction contractors need to meet, including doubling the number of women in trade-related work. The programme specifically encourages contractors to increase female representation in non-traditional occupations such as environmental or construction management, drafting and civil engineering. The Training Management Guidelines provide strategies for the achievement of these targets, for example training new entrant workers and upskilling for existing ones. Contractors should also implement a system to report the compliance with diversity targets, including number of female employees and hours of work in trade related tasks.

Canada

The "Canada's Women in Construction Fund" aims to increase the participation of women in construction trades where they have been traditionally under-represented by investing CAD 10 million in training and support to attract more female labour. The support provided includes mentoring, coaching and training that can help women find employment opportunities in construction, which is expected to benefit approximately 2,800 women in the country.

Source: (New South Wales Government, n.d.[85]); (Infrastructure Canada, 2018[86]); (Government of Canada, 2019[87])

2.6. Integrating a gender angle into infrastructure monitoring and evaluation

Challenges

70. Failure to define gender equality targets and weak oversight of infrastructure service delivery can have a negative impact on the successful incorporation of gender considerations throughout the assets' life cycle. The implementation of infrastructure assets can be subject to delays, higher than expected costs and changes to the specification of the investment due to differences from how implementation was planned relative to real life circumstances at the time (OECD, 2020[48]). Yet, infrastructure agencies tend to focus more on infrastructure development and less on life cycle monitoring and evaluation (OECD, 2017[51]). As a result, the lack of accountability over the provision of infrastructure services may lead to the inability to reach predefined service delivery targets and expected outcomes or impacts, for example those related to gender equality and eradication of GBVH.

71. With respect to the evaluation of infrastructure investments throughout their life cycle, more efforts are needed for advancing a gender mainstreaming approach. Generally speaking, policy evaluation is often the weakest link in the policy-making cycle as governments usually face several barriers for carrying out evaluations (e.g., unavailability of reliable data, lack of a whole-of-government strategy for policy evaluation, limited human resources, limited use of evaluation results in policy-making) (OECD, 2020[88]). As highlighted in Section 2.1, the unavailability of sex-disaggregated data is still a major obstacle faced across countries, which further hinders the evaluation of a gender perspective in infrastructure decision-making. Equally important, the lack of skills and competences to both evaluate and incorporate evidence into the infrastructure decision-making can pose significant challenges. Limited knowledge and low awareness on how to adopt a gender mainstreaming approach in infrastructure can make the evaluation process significantly more complex. Likewise, essential gender-related evidence can be disregarded during the planning and decision-making processes if there is no clear identification of the entry points to gender mainstreaming throughout the infrastructure life cycle in the first place.

Policy solutions

72. Gender equality objectives have the greatest chance of being achieved if they are supported by robust monitoring and accountability mechanisms (OECD, 2019[40]; Lallement, 2013[32]). The OECD Recommendation on the Governance of Infrastructure invites countries to monitor asset performance against predefined service delivery targets and expected outcomes. Infrastructure monitoring is a function performed by the government agency responsible for the implementation, combined with oversight by at least one other government organisation, such as a ministry of finance or a similarly specialised body, to help governmental decision-makers stay appraised of the circumstances and take remedial action as required. Monitoring the whole-of-life performance of infrastructure investments is crucial to ensure that the ambitions for gender equality identified in the strategic vision are accomplished and that the asset effectively benefits targeted populations.

73. Key performance indicators and targets in gender equality should be adopted along the different stages of the infrastructure life cycle. The OECD Recommendation on Gender Equality in Public Life (2015) calls for systematically measuring progress towards gender equality performance, based on impact indicators and measurable outcomes. The need for measurable objectives and indicators during the strategic planning and budgeting phases was already discussed in Sections 2.1 and 2.4 of this document. Gender-related key performance indicators should also be adopted at the project design phase (Lallement, 2013[32]), in order to allow for the monitoring of the implementation and operation of infrastructure contracts. Integrating gender-inclusive indicators into gender-blind projects can still allow governments to make them more inclusive by keeping track of its contribution to gender equality goals and adopting corrective measures throughout its performance if needed (International Labour Organisation, 2020[89]). Contract performance indicators should include as a minimum: access to infrastructure services disaggregated by

gender; women's safety when using infrastructure services; and, resolution of concerns or grievances raised during project implementation and operation raised by female members of impacted communities.

74. Robust policy evaluation practices can provide an understanding of the effectiveness and efficiency of gender-responsive infrastructure decision-making processes. Promoting policy evaluation can provide credible evidence on governments' performance and outputs, which in turns improves the quality of public services (OECD, 2020[88]). For instance, conducting *ex post* assessments is a good practice to evaluate the impacts of infrastructure investments in reducing gender disparities, improving women's wellbeing and social empowerment, and supporting economic growth through enhanced women's economic empowerment. OECD countries like Austria, Iceland, Israel, Mexico, Netherlands, Norway, Spain and Sweden reported conducting *ex post* gender impact assessments (Downes, von Trapp and Nicol, 2017[71]). The adoption of key performance indicators on the projects' construction and operation phases is paramount for impact evaluation and policy analysis. Nonetheless, it is also important to evaluate what specific measures where adopted during the project to address gender equality and non-discrimination and how effective where these measures in advancing equality and inclusivity (International Labour Organisation, 2020[89]).

3 Conclusions and key messages

75. Infrastructure is central to every country's pursuit of economic growth, wellbeing and sustainable development. However, there is a common misconception that infrastructure is gender-neutral. By incorporating gender considerations throughout the public investment process and involving more women in decision-making processes, governments can identify gender impacts of infrastructure and capital investment decisions, prevent one group from disproportionally benefitting at the expense of disadvantaging others and support women's empowerment and equality.

76. This paper has explored the challenges that policy makers face when mainstreaming gender considerations throughout the infrastructure public investment and capital life cycle and discussed policy solutions to support gender-responsive infrastructure and gender capital budgeting. The first chapter of this report laid out the case for a gender-responsive approach to infrastructure planning, budgeting, delivery and implementation. The second chapter of this paper provided a framework and a broad mapping of gender mainstreaming tools at each stage of the infrastructure life cycle. Key messages on how to ensure gender-responsive infrastructure decision-making processes are presented below.

3.1. Key messages

- A **strategic long-term vision for infrastructure and capital investment**, adequately informed by a thorough assessment of gender-differentiated needs and a gender-inclusive stakeholder engagement process, can help to ensure that investment decisions respond to the specific needs of the entire population to prevent one group from disproportionally benefitting at the expense of disadvantaging others. This vision will have an additional value if it presents a whole-of-government plan that is mindful of the gendered impacts of infrastructure in the long-run.
- Strengthening **co-ordination across sectors and levels of government** is key for a whole-of-government approach to gender-responsive investments. Vertical co-ordination is essential to close gender equality gaps across women from different backgrounds (e.g., urban-rural, under-served regions) through public investments specifically targeted to local needs. Horizontal co-ordination can also allow the identification of trade-offs and synergies across sectors to progress gender equality.
- Adopting an **evidence-based approach** is necessary condition for mainstreaming gender considerations in strategic planning, delivery and implementation. More efforts are required to identify gaps in gender-disaggregated data and define strategies to facilitate its collection, sharing and systematic use for infrastructure needs assessment. Data should cover gender gaps in access to infrastructure, different patterns of use and preferences between women and men, as well as measurable benefits and risks that infrastructure poses to women and girls.
- A **meaningful stakeholder engagement** is a powerful platform to articulate women's infrastructure preferences and claims. Additional efforts should be made to map and target relevant stakeholders at different stages of the investment life cycle, disaggregated by gender, income brackets, minority groups, under-served population groups and territories.

- Tools for **evidence-based regulatory decisions**, such as gender regulatory impact assessments, allow governments to adopt regulatory frameworks that enable women's agency and amplify the benefits that can be drawn from infrastructure projects.
- Identifying barriers for women of diverse backgrounds to **get involved in infrastructure leadership** is an additional way to support a more meaningful participation of women in infrastructure management and governance.
- A **rigorous project appraisal and selection process** should take into account non-monetised costs and benefits, pay due consideration to gender-specific impacts of infrastructure projects and capital investment account for the full cycle of the assets.
- **Gender budgeting tools** can support governments in mobilising resources towards transformative investments that effectively progress gender equality policy goals. The alignment of budget policies with long-term infrastructure plans and gender equality policies is essential to achieve expected policy outcomes.
- **Gender procurement** is an emerging policy area that has the potential to support countries in mainstreaming gender considerations throughout the delivery and execution of infrastructure projects. This can be done for instance through providing training to public procurement workforce on mainstreaming gender equality in infrastructure projects, incorporating gender considerations into tender requirements and into contract implementation clauses.
- Gender equality objectives in infrastructure have the greatest chance of being achieved if they are supported by robust **monitoring and evaluation** mechanisms. Key performance indicators and targets in gender equality targets should be adopted along the different stages of the infrastructure and capital investment life cycle.

3.2. Next steps to mainstream gender considerations in infrastructure decision-making and capital budgeting

G20 countries have a decisive role in shaping the direction for future work on gender mainstreaming in infrastructure public investment and capital life cycle. Countries are invited to identify and express key priority areas across the infrastructure life cycle. More insights for further analysis could be drawn from conducting a rigorous assessment of governments' capabilities, strengths and key areas for improvement. Advancing the dialogue on gender responsive infrastructure and gender capital budgeting to generate long-lasting effects requires continuous engagement and support for public officials in G20 countries. Next steps to continue supporting the incorporation of gender considerations in infrastructure decision-making and delivery could involve the development of a policy tool-kit with specific policy guidance on gender-responsive and efficient planning, budgeting, decision-making and delivery of infrastructure programmes and projects. The World Bank, the Global Infrastructure Hub and Multilateral Development Banks could also be invited to provide inputs to this work.

The OECD stands ready to support governments in future work aimed to mainstream gender considerations in infrastructure decision-making and delivery, by convening its policy networks to share good practices and tools. Looking to the future, it stands ready to respond to G20 demands for additional data collection, analysis and dissemination of good practice.

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Selected stocktaking of good practices for inclusion of women in infrastructure

Infrastructure can have a major impact on women's access to resources and agency over their well-being, and thus on women's empowerment. Infrastructure itself is not gender-neutral: women and men have different needs and use infrastructure differently given their specific social roles, economic status or preferences. Poor infrastructure quality also poses differentiated threats to women's safety and well-being. Moreover, infrastructure has traditionally been a heavily male-dominated sector, leaving women little or no voice in investment decisions that affect their economic opportunities, day-to-day lives and well-being. Increasing women's participation in infrastructure policy and decision making is thus crucial.

This report explores the challenges policy makers face when mainstreaming gender into infrastructure and proposes a framework for incorporating gender considerations at each stage of the public investment process. The report also provides guidance on how to involve more women in infrastructure leadership and decision making.