WeProsper

GLOBAL COALITION FOR
WOMEN'S ECONOMIC EMPOWERMENT

Global Assessment of Care-Related Infrastructure: Current Status, Impact, and Policy Recommendations

WeProsper's Research and Policy Publication Series on Women's Economic Empowerment

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About WeProsper

WeProsper is a global coalition that promotes women's economic empowerment (WEE) by engaging in strategic advocacy to advance gender equality, address structural barriers, and foster women's and girls' voice and power as economic actors. Together, we work to build and utilize the global evidence-base on women's economic empowerment using a feminist and intersectional approach to meaningfully inform global policy, increase funding for WEE, and support prosperity for women and girls in all their diversity.

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Authors and Acknowledgements

Authors: Emily Schaub (ICRW), Mary Borrowman (ICRW), and Kelsey Harris (ICRW).

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List of Abbreviations

ADB	Asian Development Bank
DAC	Development Assistance Committee
G7	Group of Seven
GBV	gender-based violence
GBVH	gender-based violence and harassment
IEA	International Energy Association
LMICs	low- and middle-income countries
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
PGII	Partnership for Global Infrastructure and Investment
SDGs	Sustainable Development Goals
TLSE	time and labor-saving equipment
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WASH	water, sanitation, and hygiene
WEE	women's economic empowerment
WHO	World Health Organization

Executive Summary

The impacts of the COVID-19 pandemic highlight longstanding gender inequities in both unpaid and paid care work — and have brought care to the forefront of social and economic policy dialogues. WeProsper, a global coalition for women's economic empowerment (WEE), developed this report to synthesize evidence to inform advocacy campaigns and policy recommendations. Given this evidence, WeProsper makes the case for policymakers to take action on and invest in care holistically, as they weigh the full range of COVID-19 recovery measures and other competing investment priorities.

This report, the second in a two-part series on care work, synthesizes a wide range of existing research and evidence on one aspect of care policies — care-related infrastructure — with a focus on low- and middle-income countries (LMICs) and intersections with climate change. This includes the evaluation of existing policies and programs on water, sanitation and hygiene (WASH), energy, transport, and time and labor-saving equipment (TLSE) infrastructure with WEE outcomes, current levels of investment and financing, and policy considerations.

Unpaid Care Work, Infrastructure, and Climate Change

The amount of unpaid care work — which disproportionately falls to women and girls — is exacerbated by insufficient or nonexistent care-related infrastructure.[1] The climate crisis is deeply linked to the care crisis. Climate change is likely to intensify the amount of unpaid care work, by directly reducing the availability of food, water, and fuel sources which makes caring for people, crops, and livestock even more time- and labor-intensive than it has been in the past.[2]

Strategies for climate resilience are also closely linked to care-related infrastructure. Investment in clean fuel and responsibly and sustainably managed WASH services, both reduce the amount of unpaid care work and mitigate the impacts of climate change on vulnerable communities.

Successful Policy and Programmatic Approaches

Key findings from the evidence synthesis include:

- **Water, Sanitation, and Hygiene (WASH):** Increasing women's participation in policy-setting and elevating their voices in resource governance. Constructing and maintaining safe public water points, including by integrating gender-based violence and harassment (GBVH) mitigation measures. Collecting gender-disaggregated data related to WASH preferences and use.
- **Energy:** Research to better understand the relationship between women's empowerment and electricity, as well as the engagement of women in the clean energy sector as entrepreneurs. Involvement of women in new energy systems and as entrepreneurs can be a powerful driver of changing gender norms and power dynamics within households.
- **Transport:** Collecting gender-disaggregated data on usage and safety in public transit stations. Constructing additional and improving existing transport systems with wider geographic and time coverage. Ensuring that women's preferences and voices are included in the design of transportation systems.
- **Time and Labor-Saving Equipment (TLSE):** Delivery of laundry, farming, and WASH equipment, as well as the collection and analysis of gender-disaggregated data to understand the impact of TLSE.

WASH Financing

Key findings from the evidence synthesis include:

- **Financing gaps are prevalent:** While most governments have national WASH plans, less than 15% of 100 countries surveyed reported that they have at least 75% of the funding or the human resources for implementation, and 20 countries surveyed reported a funding gap of 61% between the identified country needs and the funding available to meet targets.[3,4]
- **Gender-disaggregated data is limited yet important:** For WASH and water resource management, only about one-third of countries collect such data, which makes valuation and adequate financing for such services even more challenging.[5,6]

Foreign Policy and Donor Financing

Key findings from the evidence synthesis include:

- **Rising awareness of the intersections of care, gender, climate, and infrastructure:** such as the Partnership for Global Infrastructure and Investment (PGII), launched at the 2022 Group of Seven (G7) Summit.[7]
- **Gender equality financing is not being prioritized within care-related infrastructure sectors:** the most recent data available (2020) on official development assistance (ODA) indicates that financing is remarkably low particularly where gender equality is the principal objective of the project or program (see Table 5).

Policy Considerations and Implications

Key findings from the evidence synthesis support the following policy considerations and implications in the "5R" care framework:[8]

- **Recognize** unpaid care work in national statistics, data collection about needs for and usage of care-related infrastructure, and by including it in cost-benefit analyses of infrastructure investments.
- **Reduce** and **Redistribute** unpaid care work by:
  - Financing gender-responsive and climate-resilient care-related infrastructure provision that is implemented through a care lens.
  - Ensuring this care-related infrastructure is of good quality, accessible, affordable, and safe.
  - Conducting impact assessments of infrastructure investments with WEE indicators, including unpaid-care time.
  - Maximizing the linkages between climate change, sustainability, and unpaid care in policy and financing.
  - Enacting gender norm campaigns to redistribute unpaid care work across genders.
- **Represent** the needs and perspectives of women and girls to create effective policies around care-related infrastructure, climate change mitigation, and unpaid care by ensuring the presence of their voices in decision-making spaces.
- **Reward** paid workers in care-related infrastructure sectors and unpaid caregivers by ensuring decent wages and working conditions for women workers in infrastructure sectors and providing critical social protections for unpaid caregivers.

Conclusion

In summary, this report illustrates why addressing the intersections between gender, care, infrastructure, and climate change is critical to achieving a broad range of social and development goals, including supporting women's economic empowerment, justice, and rights.

> **Infrastructure investments must be implemented in a way that is not only climate-resilient and gender-responsive, but also through a care lens to be the most effective and generate the greatest returns.**

Given the extent of provision gaps documented across many contexts, greater prioritization of available domestic resources, as well as financing from donor governments and IFIs, is necessary. Governments have a central role in supporting provision that is of good quality, affordable, accessible, and gender-responsive, particularly in terms of ensuring the safety of users. It is a critical time for policymakers to interrogate these priorities and recognize care-related infrastructure investments as instrumental for WEE and sustainable development.

Introduction

The impacts of COVID-19 created an opening on global and national policy agendas for care work. WeProsper has utilized this opportunity to advocate for a holistic policy approach to care, because of its substantial impact on women's economic empowerment, justice, and rights, and its transformative effect on societies and economies. This approach includes elevating issues specific to care work within low- and middle-income country (LMIC) contexts that are not currently at the forefront of the global discourse on care policies, such as care-related infrastructure. Care infrastructure encompasses a range of sectors, from social infrastructure, like health, childcare, and long-term care services, to care-related components of more traditional physical infrastructure sectors, such as water, energy, transportation, and technology. Without addressing care infrastructure holistically, issues within paid and unpaid will not be adequately addressed, and policy solutions will fall short of achieving desired economic and gender equality outcomes, as well as achieving the Sustainable Development Goals (SDGs).

The spectrum of unpaid to paid care spans a wide range of policy issues. A holistic approach to address these issues integrates the "5 Rs" of care — recognizing, redistributing, and reducing unpaid care work and rewarding and representing paid care work. Building off of WeProsper's first report on care services, this second part of the series seeks to bring specificity to the global conversation on care and inform effective policy by synthesizing a wide range of research and evidence on one component of care policies - investments in care-related infrastructure. This synthesis evaluates the connections between care-related aspects of infrastructure and women's economic empowerment (WEE), and existing policies and programs with a focus on LMICs and intersections with climate change. The goal of this synthesis is to provide evidence for advocates to use in championing and crafting policy recommendations, and to provide justification for policymakers to make additional and more effective investments in care-related infrastructure, which foster WEE and sustainable and inclusive economies.

Care infrastructure is used broadly to encompass the policies, systems, resources, and services that enable people to fulfill their caregiving responsibilities and support participation in paid work.

- This includes **social infrastructure**, such as services for childcare, eldercare, care for those with disabilities, education, and healthcare.
- This also includes components of what has been more traditionally considered infrastructure that relates to the time spent on unpaid domestic care work, such as water, sanitation, energy, transport, and technology sectors. This is referred to as **care-related infrastructure** or care-supporting physical infrastructure.[9,10]

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Gendered Impacts of Care-Related Infrastructure

The amount of unpaid care work — which disproportionately falls to women and girls — is exacerbated by insufficient or nonexistent care-related infrastructure. This includes the lack of piped water in the home, access to electricity and effective time- and labor-saving technology and equipment (TLSE), and poor transportation linkages between care providers' homes and their most frequented destinations.[11] Infrastructure shortages, particularly for the poorest households, such as failing to provide efficient and reliable transportation along routes frequented by caregivers, results in women needing to spend additional time on activities like walking or traveling long distances to fetch water. This results in time poverty, as it leads to longer overall working days for women, and depletes time for leisure or self-care. The additional time spent on unpaid care work reduces the time women can spend on income-generating activities or it excludes them from the labor force altogether. Insufficient access to care-related infrastructure is also related to poor health outcomes. Additionally, time poverty can increase reliance on unsafe sources of water and fuel and increase exposure to gender-based violence and harassment (GBVH) while using public water points and latrines. Poor health and the physical and psychological impacts of GBVH further impact WEE as they reduce women's mobility and ability to work, particularly in countries with weak legal structures to prevent GBVH and where women lack decision-making power.[12,13]

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Unpaid Care Work and the Climate Crisis

The climate crisis is deeply linked to the care crisis. Climate change will likely intensify the amount of unpaid care work by directly reducing the availability of food, water, and fuel sources and making caring for people, crops, and livestock even more time- and labor-intensive.[14] The increase in extreme weather (storms, heat waves, floods, and droughts) will heighten resource and water scarcity and increase the labor and time required for cultivating crops and rearing livestock. Changing temperatures and rainfall levels will increase the rate of water- and insect-borne infectious diseases, including malaria, which will further strain care providers' efforts to tend to sick dependents. Modeling suggests that projected climate change will increase the spread of malaria in sub-Saharan Africa, particularly in the highlands, tropics, and East Africa.[15,16,17]

Climate change will create huge numbers of refugees and displaced people. Already, 20 million people annually are forced to relocate as a result of extreme weather events and sea-level rise.[18] Women are particularly vulnerable to climate-related crises and displacement. It is estimated that as many as 80% of those displaced by climate change will be women, and displacement is likely to be permanent.[19] In many cases, displacement due to climate and other emergencies risks shifting populations to places where care-related infrastructure — piped water, safe sanitation, electricity, and transportation systems — may not be as readily available, accessible, or responsive to the needs of users, and may heighten the risk of GBVH.[20]

Strategies for climate resilience are closely linked to care-related infrastructure. Investment in clean fuel and responsibly and sustainably managed water, sanitation, and hygiene (WASH) services, stands to both reduce the amount of unpaid care work and mitigate the impacts of climate change on vulnerable communities.

Safe and Accessible Water, Sanitation, and Hygiene (WASH) Infrastructure

Unpaid Care and Access to WASH Infrastructure

Obtaining and using WASH services is a significant component of unpaid care work. This includes collecting water for drinking, cooking, washing, and tending to crops and livestock, as well as accompanying children and other dependents to use sanitation and hygiene facilities. For many households, these services are not available in the home, workplace, or school. Globally, as of 2020, 26% of people lack access to safely managed drinking water, 46% lack access to safely managed sanitation services, and 29% do not have access to handwashing services at home.[21]

When sufficient household WASH infrastructure is not provided, care providers must turn to other sources. Households without WASH services on the premises often use public taps or other water providers. Yet these sources can be far away, contaminated or insecurely managed, and expensive — three factors which compound each other. Those responsible for water collection may opt to travel further for cheaper or safer water, and/or cut down on costs and time use by forgoing some uses of water, including sanitary hygiene and food preparation practices.[22,23]

Gendered Impacts of WASH Infrastructure Access

Time Poverty and Labor Force Participation

Collecting water is a significant time and labor burden for caregivers, as is accompanying dependents to public toilets and bathing facilities. The care providers who bear the brunt of this burden are overwhelmingly women and girls. Globally, women are primarily responsible for collecting water for drinking and washing in around 80% of households with off-premise water services.[24] Data indicates that women and girls spend some 200 million hours per day collecting water.[25] Interestingly, time-use data from Tanzania suggests that women not only are more likely to collect water but also spend more time on this task than men, an average of 30.1 minutes per day, compared to men's 19.6 minutes.[26]

Time spent collecting water and using sanitation services translates directly into sacrificed hours for engagement in paid labor — which could be offset by investments in WASH infrastructure. Findings from both Ghana and Pakistan linked access to safe water in or near the home with increases in women's participation in income-generating activities, and evidence from Senegal suggests that investments in piped water saved women time, which they then used to engage in entrepreneurship, founding businesses in livestock and gardening.[27,28]

The linkage between WASH infrastructure and labor force participation begins in childhood, as girls in many contexts are expected to help collect water, often to the extent of sacrificing school. Research findings from Ghana directly relate the time needed to obtain water with school attendance for girls between the ages of five to 15, suggesting that reducing the time to obtain water by half increases attendance by 2.4 percentage points, and more in rural communities.[29] Likewise, in Zimbabwe, research shows that access to water reduced girls' time spent on care work and increased the time they spent studying.[30]

Health Outcomes

Poor and/or inaccessible WASH infrastructure poses health challenges. Infrastructure that fails to provide affordable, accessible, and safe water and sanitation, negatively affects the people primarily responsible for collection and use — disproportionately women. Consequently, women use unsafe, unmonitored water to meet household needs. Using contaminated water sources for cooking, drinking, and bathing, coupled with poor sanitation and hygiene, dramatically increases the prevalence of water-borne disease. Estimates suggest that poor sanitation is responsible for nearly half a million diarrheal deaths in LMICs, particularly among children under five years old.[31]

Higher incidence of sickness increases the amount of time required to care for sick family members. Without easy access to water, this unpaid care work is often done without the means to safely protect the patients nor the caregivers themselves, increasing both the severity and the spread of disease.[32] Improved sanitation and hygiene infrastructure could decrease the spread of diseases, improve child and caregiver health, and reduce unpaid care work. This could improve caregivers' ability to engage in income-generation and reduce absenteeism and loss of productivity.

Simultaneously, the health impacts of carrying heavy loads of water over long distances, sometimes several times daily, can be severe. Researchers in six rural villages in South Africa found that the average weight of water carried, most of which is done by women and children, is 19.5 kilograms (43 pounds), and that 69% of individuals who carried water reported neck or back pain.[33] Similarly, a cross-national survey in South Africa, Ghana, and Vietnam found that people who carried water had a greater risk of reporting pain in the hands and the upper back, including those who had carried water in the past.[34]

Gender-Based Violence and Harassment (GBVH)

Women and girls who travel (usually on foot) to collect water and use public toilets and washing facilities face a serious risk of GBVH while doing so. The International Rescue Committee reports that of women interviewed in 15 countries across East and West Africa and the Great Lakes region, nearly a third reported harassment and sexual violence while traveling to water points, and 21% reported harassment at water points.[35] Violence is particularly common when water points, washing facilities, and toilets are poorly lit, not gender-segregated, and lack doors that lock.[36] Women in LMICs around the world, including Kenya, South Africa, and Colombia have also reported being coerced into trading sex for water.[37]

Climate Change and WASH Infrastructure

The impacts of limited WASH infrastructure will almost certainly be exacerbated by the climate crisis. As water becomes scarcer and people are dislocated to places without consistent and secure access to water and sanitation services, care providers will travel further, face greater risks, and will more often resort to unsafe sources.

Climate change-driven drought and heat waves will both reduce the availability of water and increase households' water needs. WaterAid estimates that climate change-related flooding will disrupt WASH services for up to 13% of the population in the most vulnerable countries.[38] Climate emergencies will result in long-term displacement, including to sites with limited access to water. Of 133 global refugee camps and settlements for which recent data are available, 69% fail to meet the daily requirement of 20 liters of water available per day per person.[39] In addition to creating additional stress on the supply of available water, climate change will demand more frequent trips to water points that are further from residences and that serve a greater number of households, which increase both travel and wait times. Illustratively, in the wake of the COVID-19 pandemic, in interviews with displaced women in sub-Saharan Africa, 55% reported collecting water more frequently and 39% reported making longer trips; 48% reported waiting in line for over an hour.[40]

Climate change will also increase the rate and risk of disease, both as a direct result of changes in temperature and rainfall, and because of displacement to crowded sites, where greater numbers of households share public WASH facilities.[41] In some emergency and refugee contexts, as many as 50 people from different households may share a toilet, and handwashing and menstrual hygiene management facilities may also be unavailable.[42] Crowded WASH facilities, coupled with poor hygiene infrastructure, will result in the increased spread of water-borne illnesses. The World Health Organization estimates that climate change-related cases of diarrhea and other diseases will result in 5 million additional deaths between 2030 and 2050.[43] This will also result in increased time spent caring for the sick, particularly children.

Similarly, climate change will increase the risk of WASH-related GBVH. Increased stress on water is likely to increase violence among competitors for the scarce resource. The risk of GBVH in public areas, including public latrines and water points, is also heightened in humanitarian and emergency settings.[44,45,46] This has the potential to put care providers at increased risk of violence while collecting water.

Evidence on WASH Infrastructure and Women's Economic Empowerment Outcomes

Table 1 reviews examples of WASH infrastructure programs that evaluate WEE-related outcomes to highlight evidence-based interventions that policymakers can make to fill essential infrastructure needs while also supporting WEE. Key successful approaches have included increasing women's participation in policy-setting and elevating their voices in resource governance, constructing and maintaining safe public water points, integrating gender-based violence (GBV) mitigation measures, and collecting gender-disaggregated data related to WASH preferences and use. The impacts of these interventions are an increase in representation of women in WASH management roles, the expansion of budgets for and the reach of WASH services, and the reduction and redistribution of domestic work for women, which increased opportunities for income generation.

Investment in WASH facilities that are located in or near living spaces of users can dramatically reduce unpaid care work time, increasing the time available for income-

generation and other activities. However, in order to have the impact and mitigate unintended consequences, infrastructure must be designed and implemented in a way that is gender-responsive and accessible to women and girls, who are primarily responsible for these tasks. For instance, women's privacy and safety must be assured at communal water points and in public latrines, to encourage their use. In order to ensure this access, women and girls must be present and meaningfully involved in decision-making around water projects. For investments in infrastructure to translate into reduced time on unpaid care work and increased labor force participation for women, gender norms and lack of decent work opportunities must also be addressed.

Table 1: Examples of WASH Infrastructure Programs Evaluating WEE Outcomes

Example Project	Approach	Country/Region	Impact
Creation of Water Liaison Division (2003)[47]	Increase opportunities for women's participation in policy-setting	Uganda	Recruitment of staff with gender-mainstreaming competencies increased women's representation in management.
Oxfam and Youth Alive! Kenya's engagement with women in informal settlements to influence budgeting (2015-2018)[48]	Increase opportunities for women's participation in policy-setting	Kenya	More than 800 women participated in decision-making to influence decision-making and budget allocation; budget allocation for WASH services increased by 11%.
Women's Economic Empowerment and Care (WE-Care) Partnership: Oxfam, Unilever, Surf (2016-2019)[49,50]	Construct and repair of public water points; raise awareness of unpaid care	Zimbabwe, Uganda and the Philippines	Time on unpaid care was reduced by 1 to 4 hours per day and redistributed between women and girls and men and boys.
Shack/Slum Dwellers International's data collection on physical infrastructure [51]	Increase opportunity for women's participation in policy-setting in the upgrading of informal settlements (including related to water and sanitation, as well as solid waste collection, electricity and road paving)	Urban areas in Africa, Asia and Latin America	Collection and analysis of data related to informal settlements, often by women, is used to advocate for the improvement of physical infrastructure.
Ugandan Ministry of Water and Environment's expansion of access to water for poor communities (2014) [52]	Construct public water points; develop pro-poor tariffs and affordability	Uganda	Increased services for poor communities and decreased unpaid care work time.
UNICEF integration of GBVH mitigation in WASH (2017) [53]	Mitigate GBVH in WASH programming	South Sudan	Formalized collaboration between WASH and GBVH sectors led to a reported increase in safety around WASH facilities.
Women-led audit of WASH facilities for adaptation of facilities and mitigation of safety concerns (2018-2019)[54,55]	Collect and use data on women's use of and preferences around WASH facilities; mitigate GBV in WASH programming	Bangladesh	Research with women users of WASH facilities revealed concerns related to safety, privacy and dignity; facility designs and approaches were developed to address these.
Gender Equality and Empowerment of Women (ADB) [56]	Community infrastructure projects, including water taps	Nepal	Reduced women's chores by 41 minutes per day; 67% of affected households used this saved time for income generation.

Clean Fuel, Electrification, and Energy Infrastructure

Unpaid Care and Energy Infrastructure

Unpaid caregivers spend a significant amount of time obtaining and using fuel for cooking and lighting. In 2022, 2.4 billion people, or a third of the world's population, lack access to clean, accessible, and affordable energy, and little progress has been made in the last decade, particularly related to cooking fuel and infrastructure.[57] As a result, to meet their cooking and heating needs, they are forced to rely on cheaper but unsafe alternatives, such as solid fuels and kerosene. The World Health Organization reports that as of 2020, 36% of the global population primarily used unsafe, polluting fuels, particularly in rural and LMIC contexts.[58] Moreover, estimates suggest that by 2030, a third of the population will continue to use these kinds of fuels, particularly in sub-Saharan Africa.[59]

Gendered Impacts of Energy Infrastructure Access

Time Poverty and Labor Force Participation

Like water, the collection and use of these fuels for the household typically falls to women. Data from 2010 suggest that in Ethiopia, more than 54% of women spend time collecting fuelwood, while 28% of men report doing the same task.[60] On average, African women carry 20 kilograms (44 pounds) of fuelwood around 5 kilometers (3.1 miles) per day.[61] Lack of easily accessible and affordable fuel and energy infrastructure results in significant impacts on unpaid care providers' time for engagement in income generating or leisure activities. The International Energy Agency (IEA) reports that among households that rely on biomass fuel for cooking, fuel collection requires an average of 1.4 hours per day, though this varies significantly between and within regions and countries.[62] Ghanaian data from 2005-2006 suggest that firewood collection accounted for 5% of women's paid and unpaid working hours, and for about seven hours per day for women in Ethiopia.[63,64]

Cooking with inefficient fuels and technology is a further drain on unpaid caregivers' time.[65] Global evidence suggests that improvements in energy infrastructure has the potential to reduce time spent on unpaid care work and thereby freeing up caregivers' time to engage in paid employment. According to the IEA, access to clean cooking fuel and technology would save women as much as 100 billion hours of unpaid care work annually by reducing or eliminating the need to collect fuel and improving cooking efficiency.[66] In Nepal, evidence found that a switch from firewood to gas saved women four hours a day, and in India, access to clean energy technology reduced time and drudgery related to both collecting fuelwood and cooking times.[67,68] Evidence from Bangladesh suggests that electricity would reduce women's unpaid care work time by as much as 70%.[69]

These time-savings measures could and has shown to improve women's ability to engage in income-generation and leisure activities. For instance, in South Africa, Ghana, and Nicaragua, researchers found that electrification led to an increase in women's labor force participation and engagement in wage work — in Nicaragua by as much as 23%.[70,71] Electrification in rural South Africa increased women's engagement in entrepreneurship and in the informal sector by 9.5%.[72] In addition to time savings, electrification can boost productivity and reduce safety concerns, even increasing women's working hours.[73] In the Philippines, Oxfam found electrification to be positively correlated with an increase in leisure time.[74]

Conversely, research in Zimbabwe and Uganda found that electrification can actually increase unpaid care time and reduce sleep hours, because electric lighting extends the hours available for housework.[75] Furthermore, evidence suggests that for many households electrification has failed to fully replace solid fuels, and is more likely to be adopted in addition to other cooking fuels.[76,77] This highlights the need for a clear understanding of women's constraints and preferences in designing infrastructure projects, as well as addressing gender norms around responsibilities for housework.

In addition to reducing the time constraints related to unpaid care work, access to clean energy and electrification in the home and community directly benefits girls' economic opportunity. Girls who have access to lighting at home and at school are able to devote more time to study. Data suggests a link between higher rates of electrification and better educational outcomes in Nicaragua and Peru, and higher literacy rates and increased school enrollment in Bangladesh.[78,79]

Health Outcomes

Lack of electricity and clean energy infrastructure has dire health consequences. Women without consistent and affordable access to clean energy sources rely on solid fuel and kerosene, which are linked to a slew of health impacts, including respiratory infections, lung cancer, and cardiovascular issues, among others.[80] In 2019, 2.3 million deaths, 4.1% of deaths worldwide, were the result of household air pollution caused by cooking with unsafe fuels, particularly in South and Southeast Asia and sub-Saharan Africa.[81] Data from Kenya has shown that investment in improved cookstoves and clean fuels could result in decreases in respiratory infections and other health benefits.[82] However, fuel stacking and other forms of air pollution are likely to mitigate these potential benefits without additional intervention and understanding of caregivers' choices and preferences.[83]

Gender-Based Violence and Harassment (GBVH)

Similar to water collection, the collection of firewood and other fuel materials puts women and girls at serious risk of GBVH. This is greatly exacerbated in emergency and conflict settings, and when women and girls are displaced. In the Farchana refugee camp in eastern Chad, a staggering 91% of reported rapes occurred while residents were collecting firewood outside the camp.[84] Reducing the need for women and girls to travel long distances to obtain fuelwood would meaningfully reduce their risk of experiencing violence. At the same time, reliable electrification in public spaces, particularly latrines, schools, and common walking routes, would improve safety in those places, as described above.

Photo: Canva Pro/Getty Images/Hadynyah

Climate Change and Energy Infrastructure

Reliance on firewood and other unclean sources of energy both exacerbates and is exacerbated by climate change. The use of unclean fuel for cooking and heating creates unnecessary greenhouse gas emissions. The World Bank reports that household burning of solid fuel accounts for as much as 58% of global black carbon emissions, totaling a gigaton of carbon dioxide annually, and amounting to around 2% of global emissions.[85] This could be meaningfully curbed by improving access to safe cooking fuels and equipment. In Bangladesh, the World Bank reports that efforts to develop market incentives for clean cookstoves led to the distribution, by 2019, of 1.7 million improved stoves and reduction of greenhouse gas emissions by the equivalent of three metric tons of CO2.[86]

Climate change and related extreme weather events, such as fires and droughts, will also reduce the availability of fuelwood for household use — further increasing unpaid care work time by increasing the distances they must travel to obtain fuelwood.[87] Displacement, driven by climate and other emergencies, will likewise increase the stress on fuel supply, and increase the risk of GBVH related to the collection of fuel.

Evidence on Energy Infrastructure and Women's Economic Empowerment Outcomes

As with WASH infrastructure, energy infrastructure programs need to be designed in gender-responsive ways and implemented through a care lens to maximize returns from these investments. Table 2 reviews examples of energy infrastructure programs which evaluate WEE outcomes. Illustrative programming includes research related to women's empowerment and electricity and the engagement of women in the clean energy sector as entrepreneurs. The impacts of such programming include an expanded understanding of women's role in the energy sector, and that the involvement of women in new energy systems and as entrepreneurs can be a powerful driver of changing gender norms and power dynamics within households. The research from these programs also illustrates that current service design often excludes women, but that reliability and affordability are the key factors for increasing women's equitable access.

Table 2: Examples of Energy Infrastructure Programs Evaluating WEE Outcomes

Example Project	Approach	Country/Region	Impact
Energia: Exploring Factors that Enhance and restrict Women's Empowerment through Electrification (EFEWEE) (2019)[88]	Research study on potential paths to women's empowerment through electricity	India, Kenya and Nepal	The study determined that involving women in the supply chain of new power systems can transform gender norms, reliability and affordability are the most important factors for women, and services are often structured in ways that exclude women.
Solar Sister [89]	Provide women entrepreneurs with training, services, and support to deliver clean energy in rural Africa	sub-Saharan Africa	96% of Solar Sister entrepreneurs report feeling more respected in the household; 41% of entrepreneurs report using profits to support an existing business.

Safe and Accessible Transport Infrastructure

Unpaid Care and Transport Infrastructure

A significant part of unpaid care providers' domestic responsibilities involves traveling between their homes and other locations. Unpaid caregivers spend time accompanying children and other dependents to school and to health facilities. They are also responsible for buying groceries, clothing, and other household necessities, and, as described above, fetching water and fuel, which requires moving from place to place.[90,91]

Because of the nature of unpaid care work and entrenched gender norms that influence how women move around, women performing unpaid care work use transportation systems in unique, specific ways that are frequently at odds with the way these systems have traditionally been designed. Their routes, travel patterns, and destinations are drastically different from those of men and of traditional commuters who generally move from the periphery to the center, and whom most transit systems favor. For instance, women are more likely to travel at off-peak hours and on less common routes.[92] Less popular routes have limited options for services, and may require intermediate sources of transit and multiple transfers, rather than direct, one-way trips, longer travel times, and more walking. Low-income households in particular tend to be located further distances from key destinations, and under-served by public transportation, resulting in longer wait and transit times.[93] Because of their domestic responsibilities, women also tend to make shorter but more frequent daily trips and engage in "trip chaining" — traveling to more than one destination on a single trip, which are more complex and can be costlier than single, direct trips, if payment schemes do not allow for inexpensive and easy transfers.[94]

Like their patterns, women's typical modes of transportation differ from those of men. In general, transport schemes favor private motorized vehicles, but women are less likely than men to own or use private cars.[95,96] Instead, they rely more often on mini-buses and other intermediate and local transportation, which are generally more flexible and suitable for women's routes than rail systems.[97] They also walk more. Unpaid caregivers may also travel with children, other dependents, and goods and therefore need to use transport that can accommodate these needs, such as buses and trains over motorbikes. For caregivers of people with disabilities, the need for accessibility is even more critical, and can be even more limiting. Common transport challenges for people with disabilities and their caretakers include unpaved and/or poorly maintained walkways, inaccessible over- and underpasses, and inaccessible boarding areas onto trains and buses, among others.[98]

Gendered Impacts of Transport Infrastructure

Time Poverty and Labor Force Participation

Though evidence is more limited in evaluating the impacts of gender-responsive transportation on unpaid care time and WEE outcomes, existing evidence indicates that investment in transportation infrastructure that is responsive to where women live and work can support women's engagement in income-generation, and may even increase economic activity around their homes. Evidence from Bhutan suggests that attention to women's routes and construction and rehabilitation of their frequented tracks and roads allowed for more shops to open in rural areas.[99]

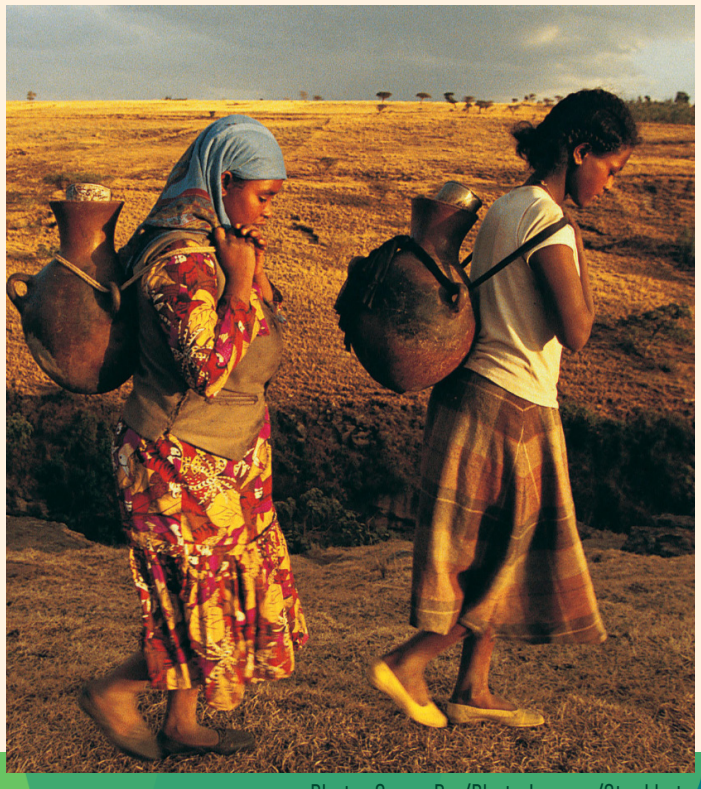

Photo: Canva Pro/Photo Images/Stockbyte

Gender-Based Violence and Harassment (GBVH)

Transportation services designed without consideration for the specific needs of women users also risk exposing them to GBVH. Poor lighting, all-male staff and drivers, lack of safe public toilets in stations and waiting areas, and long wait times increase women's risk of experiencing violence while traveling, exacerbated by the fact that women's trips tend to be longer and at off-peak hours.[100] A Reuters poll of women and experts in 15 global cities found that in Latin American cities, 60% of women had experienced physical harassment on public transportation, creating fear of using public transit systems, particularly at night.[101] Eighty-four percent of surveyed Bangladeshi women reported that they had faced insults or sexual comments while traveling.[102] Lack of policing and distrust of reporting systems is also a major concern for women using public transportation in many of the world's cities.

Poor transportation linkages, creating increased pressure on women's time poverty, and threats of GBVH, have detrimental effects on women's access to income-generation and engagement in the workforce. The lack of safe, gender-sensitive transport options between women's homes and economic centers directly prevents women from accessing productive workplaces, while increased time required to manage unpaid care work limits the time they have available for economic activity. In response, women either forego income generation altogether, or choose to work, often in the informal sector, closer to their residences, where potential earnings may be lower than in urban centers.[103] In Nairobi, residents of informal settlements lack affordable transport options, which limits their movement and engagement to and within the settlement.[104] Similarly, threats of violence on public transportation, exacerbated after dark, may encourage women to limit their work hours to avoid traveling at night, again forcing them to accept lower earnings.

Climate Change and Transport Infrastructure

Comparable to water and energy, transportation infrastructure is closely tied to climate change and climate-related displacement. Intense and unexpected weather events, such as flooding and heat waves, will cause shutdowns of already stressed transit systems, particularly in places and along routes that include unpaved roads and feeder tracks and are outside the most common routes.[105] Thus, women and others performing unpaid care work will suffer the most from climate-induced transport shortages.

Planning for climate-resilient transport systems is an opportunity for intentional gender-responsive policies and programs. Prioritizing rail systems and other mass public transit over private cars, can both lower emissions and expand gender-responsive transit routes and modes. For example, the establishment of a bus rapid transit system in Bogota successfully reduced emissions by 1.6 million tons within the first seven years of implementation, while also creating gender-responsive spaces for women and children riders and transport staff members.[106]

Evidence on Transport Infrastructure and Women's Economic Empowerment Outcomes

In order to address the needs and challenges of unpaid women caregivers, investments in transportation infrastructure must be thoughtfully gender-responsive and implemented through a care lens. This requires responding to normative, legal, and pragmatic barriers of infrastructure, including law and attitudes against women using transportation alone, safety concerns, routes, and modes that fail to meet women unpaid caregivers' travel needs, and insurmountable costs. Potential solutions include expanding service in off-peak hours and for off-peak routes, implementing flexible and free or reduced transfer fares, and investment in accessibility and safety infrastructure, such as lighting in public spaces and specialized seating and boarding ramps. It is also important to continue tracking gender-disaggregated transport data to maintain updated information on women's transport routes and preferences.

Table 3 summarizes examples of transport infrastructure programs that evaluate WEE outcomes to highlight examples of what has worked for policymakers. Key strategies include collecting gender-disaggregated data on usage and safety in public transit stations, constructing additional and improving existing transport systems to expand geographic and time coverage, as well as ensuring that women's preferences and voices are included in the design of transportation systems. The impact has been the deployment of additional resources to improve safety, reduced emissions, improved gender balance in the transportation workforce, designated entrances and seating for women, children, and individuals with disabilities, and a reduction in women's travel time to buy essential resources.

Table 3: Examples of Transport Infrastructure Programs Evaluating WEE Outcomes

Example Project	Approach	Country/Region	Impact
SafetiPin Initiative (2013-present)[107]	Mobile app for crowdsourcing information on safety, lighting, walking paths, and bus stops in public spaces	India, Indonesia, Kenya, Colombia, and others	In Delhi, local administrators used data to improve the planning and deployment of resources to improve safety for women in public transportation.
IFAD's Agriculture, Marketing and Enterprise Promotion Programme (2005-2012)[108]	Construction and rehabilitation of feeder roads	Bhutan	460 kilometers of roads were built and rehabilitated, resulting in improved ease of access to goods and markets, reducing women's time buying goods.
TransMilenio (2000-present)[109]	Establish bus rapid transit system; incorporation of women's perspectives into design and implementation	Bogota, Colombia	Reduced emissions by 1.6 million tons over seven years; designation of seating and entrances for women, children, and travelers with disabilities; improved gender balance in the transportation workforce; however, challenges with women's safety persist.

Time and Labor-Saving Equipment (TLSE)

Unpaid Care and Time and Labor-Saving Equipment

The development and delivery of time and labor-saving equipment (TLSE) stands to significantly reduce the drudgery and time associated with domestic care work, including farming. These technologies include water-related and fuel- and cooking-related equipment and tools, such as containers for carrying water, fuel, and food and refrigerators, as well as equipment related to farming and dependent care, such as washing machines and wash basins.

The lack of reliable, safe, and accessible connections to water and fuel for many low-income households is discussed above. Similar gaps exist in ownership of other care-related TLSEs. A study of households in the Philippines, Uganda, and Zimbabwe, Oxfam found that just 17%, 10%, and 14% of households in each context, respectively, owned a refrigerator.[110] Even when technology is available, there may be limitations on who can use it: men often have more access to and knowledge of technology than women, particularly related to farming. In addition, women have often been excluded from the design of TLSE, and as a result their needs and preferences are underrepresented.[111] Because of this, the introduction of new technologies that do not consider and address the related gender dynamics may result in a decrease in men's labor, without a similar effect for women's labor, who may continue to use more traditional and familiar technology.[112]

Gendered Impacts of Time and Labor-Saving Equipment

Time Poverty and Labor Force Participation

Gender-sensitive expansion in the availability of TLSE could have dramatic impacts for women. As described above, technologies such as in-home or nearby water taps and efficient cookstoves have the ability to reduce the time women spend on domestic work. Other appliances, such as refrigerators and water containers would save additional time, by reducing the need for multiple and frequent trips to collect these items.

Some evidence suggests that these time savings correspond to increases in women's participation in the labor force. In the United Kingdom an increase in women's labor force participation of between 10% and 15% was attributed to a decline in the price of home appliances.[113]

The introduction of TLSE can also help to redistribute unpaid care work. Some studies have found that access to care-related equipment is correlated with an increase in time men spend on tasks like gathering water and fuel. In Zimbabwe, men whose households owned more water collection equipment tended to spend more time collecting water than in households without such tools.[114] This may indicate that men are more likely to participate in care work if there is technology and equipment available that facilitates it.[115,116] Where TLSE is lacking and care work is most intensive, it more often falls to women.

Additional research is needed to understand the choices that households make when such technologies are available, and the extent to which TLSE can create space for women's entry into the labor force and foster gender equality in household chores. There appears to be promising potential for investment in TLSE to yield benefits for women, but other evidence suggests that in some contexts, the gains are minimal.[117] In some cases, TLSE only shifts attention to other responsibilities, and it does not meaningfully reduce women's care work, or even increases the time spent on domestic work.[118]

Evidence on Time and Labor-Saving Equipment Infrastructure and Women's Economic Empowerment Outcomes

The contradictory findings related to the relationship between TLSE and women's unpaid care time point to a need for further in-depth research related to household choices around these technologies to understand the mitigating factors. They also suggest a need to ensure that technologies are culturally appropriate and accessible to women, and that women receive the appropriate, targeted training to use them.

Table 4 summarizes examples of TLSE infrastructure programs that evaluate WEE outcomes to highlight examples of what has worked for policymakers. Successful approaches have included the delivery of laundry, farming, and WASH equipment, as well as the collection and analysis of data to understand the impact of TLSE. Impacts included reduction and redistribution of care work, improved farm productivity, and increased income, as well as a greater understanding of the context-dependent relationship between technology and care work.

Photo: Canva Pro/Pexels/Volker Meyer

Table 4: Examples of Time and Labor-Saving Equipment Programs Evaluating WEE Outcomes

Example Project	Approach	Country/Region	Impact
2017 Household Care Survey Report[119]	Establish evidence through surveying households on the impact of public services on unpaid care and domestic work	Philippines, Uganda and Zimbabwe	Impact of TLSE on the reduction and redistribution of unpaid care work varies based on country and type of equipment; men spent more time on water collection when water-related equipment was available and more time on primary care when fuel-related equipment was available.
Surf (Oxfam)[120]	NGO-private sector partnership between Oxfam and Unilever to recognize, reduce, and redistribute time spent by women and girls on unpaid work, including by improving access to laundry infrastructure	Zimbabwe, Philippines	In the Philippines, time spent by men on main care tasks increased by over an hour, up from an average of 2-3 hours. Women spent two hours less on care work in the Philippines, and one hour less in Zimbabwe.
Strengthening Women's Leadership in Climate Change Adaptation (Helvetas)[121]	Introduction of TSLEs such as electric grinding mills and water taps to communities	Nepal	New technologies facilitated reductions in women's unpaid care time.
CARE's Water and Development Alliance (2019-2020)[122]	Introduction of TLSE for smallholder women farmers' groups	Malawi	Improved crop productivity, decreased labor time, and increased income.
Drum seeder: saving time, effort and money – A case study from the Lao People's Democratic Republic (2018)[123]	Field testing a drum seeder instead of manual transplanting in villages	Lao People's Democratic Republic	97% reduction in time needed to plant seeds, a task predominantly done by women.

Photo: Canva Pro/Getty Images/Hadynyah

Financing for Water, Sanitation, and Hygiene (WASH) Infrastructure

As access to WASH is generally acknowledged as a fundamental human need, right, and public good, governments are often leaned upon to provide services or subsidies. Where such provision is not possible with available resources, governments in LMIC countries may seek external support to fill gaps, such as through donor programs or non-governmental organization programming. There can be issues with this approach, such as subsidies not going to the most vulnerable, the quantity or quality of services declining, or incomplete or inaccurate costs and affordability estimates for household WASH access, particularly for the poorest and most vulnerable.[124]

When looking at sources of global funding for WASH at the country-level, two-thirds of WASH is funded by households, compared to only 22% by the government, 9% for repayable finance, and 3% other external sources.[125] While most governments have national WASH plans, there are very often not sufficient resources to actually operationalize and implement the plans. In a 2018-19 World Health Organization/UN-Water survey of over 100 countries across all income levels and geographies, less than 15% of countries reported that they have at least 75% of the funding or the human resources to do so.[126]

Further, the overall financing gap is significant, with 20 countries surveyed reporting a funding gap of 61% between the identified country needs and the funding available to meet targets; yet, government WASH budgets only increased 11.1% on average in 2018-19.[127]

A few challenges specific to WASH financing in the WEE context should be noted. First, comprehensive valuation of investments in WASH are difficult and complex, and all of the costs and benefits are not consistently taken into account when financing decisions are made. This is particularly the case for costs or benefits that are less tangible or financial, such as social or economic benefits like reducing the amount of time that users, usually women, must sacrifice to collect water. Additionally, gender-disaggregated data on WASH and water resource management is scarce, with much of the data collection done at a high level, which makes valuation and adequate financing for such services even more challenging.[128] In fact, only about a third of countries collect sex-disaggregated data to support water management; to address this issue, tools like the UNESCO WWAP Toolkit on Sex-disaggregated Water Data can be helpful to strengthen data collection and facilitate utilization of a gender lens in financing decisions.[129]

Foreign Policy and Donor Financing

The evidence presented throughout this report has documented significant provision gaps in care-related infrastructure, which will need additional financing to fill. Evidence on domestic financing for these aspects of care-related infrastructure that are gender-responsive in LMICs is limited, pointing to an important area for further research, particularly at the country level, using resources such as the Care Policy Scorecard as a guiding tool.[130] The box on WASH financing illustrates that even when countries have plans in place, they face significant resource constraints to implement those plans, and their ability to do so in a gender-responsive way is hindered by a lack of gender data. This report has made the case for prioritizing gender-responsive care-related infrastructure policies and financing at the domestic level, however it is clear there will continue to be an important role for foreign policy and donor programs and financing, given resource constraints and as infrastructure is often identified as a key area of support from donors in supporting development in LMICs.

Recent developments indicate a rising awareness of the intersections of care, gender, climate, and infrastructure in multilateral and international financial institutions, and foreign policy. At the 2022 Group of Seven (G7) Summit in Germany, leaders launched the Partnership for Global Infrastructure and Investment (PGII), which seeks to generate $600 billion by 2027 to fill infrastructure gaps in LMICs in quality and sustainable ways.[131] In the United States, President Biden designated improving care infrastructure and water and sanitation infrastructure as one of his four priority pillars under the PGII as a means

to advance gender equality and equity.[132] The U.S. has pledged $200 billion to the PGII, and advocacy can support the U.S. making investments which are the most effective and generate the greatest returns by recognizing the intersections of the many dimensions of care infrastructure with two of the other priority pillars — climate-resilient infrastructure and health systems.

In the United Nations Development Programme (UNDP) 2022-2025 Gender Strategy, addressing gender gaps in access to sustainable energy is one of their six priority areas.[133] In the strategy, the importance of investments in sustainable energy to address time-poverty is a central component, as is the creation of a UNDP Sustainable Energy hub to create collaboration, knowledge sharing, and innovative policies at the intersection of gender and sustainable energy. Impact assessments of these initiatives will be important to continue to build evidence on what works as well as evaluating the scope of their impact.

Despite this acknowledgement within global initiatives and strategies, the most recent data (2020) from the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) database indicates this has not been prioritized in donor financing. Official development assistance (ODA) for projects and programs where gender equality is the principal objective within care-related infrastructure categories such as water and sanitation, transport and storage, and energy is very low, ranging from 0.1% to 1.1% of ODA for the sector (see Table 5 below).[134] Though levels are higher for significant funding (where gender equality is mainstreamed in the project or program, but not the principal objective), it still only ranges from 21.3% to 33.5% of total ODA for the sector. Financing targets established by the global gender advocacy community are for 100% of ODA to integrate gender equality objectives, with at least 20% of projects and programs with gender equality as the principal objective.[135] This indicates substantial gaps to meaningfully integrate gender equality into ODA in these key infrastructure sectors for unpaid care work. Even within funding that does target gender equality outcomes, it is impossible to know the extent to which unpaid care considerations are integrated into these programs.
The most relevant sector category for climate change financing, General Environmental Protection, has principal and significant financing percentages that are roughly consistent with those of the infrastructure sectors.[136] This indicates donors have a lot of room to integrate gender equality and unpaid care considerations into their existing infrastructure and climate change financing to create greater impacts and returns on a broader range of critical development objectives.

Table 5: ODA Financing for Gender Equality Objectives in Care-Related Infrastructure and Climate Change Sectors*

Sector	Principal Financing**	Significant Financing***	Gender Total (Principal + Significant Financing)
Water Supply and Sanitation	1.1%	33.5%	34.6%
Transport and Storage	0.1%	24.3%	24.3%
Energy	0.4%	21.3%	21.7%
General Environmental Protection	1.4%	34.9%	36.3%

*Principal, significant, and total gender financing as a percentage of total official development assistance (ODA) in each sector.

**Principal financing: "gender equality is the main objective of the project/programme and is fundamental is its design and expected results."[137]

***Significant financing: "gender equality is an important and deliberate objective, but not the principal reason for undertaking the project/programme, often explained as gender equality being mainstreamed in the project/programme."[138]

Author's calculations based on OECD (2022).[139]

Policy Considerations for Care-Related Infrastructure

This report has documented the scope of the impacts of inadequate care-related infrastructure for unpaid care time, as well as the broader impacts on aspects of WEE, and health and GBVH outcomes for women and girls. It has also highlighted evidence on policies and programs that work, and the benefits that they can provide when infrastructure is enacted in both a gender- and care-responsive manner. Access to quality and affordable care-related infrastructure allows individuals, particularly women, to engage in paid, productive work, reduces time poverty, and supports wellbeing.[140,141] The ripple effect of these impacts and benefits have large implications for a range of economic and development policies and outcomes, including the SDGs.

Policy recommendations and considerations that have emerged from this report are outlined below following the "5R" care framework:

Recognize unpaid care work in:

- **National statistics:** Incorporate unpaid care work in national statistics, including by utilizing time-use surveys as a means of measuring and valuing this work.
- **Data collection**: Ensure the ongoing and regular collection of gender disaggregated data that documents women's use and needs related to care-related infrastructure and the impacts of climate change. Where possible, collect intersectional data to support the visibility of the most vulnerable in crafting policy.
- **Cost-benefit analyses:** Integrate time-use assessments of unpaid care time into cost-benefit analyses for investments, so that social and economic costs and benefits are accurately captured in undertaking infrastructure investments.

Reduce and *Redistribute* unpaid care time and the intensiveness of unpaid care work by:

- **Financing gender-responsive care-related infrastructure provisions:** Increase financing in infrastructure that is not only gender-responsive, but mainstreams unpaid care considerations in design, and implementation.
- **Ensuring care-related infrastructure is accessible, affordable, of quality, and safe:**
- **Accessibility:**
  - **WASH:** Locate WASH facilities strategically to give the greatest access, particularly prioritizing remote areas and the most vulnerable populations.
  - **Transport:** Increase the availability of transport services at off-peak hours and for off-peak routes and ensure that they are made accessible for individuals with disabilities.
  - **Energy:** When electricity and clean energy sources are not available, create centralized and accessible firewood collection points.
- **Affordability:** Ensure that essential resources and services are free or low-cost, particularly for the most vulnerable populations. This includes exploring different models for making water, sanitation, energy, technology, and transportation services affordable, such as public provisions, vouchers, or subsidies. For transport, flexible and free or reduced transfer fares support making unpaid care providers' unique transport usage more affordable.
- **Quality:** Care-related infrastructure services need to provide essential resources and services that are of quality to protect health and wellbeing, as well as people utilizing them. This includes providing access to safe drinking water, sources of energy that do not compromise health, and technology and transport that meets needs and does not increase time spent on unpaid care work.
- **Safety:** Safeguard women and girls' privacy and safety at communal water points, in public latrines, and in transport services. Considerations include reliable

lighting in schools, latrines, common walking paths, and waiting areas for transport, safe bathrooms in transport waiting areas and services, and effective locks on bathroom doors.

- **Conducting impact assessments:** Ensure that programs and policies are supporting gender equality goals, including reduction and/or redistribution of unpaid care work, by conducting regular impact assessments. These assessments should include time-use surveys and a robust set of indicators around unpaid care that are supported by evidence.
- **Maximizing the linkages between climate change, sustainability, and unpaid care in policy and financing:**
    - Explicitly address the intersection of unpaid care work reduction and climate resiliency in infrastructure programming to develop gender-responsive and climate-resilient infrastructure that implements a care lens to most effectively utilize available financing.[142,143]
    - Invest in clean fuel, and responsibly and sustainably managed water, sanitation, and hygiene (WASH) services to support climate change mitigation and reduce unpaid care time.
- **Enacting gender norm campaigns:** Promote the gendered redistribution of unpaid care work as a necessary complement to other care-related infrastructure investments and policies, otherwise access to some components, such as electricity and technology, can just increase the unpaid work time of women and girls.

Represent the needs and perspectives of women and girls to create effective policies around care-related infrastructure, climate change mitigation, and unpaid care by:

Ensuring the presence of women's voices in decision-making spaces: Include women and girls in decision making regarding infrastructure and climate change mitigation from which they have traditionally been excluded, including budget allocations, and by ensuring social dialogue and collective bargaining for care workers.[144]

Reward paid workers in care-related infrastructure sectors and unpaid caregivers by:

- **Ensuring decent wages and working conditions, for women workers in infrastructure sectors.** As these sectors are generally male-dominated, providing opportunities for women workers, including opportunities for advancement, leadership, and decision making are critical to ensuring that the needs of unpaid care providers are considered in design and implementation.
- **Providing critical social protections for unpaid caregivers** who perform domestic work tasks impacted by inadequate care-related infrastructure and care services.

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Conclusions

The international community has laid out collective goals through the UN Sustainable Development Goals (SDGs), goals which will not be met without addressing care-related infrastructure needs in LMICs. This synthesis of evidence provides a compelling case for use in advocacy campaigns and for policymakers to take action on and invest in care-related infrastructure to meet these goals. This report has illustrated that addressing the intersections between gender, care, infrastructure, and climate change is critical to achieving a broad range of social and development goals, including supporting women's economic empowerment, justice, and rights. As the OECD attests, with regard to the SDGs and 2030 Agenda, "within the spectrum of policy tools, infrastructure plays a central role since it supports co-ordinated action to deliver on many other goals, including those regarding education, health, social protection, jobs, and the environment."[145]

However, infrastructure investments must be implemented in a way that is not only climate-resilient and gender-responsive, but also through a care lens to be the most effective and generate the greatest returns.

In many cases, data is limited on domestic financing, however given the extent of provision gaps documented across many contexts, greater prioritization of available domestic resources is necessary. Governments have a central role in supporting provision that is quality, affordable, accessible, and gender-responsive, particularly in terms of ensuring the safety of users. Evidence on donor financing indicates that there are very low levels of financing which centers the needs of women and girls in infrastructure programs, and even where there is gender-mainstreaming, it is far from reaching the targets set by the global gender advocacy community. Where there are fiscal constraints domestically, donor governments and IFIs can place a greater priority on creating gender-responsive care-related infrastructure in existing and new investments to support WEE and a broad range of development objectives. The recent initiatives at the global level indicate an increased recognition of the important intersections outlined in this report and it is a critical time for policymakers to build on these actions and recognize that care-related infrastructure investments are instrumental for sustainable development and women's economic empowerment.

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