

# Climate Change and Care Work:

## Integrated Solutions for Intersecting Crises

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## A Message from **Jane Sloane**, Senior Director, The Asia Foundation



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Caring for each other requires access to the resources that sustain life, and conversely, caring for our planet and environment depends on the economic and social wellbeing of people needing and providing care. A rapidly changing climate is increasing care demands and is widening inequities. It is also increasing climate migration, which further intensifies care demands.

Care work and care workers are critical to solutions to climate change because they strengthen community resilience, support vulnerable populations during climate impacts, and contribute to sustainable practices that protect ecosystems. To achieve the level of transformation required at a societal level, we must address the intersecting impacts of climate change and the crisis of care in our communities. This pathway is essential for sustainability, equity, belonging, and regenerative economies. This includes the care sector's role in contributing to climate resilience and decarbonization.

This policy brief highlights how climate change worsens issues like girls' and women's unpaid care work, limiting their access to education and paid jobs, and increasing their economic insecurity. It also discusses promising, intersectional approaches to address unpaid care through environmental agreements. The brief calls for greater collaboration within and across governments, warning against fragmented problem-solving, especially during climate emergencies. It emphasizes the need for stronger social protection, safeguarding, and the agency of care workers, who are often frontline responders. Centering caregivers' perspectives in decision-making, policies, and programs is crucial.

The paper makes a case for strengthened and gender-inclusive care policies, delivery, infrastructure, and networks in a dramatically changing climate to ensure that the climate solutions proposed are effective and don't perpetuate injustice. This is especially important in rural and remote areas where there is often the greatest need. The paper also recognizes the need for dual investment in high-quality, well-paid jobs in the care economy and the clean energy sector. This includes opportunities to advance green care infrastructure that contributes to decarbonization.

The paper concludes with recommendations for action by governments, institutions, civil society organizations, the private sector, and philanthropic foundations. These actions include committing to joint solutions for a Gender-Just Transition, building the evidence base, leveraging climate finance for care investments, and committing to quality, well-paid jobs for care workers. Crucial here is centering the experiences of those most impacted by care and climate emergencies and elevating women's voices and leadership in dialogues and decision-making.

By adopting these recommendations, countries and communities will be better prepared to support and safeguard those most at risk, advance regenerative economies and infrastructure, and ensure a more equitable, sustainable, and just world.

We commend this policy brief to you and hope it contributes to thoughtful and timely actions and solutions.



## A Message from **Erin Tansey**, Sustainable and Inclusive Economies, IDRC (Canada's International Development Research Centre)



Photo: © Lindsey Gibeau

The world is facing a polycrisis, where challenges like climate change, economic instability, and geopolitical tensions intersect and amplify each other. This interconnectedness means crises can quickly ripple across borders, affecting economies, societies, and ecosystems. Collaborative and integrated approaches are crucial to address these complex issues effectively.

As this brief explains, climate change is raising care demands and weakening care systems. Additionally, many climate change mitigation and adaptation strategies, programs, and policies are unintentionally increasing care work, which often exacerbates gender inequalities.

IDRC's Sustainable Inclusive Economies program supports a feminist just transition, recognizing that addressing the unequal distribution of care work is central to climate justice.

Despite progress in integrating gender equality into climate change programs and policies, the link between care work, climate change, and environmental sustainability remains invisible to many policymakers.

Leveraging over a decade of investment in feminist researchers and movements, IDRC's Climate and Care Initiative aims to unravel these links and broaden climate action to include the essential contributions of care work in building resilient communities. Investing in the care economy is both a social and economic imperative and crucial for climate resilience and sustainability. This work aims to drive gender-transformative climate action and reshape policies addressing the unequal social organization of care. In addition, IDRC is partnering with the Southern Centre for Inequality Studies at the University of Witwatersrand in South Africa to deepen understanding and build theoretical foundations around the connection between climate change and care work.

This foundational work aims to integrate gender equality and care into climate change discussions and actions for a just transition. Our goal is that the care economy mobilizes action and receives attention and resources within climate decision-making processes and financing.

More research is needed, as this brief shows, on the role of social networks and community caregiving in building climate resilience. Demonstrating the positive contributions of care work to climate mitigation, adaptation, and resilience is crucial for mobilizing climate finance for a feminist just transition.

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Photo: © Hisaar Foundation



There is a fundamental link between the act of caring for people and caring for the planet. Both are essential for human survival. Both are exploited in the pursuit of short-term economic and material profit.<sup>1</sup> The devastating impacts of climate change and environmental degradation are outcomes of these exploits, as are the immense social and gender inequalities arising from the exploitation of care labor.

The COVID-19 pandemic amplified the complexities of and the demand for care. Globally, it exposed and deepened inequalities, particularly for already vulnerable and structurally disadvantaged populations. COVID-related lockdowns and other disruptions led to widespread school and daycare closures. While these factors increased care responsibilities for both men and women, data continues to suggest that women—particularly those from poorer, marginalized, and minority communities—have had to shoulder a disproportionate share of rising paid and unpaid care responsibilities. COVID-19 also exposed the fragility, inadequacy, and injustice of global care ecosystems and institutions and underscored the importance of care for the sustainability of life.

“Women and nature share similar treatment in neoclassical economics [. . .] variously, invisible; pushed into the background; treated as a ‘resource’ for the satisfaction of male or human needs; considered to be part of a realm that ‘takes care of itself’; thought of as self-regenerating (or reproductive, as opposed to productive); conceived of as passive; and/or considered to be subject to male or human authority.”

Source: Julie A. Nelson,  
“Between a Rock and a Soft Place.”

The climate crisis and the crisis of care are not unrelated. Repercussions of climate change are intensifying demands for care work, while also weakening the care-related services, institutions, networks, and infrastructures that have already been fragmented by geopolitical trends like colonialism, patriarchy, austerity measures, conflict, and migration.

The global community’s efforts to adapt to and mitigate the changing climate and environment have insufficiently recognized the necessity of care work for human and ecosystem survival and community resilience. Even more, mitigation and adaptation solutions often reinforce inequalities in care labor, placing even more of the climate change burden onto minoritized<sup>2</sup> groups, particularly women, girls, and structurally disadvantaged populations in low- and middle-income countries (LMICs). To fully address these disparities, incorporating an intersectional perspective can help to better understand how multiple factors, such as gender, ethnicity, and socioeconomic status, may interact to intensify the vulnerabilities faced by these groups.

As policymakers navigate these intersecting crises, it is essential to address them holistically. Climate change cannot be addressed without also recognizing the essential role of care work; redistributing the inequalities of care labor; and rebuilding political, economic, and social structures to support quality care and choice of care. Therefore, integrating care work into climate policy is essential for addressing both the immediate and long-term challenges of these inter-related crises.

<sup>1</sup> ILO, “Mainstreaming Care Work to Combat the Effects of Climate Change,” 2; Nelson, “Between a Rock and a Soft Place”; UN Women, *The Climate-Care Nexus*, 14; and UNEP, *Global Gender and Environment Outlook* 198–89.

<sup>2</sup> “Minoritized” refers to social groups that are marginalized or persecuted because of systemic oppression. It differs from the term “minority” in that it emphasizes the structures that are responsible for marginalization and oppression. See for example, Black, Cerdeña, and Spearman-McCarthy, “I Am Not Your Minority.”



# Policy Brief Overview

This policy brief builds on a small but growing body of literature that captures the connections between climate change, environmental degradation, care work, and the ensuing gender and social inequalities.

This brief has been developed as a collaborative effort by The Asia Foundation and Canada's International Development Research Centre (IDRC).

The Asia Foundation's approach to supporting resilient care economies across Asia and the Pacific focuses on three key pillars: 1) elevating the care economy on national agendas, 2) improving coordination among diverse stakeholders, and 3) building a robust evidence base to inform effective care delivery systems. In collaboration with partners, the Foundation has spearheaded key initiatives and convenings, such as the Bali Care Economy Dialogue and Women Deliver Pre-Conference on the Care Economy, to elevate the need for strong regional and global care policies and intersectional movements for care justice. The Foundation has also developed publications to help build the evidence base on care, including the *Toward a Resilient Care Ecosystem in Asia and the Pacific* white paper, the *Regional Roadmap for Action on the Care Economy in Asia and the Pacific*, and most recently, *A Global Roadmap for Action on the Care Economy* (as a co-publisher). By promoting policies and care delivery that expand access to affordable care services and professionalize care work, the Foundation supports sustainable care economies throughout the region. This brief, which explores the nexus of care and climate change, is part of the Foundation's ongoing efforts to address critical intersections within the care economy, ensuring that care systems are inclusive, resilient, and responsive to emerging local, regional, and global challenges.

For the last two decades, Canada's IDRC has been supporting feminist researchers and movements to understand and advance policies and programs that address the unequal social organization of care. Through its programming in the early 2000s unpacking the gendered impacts of trade liberalization, advancing labor market and social protection policies for women's autonomy in Latin America, or its Growth and Economic Opportunities for Women (GrOW) program, the care economy emerged as a pervasive and critical structural barrier for gender equality and women's economic autonomy. More recently, IDRC deepened its programming through its Scaling Care Innovations in Africa and supporting integrated and feminist care systems in Latin America.

In 2023 IDRC launched the Climate and Care Initiative (<https://climateandcareinitiative.org>), which this brief also builds on. This initiative seeks to integrate the agendas of care and climate action, demonstrating their interconnections and supporting and learning from concrete practices, in particular those advanced by ecofeminist movements and grassroots organizations. This initiative is developed by the AVINA Foundation, Oxfam Canada, and United Nations Research Institute for Social Development (UNRISD) in collaboration with the Global Alliance for Care. One of the areas of work of this initiative includes building a framework on the intersection between the climate and care crisis. This has been done through literature review and through consultations and participatory research processes involving feminist movements.



This brief acknowledges the contribution of the care and climate consortium, and the more than 170 participants that engaged in a series of consultation workshops including during CSW68 (the 68th annual Commission on the Status of Women) and other various virtual spaces organized by the consortium. The Initiative has also developed a framework that explores the intersection of care and climate, including, but not limited to, amplifying the definition of care, exploring the intersection of climate with the 5Rs of care and the care diamond<sup>3</sup>, and understanding the paradigm shifts required by this nexus. The framework has been developed by UNRISD as the lead, with a consortium of partners supporting its development.

This brief is designed for a climate-oriented audience, which primarily includes policymakers, climate change experts, environmental organizations, and stakeholders involved in climate action and sustainability initiatives. These individuals and organizations are typically focused on developing strategies and policies to mitigate climate change, adapt to its impacts, and promote environmental sustainability. While their work often involves addressing broad societal and economic challenges, the care economy has not traditionally been a focal point within climate decision-making processes.

This brief is intended to start a conversation within climate-focused forums about the critical need to integrate the care economy into climate policies and strategies. It also aims to raise awareness about potential negative effects or even unintended negative consequences of not considering the impacts on care in the design of climate policies, strategies, and programs. By exploring how care and climate intersect, it aims to broaden the scope of climate action to include the essential contributions of care work in building resilient communities. The goal is to demonstrate that investing in the care economy is not just a social or economic imperative but also a crucial investment in climate resilience and sustainability, ensuring that these issues receive the attention and resources they deserve within climate decision-making processes.

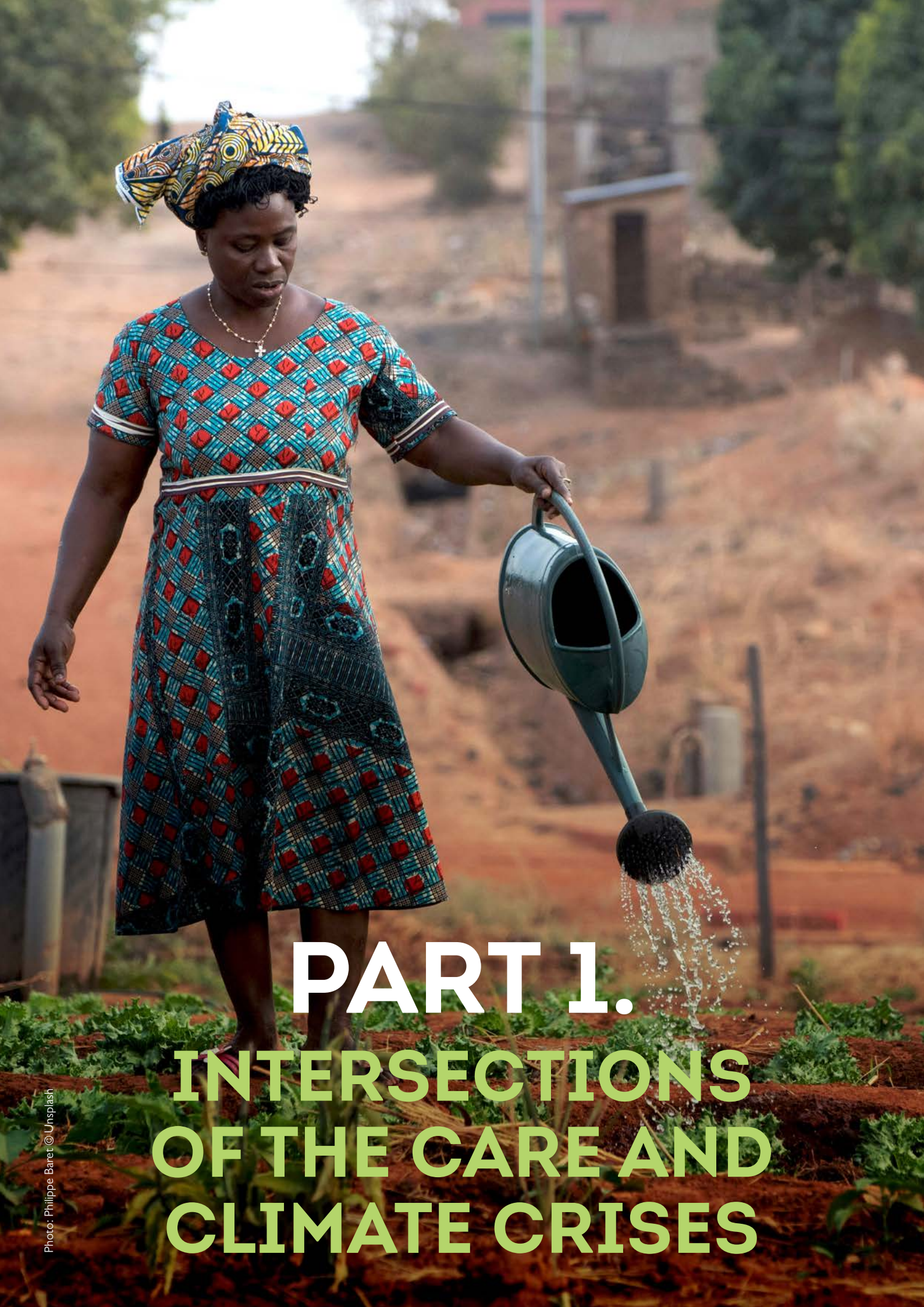
**Part 1** defines and unpacks the connections between these themes, summarizing the evidence for how climate change and care work interconnect in particularly damaging ways in LMIC contexts. **Part 2** proposes policy approaches and strategies for advancing care and climate justice together.

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<sup>3</sup> To learn more about the 5Rs of care and the care diamond, see UN Women, *A Toolkit on Paid and Unpaid Care Work* and Razavi, “The Political and Social Economy of Care.”







**PART 1.**  
**INTERSECTIONS**  
**OF THE CARE AND**  
**CLIMATE CRISES**



For the first time in history, the planet surpassed the critical 1.5°C warming barrier for 12 consecutive months, underscoring the urgent climate crisis.<sup>4</sup> The effects of climate change, along with biodiversity declines, pollution, rising sea levels, and land degradation are already evident, especially in vulnerable communities across LMICs in Asia, the Pacific, Latin America and the Caribbean (LAC), and Africa. While discourse on climate change is gradually acknowledging the need to integrate gender equality, an underexplored issue is the link between care work, climate change, and environmental sustainability. Care is central to climate justice and builds on the foundational work of feminists and gender equality advocates around gender climate justice. Care must not be seen separate from gender and inclusion because inequalities in care provision and access—both paid and unpaid—are central to achieving gender and social equality. Addressing the links between care and climate change is fundamental for gender-transformative climate action and a feminist just transition.

Although it is primarily human activities that have led to climate change, human activities throughout history have also protected, nurtured, and worked with ecosystems to sustain human and natural life. These human activities are what ecofeminists refer to as **environmental care work**, one of three types of care work alongside the direct and indirect care for other humans. **Direct care work** refers to the hands-on, interactive care for people, whereas **indirect care work** typically refers to work that does not require direct contact with people being cared for, such as house cleaning; washing clothes; gathering water, fuel, and food; or preparing meals.<sup>5</sup> However, there are overlaps in these three types of work and often a person is doing elements of two—or all three—simultaneously.

### Defining Climate Change and Environmental Degradation

*Climate change* refers to the changes in global temperatures and shifts in weather patterns over an extended period. It is due primarily to human activities, particularly the extraction and burning of fossil fuels. Interconnected with climate change are other forms of *environmental degradation*, including declining biodiversity, which is also negatively impacted by climate change as well as other human activities including pollution, land degradation, and industrial agriculture.

Source: United Nations, “Finance & Justice” and IPES-Food, *From Uniformity to Diversity*.

Care work is essential to survival, yet there are wide-ranging inequalities with regards to who can access care and who provides care. Multiple institutions at the state, market, community, and family levels make up the care ecosystem by providing and enabling care work.<sup>6</sup> Yet care work is disproportionately provided by unpaid or minimally paid women and girls, particularly from minoritized communities: people of color, migrant workers, and people from disadvantaged socioeconomic status. The disproportionate responsibility for care work, particularly unpaid care work, results in gendered time poverty whereby women and girls have less time to spend on income-earning work, upskilling, education, and caring for themselves. On the other hand, the concentration of women—particularly women of color and migrant women—in low paid care jobs is one of the primary reasons for gendered and racialized socioeconomic gaps, where globally women have less control over resources and capital than men.<sup>7</sup>

<sup>4</sup> Osaka, “Earth Breached a Feared Level of Warming over the Past Year.”

<sup>5</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*.

<sup>6</sup> Razavi, “The Political and Social Economy of Care in a Development Context.”

<sup>7</sup> Panda, Francis, and Sloane, *Towards a Resilient Care Ecosystem in Asia and the Pacific*, 29.



## Decolonizing language about care

The terms used in this brief to describe care work were coined in the English language by predominantly Global North institutions. They cannot fully express the nuances of care practices across different contexts, particularly in how care practices are viewed through indigenous historical contexts and cultural traditions. As Tongan researcher, Dr. Seina Taufu, expressed, “the full extent of Pacific peoples’ contribution to society and the economy is not fully recognised because of how unpaid work is defined. To Pasifika, calling service to their family and community ‘unpaid work’ implies a certain amount of burden that they don’t feel. It could even be considered offensive.”

Sources and notes: Teresa Cowie and Claire Eastham-Farrelly, “What Pasifika Families’ Unpaid Work Means to New Zealand.” Abya Yala is a term used by some indigenous people to refer to the Americas. (For more information see NativeWeb, “Abya Yala,” 2002, <http://abyayala.nativeweb.org/about.html>)

Decolonizing care from “Abya Yala” involves distinct perspectives rooted in indigenous cultures with long-standing practices of care that are undervalued in mainstream/northern definitions and approaches. These practices offer important insights into more holistic and community-centered approaches to care. Indigenous approaches to care often emphasize interconnectedness and holistic wellbeing, including that of nature. Advancing toward epistemological justice (e.g., decolonizing our definitions and concepts of care) is also an important contribution to understanding the interconnections between care and climate.

In addition to the gendered inequalities in the provision of care, countries around the world are struggling to meet care demands, particularly with the global growth in the proportion of the population over the age of 60.<sup>8</sup> Further, the increasingly privatized nature of the care economy has limited the access to care to people who have financial resources to pay for it, aggravated by the trend of growing wealth inequality.<sup>9</sup>

The struggles and inequalities of today’s care crisis are not new, but they are being exacerbated by the climate crisis.<sup>10</sup> As the following sections show, climate change and environmental degradation intensify the demands of and need for care work, putting even greater burdens on groups that are already highly vulnerable. Moreover, the devastating outcomes of climate change also have direct and indirect impacts on the networks, infrastructure, and services that support and provide care, weakening vulnerable communities’ resilience to unfolding crises. Finally, many climate adaptation and mitigation strategies unfairly rely on unpaid care labor, contributing to the gendered and intersecting social inequalities that have been long-standing in care labor.

Investing in care can build resilience to climate change and advance toward a distinct development paradigm that positions the sustainability of life—for people and planet—at the center.

## Inequalities of the Care Crisis

The World Economic Forum categorizes three types of inequalities in the care ecosystem, which it defines as “the paid and unpaid activities, labour and relationships that sustain human activity.” The first type of inequality is an *overreliance on unpaid care*, which is predominantly provided by women and girls. Second is the *precarity of the work within the paid care sector*, particularly because it relies on migrant workers who lack essential labor and social protections. The third inequality is *the gap in access to care* for people with fewer resources and wealth to pay for quality care services.

Source: World Economic Forum, *The Future of the Care Economy*, 6 and 7–8.

<sup>8</sup> Mozos et al., *Climate-Resilient Care for Older People*, 11.

<sup>9</sup> Floro, Sepúlveda Carmona, and Lozano Rubello, *A Care-Led Transition to a Sustainable Future*, 13–15.

<sup>10</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*.



## Intersection 1: Climate change intensifies the demands for care work

Climate change and environmental degradation increase the human need for care and the intensity, drudgery, and time required to do care work. Not only do care needs increase, but they become more complex. During climate emergencies, for example, family and community members must escape dangerous conditions, find shelter, food, and medical support. Often women are the ones at home caring for their children at the time of a climate emergency. These care responsibilities are exacerbated during a crisis, which then often preclude women's engagement in decision-making and access to livelihoods. Inequalities in the access to care are also intensified during climate emergencies, particularly for structurally marginalized groups like LGBTQIA+ individuals and sex workers who may be discriminated against and excluded from shelters and other emergency services. Additionally, women, girls, and LGBTQIA+ individuals are also at higher risk of gender-based and other identity-driven forms of violence, which rise due to climate stressors. Furthermore, in LMICs, the capacity for an institutional response to natural disasters is often weak due to a lack of resources and infrastructure. As a result, in many cases, almost the entire response comes from local and community-led solutions.

As a result, women, girls, and other structurally marginalized groups are spending even more time trying to meet the increasingly complex care needs of their families and communities—all with fewer resources and even higher health risks. In disaster situations, institutions frequently assume that women will take responsibility for the care of family and community members. Men are more likely to be consulted on strategies and solutions to the climate emergency and given paid work to help realize those solutions. This means women are further marginalized in decision-making and from economic opportunities because of care work demands. Importantly, the intensity of care demands means that women and girls have less time for leisure, rest, and play, which are fundamental human rights.

### 1.1 Climate-related health impacts mean more people need care, more frequently, and with increased complexity

Climate change and environmental degradation is having a devastating impact on human health.<sup>11</sup> Heat-related illnesses from extreme temperatures, water-borne and vector-borne diseases from flooding and storms, respiratory illness from pollution and wildfires, malnutrition because of food and water scarcity, and unhealthy fuel sources are making more people sick—and making them sick more frequently. Even diseases like dengue, once considered a seasonal disease in some Latin American countries, is turning into a disease that is common throughout the year.<sup>12</sup> Risk of illness and the transmission of illness to others is worsened by lack of available, accessible, and safe water, food, energy, and sanitation, which are also negatively affected by climate change.<sup>13</sup>

This, in turn, means there is a greater demand on caregivers' time and an increase in their risk of exposure. Extreme heat in India, for example, has resulted in higher likelihood of illnesses like respiratory disease, diabetes, hypertension, and cardiovascular disease, contributing to increased time spent doing care work (see Box A)<sup>14</sup>. Similarly, torrential rain and flooding in Bangladesh led to higher than usual rates of diseases like dengue and chikungunya, resulting in women spending an average of one hour more per day doing direct care work.<sup>15</sup>

<sup>11</sup> McMichael and Lindgren, "Climate Change"; Romanello et al., "The 2023 Report of the Lancet Countdown on Health and Climate Change."

<sup>12</sup> Bello, "Dengue Fever."

<sup>13</sup> Schaub, Borrowman, and Harris, *Global Assessment of Care-Related Infrastructure*; and UNEP, *Global Gender and Environment Outlook*.

<sup>14</sup> Adrienne Arsht-Rockefeller Foundation Resilience Center, "The Scorching Divide."

<sup>15</sup> UN Women, *The Climate-Care Nexus*.



In addition to having more people to care for, caregivers are at greater risk of exposure from transmission—both unpaid caregivers and paid care workers, particularly frontline workers.<sup>16</sup> Older people, especially older women who increasingly make up a larger proportion of the population and are also caregivers themselves, are particularly susceptible.<sup>17</sup> Pregnant caregivers are also uniquely susceptible because of the heightened risk of diseases and viruses to their health and that of their unborn children.<sup>18</sup>

There is also a psychological toll of care work, which is particularly pronounced in post-disaster periods.<sup>19</sup> Not only is there the stress of having greater care demands with fewer resources to meet those demands, but there is also the psychological toll from providing emotional support for family and community members. Emotional support is a form of care, albeit an often unrecognized one, and the expectation of it falls disproportionately on women and girls.

## Box A

### Quantifying the Effects of Extreme Heat on Women’s Unpaid Care Work

Research published by the Adrienne Arsht-Rockefeller Foundation Resilience Center assessed the impact of extreme heat on productivity in India, Nigeria, and the United States. It found that while more than 70 percent of lost productivity for men was in the paid workplace, the majority of women’s lost productivity—up to 75 percent—is in unpaid care work. In India, for example, extreme heat means women spending six hours per day on unpaid care work, with one of those hours due directly to extreme heat. As one woman reported, “If there is heat . . . our goods spoil. . . . Our body also suffers. We get very hot, very dizzy, very distressed.” The research estimates this unpaid labor will increase from 6 hours per day to 8.3 hours per day by 2050. Yet, these losses are not counted in GDP statistics.

Source: Adrienne Arsht-Rockefeller Foundation Resilience Center, “The Scorching Divide.”

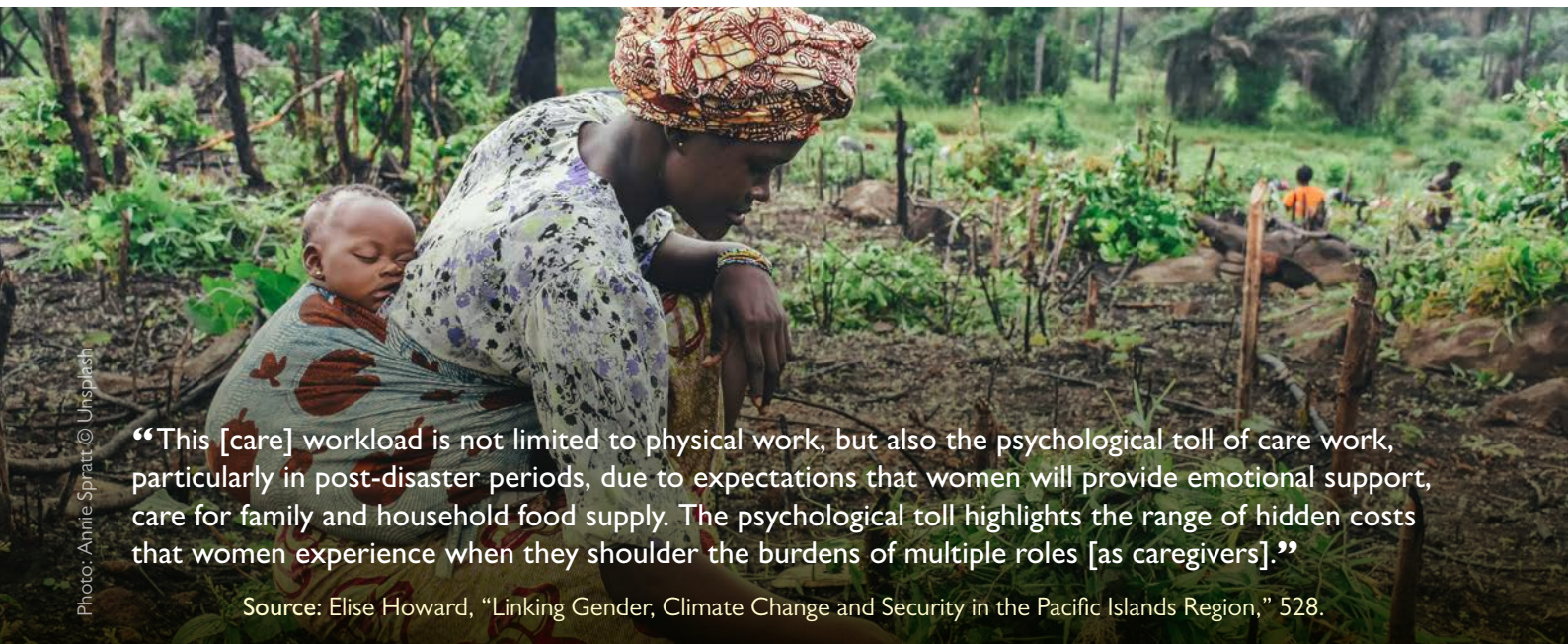


Photo: Annie Spratt © Unsplash

“This [care] workload is not limited to physical work, but also the psychological toll of care work, particularly in post-disaster periods, due to expectations that women will provide emotional support, care for family and household food supply. The psychological toll highlights the range of hidden costs that women experience when they shoulder the burdens of multiple roles [as caregivers].”

Source: Elise Howard, “Linking Gender, Climate Change and Security in the Pacific Islands Region,” 528.

<sup>16</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*, 43; Floro, Sepúlveda Carmona, and Lozano Rubello, *A Care-Led Transition to a Sustainable Future*, 19.

<sup>17</sup> Mozos et al., *Climate-Resilient Care for Older People*, 13 and 17.

<sup>18</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*, 37.

<sup>19</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*, 44; UN Women, *The Climate-Care Nexus*, 14; Lake and Quaid, *Prioritizing Care Work Can Unlock a Just Transition for All*, 11; and Howard, “Linking Gender, Climate Change and Security in the Pacific Islands Region.”



## 1.2 Climate-induced food, water, and energy insecurity intensifies demands of unpaid and environmental care

Water, food, and fuel are fundamental to human survival. The work of providing these essential survival needs is among the most basic types of care work. The nurturing and provision of food, water, and fuel for households and communities is related both to caring for humans and to caring for the environment to ensure the sustainability of these resources, including for future populations. In many of the areas most impacted by climate change, it is typically the responsibility of women and girls to provide these resources for their families, through subsistence agriculture, maintaining forests and water sources, and animal husbandry.<sup>20</sup> Yet climate change, land degradation, and biodiversity loss—on land and in water—are responsible for widespread food and water insecurity, which are making the care work of providing food, water, and fuel more time consuming, difficult, and dangerous.<sup>21</sup> As these resources become scarcer, it requires more time and energy for caregivers to collect and provide them for their families.<sup>22</sup>

“Environmental care, a form of unpaid care, includes people individually or collectively organizing to pursue sustainability through cooperative work and service. This type of work is rarely considered in economic analyses, even though many hours of volunteer or unpaid work are invested.”

Source: UN Women, *The Climate-Care Nexus: Addressing the Linkages between Climate Change and Women’s and Girls’ Unpaid Care, Domestic and Communal Work*, 14.

Importantly, the movement away from indigenous practices and the disempowerment of subsistence farmers has made it even more difficult for them to apply traditional practices of environmental care, many of which mitigate climate change and environmental degradation. Families and communities must be able to reclaim this knowledge and these practices. However, the international community must also acknowledge that this is still work that needs to be recognized and compensated, instead of relied on as a free solution to climate change.

Furthermore, women and those carrying the heaviest burden of unpaid care work often face increasing debt. A study in six Brazilian cities<sup>23</sup> in the North and Northeast found that declining resources push many women to take out loans to cover basic expenses, making it harder for them to repay those debts.<sup>24</sup> Food, water, and energy insecurity not only increase care responsibilities, but also add financial strain on women and vulnerable populations.<sup>25</sup>

### Water insecurity

There are an estimated 2 billion people without access to adequate drinking water, which will only grow as droughts increase and freshwater ecosystems are becoming dryer.<sup>26</sup> This growing scarcity of clean water directly impacts care work. Individuals who are responsible for collecting and managing water for the household—typically women—must spend more time finding adequate sources of water.<sup>27</sup> This often involves traveling longer distances to physically collect water, which is not only time consuming, but puts them at risk of physical or sexual violence.<sup>28</sup> Declining availability of water also puts sanitation and hygiene at risk, increasing illnesses, which further increases demands on care. Water scarcity also contributes to declining yields associated with food security, as climate droughts have resulted in widespread yield losses across about three quarters of the world’s harvested areas.<sup>29</sup>

<sup>20</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*; Yadav and Lal, “Vulnerability of Women to Climate Change in Arid and Semi-Arid Regions”; Parkes et al., *Care Policy Scorecard*; and Cotula, *Gender and Law*.

<sup>21</sup> UN Women, *The Climate-Care Nexus*.

<sup>22</sup> Schaub, Borrowman, and Harris, *Global Assessment of Care-Related Infrastructure*; MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*.

<sup>23</sup> I.e., Salvador (BA), Juarez Távora (PB), Viçosa do Ceará (CE), Imperatriz (MA), Belém (PA), and Manaus (AM).

<sup>24</sup> Texeira et al., *Endividar-se para viver: o cotidiano das mulheres na pandemia*.

<sup>25</sup> Rico, “Life Sustainability and Debt Sustainability.”

<sup>26</sup> UN-Water, *Summary Progress Update 2021*; IPCC, *Climate Change 2022*.

<sup>27, 28</sup> Tandon et al., “Urban Water Insecurity and Its Gendered Impacts,” 192.

<sup>29</sup> IPCC, *Climate Change 2022*, 56, 202, 584.



## Food insecurity

In many rural, low-income communities, families rely on subsistence farming and natural resources for food security. Declines in agricultural yields require subsistence farmers to work harder and longer to produce less food. Women, who are typically responsible for subsistence farming, also tend to have limited and inequitable access to and ownership of land, especially fertile land, requiring more work to produce basic food for the family.<sup>30</sup> This is also true regarding gender inequalities in access to forests and fishing sources. In addition, climate change has greatly impacted entire agricultural value chains, such as by extreme weather events that delay transport, lack of nutrition due to rising food insecurity, and rising CO<sub>2</sub> levels that have been shown to reduce nutrient content and increase foodborne pathogens and mycotoxins.<sup>31</sup>

## Energy insecurity

At a global level an estimated 1.3 billion people lack access to fuel and electricity.<sup>32</sup> Specifically, in the Global South, the lack of access to modern fuel and electricity forces many communities to rely on traditional energy sources such as biomass, kerosene, or oil for cooking and heating. This dependence disproportionately impacts women, who, as primary caregivers, are typically responsible for household chores and the procurement of these energy resources. Consequently, women are more frequently exposed to the harmful effects of polluting energy sources, which pose significant health risks.<sup>33</sup>

Electrification and renewable energy initiatives that fail to account for gender dynamics can inadvertently marginalize women. For example, when a wind farm was being considered in the community of Unión Hidalgo, Mexico, of the 400 people who participated in the early consultation process, only 50 were women.

One woman noted that the meetings were held during times when women were busy with childcare and meal preparation.<sup>34</sup> Women are the most likely to ask for investments in clinics and schools. When their insights are not heard, the whole community suffers.<sup>35</sup> Without a gender-sensitive approach, these programs may limit women's access to electricity in critical care spaces like health clinics (especially dangerous for women who are pregnant or in labor)<sup>36</sup> or exclude them from emerging employment opportunities in the renewable energy sector. Such outcomes not only perpetuate existing gender inequalities but also hinder the broader goal of achieving sustainable development.<sup>37</sup>

“The extractivist energy model has also failed to include women in consultation processes regarding the use of community lands and resources for fossil fuel extraction projects and neglected women's perspectives and needs in land use agreements, resettlement plans and local community benefits.

Feminists are demanding that, to be gender-responsive and just, the energy transition must be more than merely a technical transition from one form of energy to another. It must also transform the energy model to one that is gender-responsive, fair and equitable.”

Source: Global Initiative for Economic, Social and Cultural Rights, *Renewable Energy and Gender Justice*, 2.

<sup>30</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*, 36.

<sup>31</sup> Floro, Sepúlveda Carmona, and Lozano Rubello, *A Care-Led Transition to a Sustainable Future*, 21.

<sup>32</sup> Mozos et al., *Climate-Resilient Care for Older People*, 20

<sup>33</sup> Leduchowicz-Municio et al., “Women, Equality, and Energy Access.”

<sup>34</sup> Global Initiative for Economic, Social and Cultural Rights, *Renewable Energy and Gender Justice*, 16.

<sup>35</sup> Global Initiative for Economic, Social and Cultural Rights, 13.

<sup>36</sup> Global Initiative for Economic, Social and Cultural Rights, 5–6.

<sup>37</sup> Leduchowicz-Municio et al., “Women, Equality, and Energy Access.”



The expansion of renewable energy initiatives in Latin America and the Caribbean is expected to generate around 15 million net new jobs by 2030 as part of the net-zero emission economy. While this shift addresses energy insecurity and promotes sustainability in the region, it also raises concerns about perpetuating existing gender disparities in the workforce. Over 80 percent of the new employment opportunities are concentrated in sectors traditionally dominated by men, such as energy, construction, and manufacturing, while only 20 percent are in female-dominated sectors. This imbalance highlights the need for energy policies to ensure gender and care becoming part of the green economy.<sup>38</sup>

Not everything that is green is just: There are growing concerns that some clean energy infrastructure initiatives have not taken into account care work and end up intensifying gender inequalities through increasing unpaid care work, as well as the loss of land and livelihoods, while not really addressing energy poverty for the most marginalized.<sup>39</sup>

### **1.3 Climate stressors are associated with increases in gender-based violence, violence against children, and violence against other structurally marginalized groups**

Climate change also contributes to elevated rates of gender-based violence, violence against children, and violence against structurally marginalized groups. Research shows that these types of violence increase during periods of climate emergencies, whether inside the home, shelters, or refugee camps where they've been forced to go due to climate-induced displacement.<sup>40</sup> This affects caregivers directly, as most care work is done by women who are also disproportionately affected by gender-based violence (GBV). Both climate change and GBV also increase the number and frequency of individuals who need to be cared for.

On the Pacific island of Vanuatu, for example, there was a 300 percent increase in domestic violence cases following tropical cyclones.<sup>41</sup> Women of the Marshall Islands reported that climate-related droughts strained their ability to do care-related tasks like cooking and cleaning, which in turn led to violence from their partner.<sup>42</sup> The 2022 drought in the Horn of Africa resulted in an increase in intimate partner violence and rape by 20 percent in Somalia.<sup>43</sup> After recent flooding in Brazil's Rio Grande do Sul region, girls under 18 were sexually assaulted in three shelters, leading the government to establish shelters exclusively for women and children.<sup>44</sup> Similarly, Tropical Storm Agatha, which struck Guatemala in June 2010, caused a sharp rise in psychological violence against women. During the storm, psychological violence increased to 22.5 percent and remained elevated at 19 percent post-storm, compared to just 7 percent before the storm.<sup>45</sup> The burden of caregiving during climate emergencies, as shown in this example, can intensify tensions within households. The stress and lack of adequate resources leads to a surge of psychological violence against women, as they may face blame, frustration, and even abuse from partners or other family members, further compounding their vulnerability in already fragile conditions.

In addition to women and girls, other structurally disadvantaged groups have also been disproportionately affected by climate emergencies. For example, in Fiji after Cyclone Winston, there was an uptick in violence against LGBTQIA+ communities, as documented in the report *Down by the River*.<sup>46</sup>

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<sup>38</sup> Valenzuela Ponce de León, *Green Jobs, an Opportunity for Women in Latin America*, 13; Saget, Vogt-Schilb, and Luu, *Jobs in a Net-Zero Emissions Future in Latin America and the Caribbean*, 14.

<sup>39</sup> Global Initiative for Economic, Social and Cultural Rights, *Renewable Energy and Gender Justice*.

<sup>40</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*, 39.

<sup>41</sup> MacGregor, Arora-Jonsson, and Cohen, 38.

<sup>42</sup> Mcleod et al., "Raising the Voices of Pacific Island Women to Inform Climate Adaptation Policies" 180.

<sup>43</sup> OCHA, "Horn of Africa Drought," 5.

<sup>44</sup> Infobae, "En medio de las inundaciones en Brasil, denunciaron violaciones y robos en los refugios de evacuados" [Amid floods in Brazil, rapes and robberies reported in evacuation shelters]; IPPF, "Floods in Rio Grande do Sul."

<sup>45</sup> UNFPA, *Gender-Based Violence and Natural Disasters in Latin America and the Caribbean*, 19.

<sup>46</sup> Dwyer and Woolf, *Down by the River*.





There are also upticks in violence aimed at other minoritized groups like sex workers, people with disabilities. Discrimination can also affect their access to care during climate disasters.<sup>47</sup>

It is important to note that the high risk of gender-based violence associated with climate change is not unique to LMICs. It is a global phenomenon.<sup>48</sup> However, LMICs are most susceptible to the stressors and devastation caused by climate change, which also heighten the risk of gender-based violence.



Photo: Pierre Prakash © Creative Commons

## 1.4 Climate-induced migration and displacement intensifies care demands

“Women are often among the last to leave home when more extreme or erratic weather makes it harder for families to put food on the table, staying behind to look after children and elderly or sick relatives, while male family members leave to search for an income elsewhere. This can place a huge burden on women, who often become the main provider for the family as well as the primary caregiver.”

Source: Oxfam, “Forced from Home—Climate-Fuelled Displacement,” 7.

It is well-known that climate change has and will continue to contribute to significant population displacement and migration.<sup>49</sup> The United Nations High Commissioner for Refugees (UNHCR) estimates that, on average, more than 20 million people are leaving their homes each year due to extreme weather events that include heavy rainfall, prolonged droughts, environmental degradation, and cyclones, among other disasters.<sup>50</sup>

Migration can have extensive impacts on care demands and workloads.

When migration is spurred by the economic impacts of climate change, patterns show that men are typically the first to migrate. This affects care and women’s workloads because it means more responsibilities are shifted to women for tasks that were once more distributed within the household. Research in south India for example found that out-migration of men from rural to urban areas put the responsibility of livestock maintenance and farming on women who stayed home, in addition to the care work for which they were previously responsible.<sup>51</sup>

<sup>47</sup> Sellers, *Gender and Climate Change*, 26–30; Dwyer and Woolf, *Down by the River*.

<sup>48</sup> Sellers, *Gender and Climate Change*.

<sup>49</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*, 27; Lake and Quaid, *Prioritizing Care Work Can Unlock a Just Transition for All*, 11.

<sup>50</sup> UNHCR, “Climate Change and Disaster Displacement.”

<sup>51</sup> Rao et al., “Managing Risk, Changing Aspirations and Household Dynamics,” 7.



In addition, gender dynamics in economic-driven migration have been shifting as growing demands for care workers around the globe are prompting a migration of care workers—mostly women—from low-income countries to high income countries.<sup>52</sup> This out-migration of paid and unpaid care workers intensifies the care demands in the countries of origin, which are already struggling with intensifying care needs because of climate change. Countries such as the Solomon Islands report that the out-migration of nurses to Australia has “left a gap” in their healthcare profession.<sup>53</sup> Migration from Mexico and Central American countries toward the United States has a historically long precedent, as a result of economic conditions. However, the changes in temperature and precipitation due to climate change are set to impact migration patterns and add pressure for more to emigrate, especially those dependent on the agricultural sector.<sup>54</sup> The Small Island Developing States of the Caribbean are particularly affected by climate change increasing the risk of forced migration. Sudden-onset hazards, notably hurricanes and storms, and slow-onset environmental degradation, like sea-level rise, can deplete national resource reserves from the Caribbean countries, increasing pressure and reducing resilience capacities from the health care systems and social organizations of care. Countries such as Haiti, the Bahamas, Saint Vincent and the Grenadines, and Dominica have shown in the last five years cases of massive disasters followed by large instances of displacement.<sup>55</sup> Rather than a crisis, this is a sign of a permanent deterioration of living conditions for communities and entire populations.

In addition, out-migration shifts unpaid care responsibilities of children and family members onto caregivers, usually other women and girls, who remain in the home country. It is also worth noting that women who are migrating for jobs in care sectors in other countries are exposed to exploitative working and living environments in host countries, and paradoxically, are not able to meet their own family’s care needs, let alone selfcare.<sup>56</sup>

Climate change is emerging as a driver and exacerbator of migration in Latin America and the Caribbean. It is expected that the region could reach over 17 million climate migrants by 2050, which amounts to 2.6 percent of the total population.<sup>57</sup> Climate change is impacting the number of migrants in the Caribbean and Central American countries through two main impacts: increased intensity of storms and variations in precipitation patterns. In Central America, for example, the various droughts have resulted in around 70 percent of crop losses during some harvest seasons.<sup>58</sup> These impacts have been shown to affect critical infrastructure, reduce crop yields, and decrease workers’ health and productivity (being especially critical in both the Caribbean and Central America’s smaller economies), and therefore, inducing further migration.

According to the International Monetary Fund (IMF), it is estimated that in this region there is about a 1 percent increase of people migrating across borders when there are three additional climate disasters a year, over a five-year period.<sup>59</sup>

In Latin America and the Caribbean, gender-based violence is a major contributing factor to emigration, especially in Central America. While migration numbers show a similar distribution between female and male emigrants from many countries in the region, there is a growing trend of women, and especially girls, having to escape vulnerable situations. In 2020, girls represented up to 20 percent of the female human mobility flow in the region, weakening their support systems.<sup>60</sup>

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<sup>52</sup> IOM, “Supporting Brighter Futures.”

<sup>53</sup> Voloder, “Labour Schemes Drawing Nurses from across Pacific.”

<sup>54</sup> Wilson Center, “Climate Change and Migration in Mexico: A Report Launch.”

<sup>55</sup> Mycoo et al., “Small Islands”; World Bank Group, “On the Frontlines of Climate Change.”

<sup>56</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*, 27–28.

<sup>57</sup> World Bank Group, *Internal Climate Migration in Latin America*, 2–3.

<sup>58</sup> Speck and Bermeo, “How Climate Change Catalyzes More Migration in Central America.”

<sup>59</sup> Beltran and Hadzi-Vaskov, “How Climate Shocks Are Linked to Cross-Border Migration.”

<sup>60</sup> UNICEF. “Migration and Gender”; IOM, “Migration and Migrants.”



## Intersection 2: Climate change weakens care systems

In addition to exacerbating the demand for care work, climate change and environmental degradation are damaging care systems, which are already in a crisis.<sup>61</sup> The harm to care systems is multi-pronged. First, the financial cost of adapting to climate change and rebuilding after climate disasters is making it even more difficult for countries to invest in public care and social protection services. Second, extreme weather events and other climate-related occurrences cause direct damage to care-related infrastructure. Third, climate change is negatively affecting social networks that are essential sources of care work, spurred by climate-induced migration and other changes. Combined, these effects continue to chip away at care systems, making communities and families who are already more vulnerable to the impacts of climate change even less resilient to recovery.

### 2.1 Climate costs overshadow public spending for care systems, which are essential for resilience to climate change

Addressing the care crisis while also eliminating the gender and social inequalities of care work requires large-scale public investment in care systems.<sup>62</sup>

Public spending for care systems should include

- Social protection systems for all, including universal health care
- Universal child, elder, and disability care
- Publicly funded services for water and energy
- Urban, rural, and community planning that is centered around created spaces that promote care for both humans and the environment, including accessible care-related and green infrastructure; safe, accessible, and green public transportation; and public community green spaces.

“When States do not adequately value, provide and support care provisioning, women inevitably take on a significant share of the care workload.”

Source: María S. Floro et al., *A Care-Led Transition to a Sustainable Future*, 13.

Research shows that these services reduce the intensity and drudgery of care work and also redistribute the immense responsibilities of care work from being carried out mostly by women and girls from minoritized communities—which reproduces generations of gender and social inequality—to responsibilities that are shared by society at large.<sup>63</sup> In doing so, these services build the resilience of entire communities to the impacts of climate change.<sup>64</sup> In addition, social protection systems also play an important role in providing alternatives to escape situations of GBV.<sup>65</sup>

However, even before the current climate crisis, few countries allocated sufficient resources to fund public care services and social protection systems, which have been further diluted by austerity measures. Climate change is compounding these challenges. As of 2022, only 21 countries provide universal access to childcare for children aged zero to two years old, none of which are in Asia, the Pacific, Arab-majority states, or Africa.<sup>66</sup> Similarly, only a global minority had access to full social protection systems, which are a fundamental part of a care ecosystem.<sup>67</sup> Women are overrepresented among the unprotected, despite being the ones most likely to bear the responsibility for caring for others.<sup>68</sup> One explanation for this is that women are more likely to work in the informal economy, where job-related protections like maternity leave, healthcare, and retirement and unemployment benefits are often unavailable.

<sup>61</sup> Dowling, *The Care Crisis*; Fraser, “Contradictions of Capital and Care.”

<sup>62, 63</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*; Floro, Sepúlveda Carmona, and Lozano Rubello, *A Care-Led Transition to a Sustainable Future*; and UN Women, *The World Survey on the Role of Women in Development 2014*.

<sup>64</sup> Lake and Quaid, *Prioritizing Care Work Can Unlock a Just Transition for All*.

<sup>65</sup> UN Women, *Addressing Violence against Women through Social Protection*.

<sup>66</sup> Addati, Cattaneo, and Pozzan, *Care at Work*, 224 and 279. Four countries in the Americas provide universal access to childcare: Brazil, Mexico, Cuba, and Panama.

<sup>67</sup> ILO, *World Social Protection Report 2014/15*.

<sup>68</sup> Turquet et al., “Feminist Climate Justice”; ILO, “World Social Protection Report 2014/15.” See the ILO report for an explanation of what is included in their measure of social protection.



Additionally, many women are excluded from labor markets due to unpaid care responsibilities, further limiting their access to social protections. With the exception of a few countries—including Costa Rica, South Africa, Chile—few LMICs have developed social protection schemes that specifically address childcare needs. Even fewer countries have social protection schemes that address long-term care needs (such as long-term care insurance, or LTCI). The countries that do have a LTCI scheme are often high-income countries, like Japan and South Korea.<sup>69</sup> This is despite the region experiencing aging shifts that are increasing the demand for long-term care, particularly in countries with rapidly aging populations in Southeast Asia, where social protection systems are not yet fully equipped to meet these needs.

The climate-fueled debt crisis facing LMICs further hinders public investment in public care services and social protection systems. Although LMICs owe only 30 percent of global public debt, they have seen the fastest increase in debts over the last decade due to responses to the COVID-19 pandemic, rising cost of living, and climate change.<sup>70</sup> Many countries that are most vulnerable to the impacts of climate change are experiencing rising public debt.<sup>71</sup> In Papua New Guinea, for example, which is already considered a “highly indebted country,” external debt has increased in the years of or following major climate-related disasters. This debt has increased from 14.52 percent (in the period around 2009 to 2007) to 69.57 percent (2020 to 2021).<sup>72</sup> Consequently, more than 3 billion people live in countries that spend more money on paying interest on national debts than on education or health, which are essential components of a care system.<sup>73</sup>

Public debt from the rising costs of climate change is making it more difficult for LMICs to invest in care services. Consequently, women from minoritized communities will continue to shoulder most of society’s care work responsibilities, all with little or no pay. Moreover, because countries with weak social protection systems are less resilient to the impacts of climate disasters, this situation only serves to further erode the most vulnerable communities’ ability to cope and adapt.<sup>74</sup>

## 2.2 Climate change directly impacts care-related infrastructure

Damage to infrastructure is one of the more visible ways in which climate change impacts care systems. Like care services and social protection systems, physical infrastructure is an essential part of a care system. When climate-related disasters damage infrastructure, it damages care systems as well. Many LMICs are already at a disadvantage in terms of infrastructure, lacking “social and physical infrastructures to support people to cope with the most serious of climate impacts.”<sup>75</sup>

There are many types of infrastructure that enable people to care for themselves, families, communities, and the environment. Referred to collectively as *care-related infrastructure*, these help to redistribute care workloads among all members of society and can alleviate overall needs for care. Housing is a primary type of care-related infrastructure, which is frequently damaged by climate events. Other examples of care-related infrastructure include

- Public infrastructure that provides clean and safe water, energy, and sanitation
- Accessible, convenient, and safe public transportation
- Facilities and spaces for care services, such as hospitals, schools, nursing homes, and childcare facilities
- Community spaces, like churches, recreation centers, libraries, and parks
- Labor-saving technologies that alleviate domestic and other care tasks, like cookstoves and washing machines.

<sup>69</sup> Floro, Sepúlveda Carmona, and Lozano Rubello, *A Care-Led Transition to a Sustainable Future*, 12–13.

<sup>70</sup> UN Global Crisis Response Group, *A World of Debt*.

<sup>71</sup> Turquet et al., *Feminist Climate Justice*, 29.

<sup>72</sup> Bharadwaj et al., “Sinking Islands, Rising Debts,” 23 and 24.

<sup>73</sup> UN Global Crisis Response Group, *A World of Debt*, 4.

<sup>74</sup> Turquet et al., *Feminist Climate Justice*, 28.

<sup>75</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*, 7.



There is no shortage of examples of how climate-related disasters have impacted these types of infrastructures. On the Pacific island of Vanuatu, for example, cyclones damaged care-related infrastructure like homes, gardens, schools, roads, and churches.<sup>76</sup> Interviews with women show the difficulty they face in rebuilding these, all while trying to care for children.<sup>77</sup>

Still, more effort is needed to systematically track data about the extent of damage to care-related infrastructure across LMICs and how the damage affects care workloads. For example, data about the 2022 Cyclone Gombe shows that at least 113 school buildings in Mozambique were damaged and schools in Malawi were also severely damaged.<sup>78</sup> Although research discusses the impacts of damaged schools on children's education, there is less recognition of who is doing the work of caring for those children in the absence of schools.<sup>79</sup>

## 2.3 Climate change weakens support networks that are a source of community and familial care

Another way climate change affects care systems is in how it triggers breakdowns in social networks that have historically been an essential source of community and familial care. In many communities of LMICs, unpaid care for individuals and the environment is a collective responsibility provided by multiple people within a community.<sup>80</sup> Climate change and environmental degradation are also contributing to the breakdown of community support networks that have been a significant and reliable source of unpaid care.

Climate-induced migration or displacement is a major contributor to the breakdown of community networks.<sup>81</sup> Not only does migration shift more unpaid care responsibilities onto those who remain in the community, as discussed in section 1.4, but it also diminishes support networks that have been critical sources of community and familial care.<sup>82</sup> The erosion of these social networks and support systems also impacts the mental health of caregivers, again exacerbating the health impacts of climate change on care workers.

Migration also has impacts on communities' ability to continue important forms of environmental care. Research in south India found that migration of men from rural areas led to an "eroding community-level cooperation" around management of common natural resources of village ponds and pasturelands.<sup>83</sup> Moreover, migration can erode indigenous knowledge and practices about caring and sustaining ecosystems, which have been proven to strengthen the resilience of communities to climate shocks.<sup>84</sup>

<sup>76</sup> Alston, Fuller, and Kwarney, "Women and Climate Change in Vanuatu, Pacific Islands Region," 11.

<sup>77</sup> Alston, Fuller, and Kwarney, 11–13.

<sup>78</sup> Harmeling, Kaloga, and Petitbon, "Climate Loss and Damage in Africa"; CARE, *Education and Climate Change*, 9.

<sup>79</sup> Chigwanda, "Keeping Children in School During Natural Crises"; CARE, *Education and Climate Change*; and Harmeling, Kaloga, and Petitbon, "Climate Loss and Damage in Africa."

<sup>80</sup> Lake and Quaid, *Prioritizing Care Work Can Unlock a Just Transition for All*, 13.

<sup>81</sup> Floro, Sepúlveda Carmona, and Lozano Rubello, *A Care-Led Transition to a Sustainable Future*, 20.

<sup>82</sup> Lake and Quaid, *Prioritizing Care Work Can Unlock a Just Transition for All*, 11.

<sup>83</sup> Rao et al., "Managing Risk, Changing Aspirations and Household Dynamics," 11.

<sup>84</sup> Caviedes et al., "Indigenous and Local Knowledge on Social-Ecological Changes Is Positively Associated with Livelihood Resilience in a Globally Important Agricultural Heritage System."





## Intersection 3:

# Climate adaptation and mitigation strategies can perpetuate care inequalities

Climate change intensifies the demand for care work and damages the care systems that enable communities to be resilient in the face of climate change. Furthermore, climate mitigation and adaptation strategies can exacerbate inequalities stemming from care work or even rely on increased unpaid care work, continuing the cycle of exploiting care labor.

## 3.1 Many common climate adaptation strategies can increase care workloads or fail to address the care workloads of those who need it the most

“Many projects related to climate change mitigation and adaptation, such as reforestation, land rehabilitation, waste management, among others, count on women and their unpaid labour as ‘sustainability saviours’. Such approaches assume that women’s time is ‘infinitely elastic,’ and an unlimited resource to sustain people and environments, often ignoring or overlooking women’s own health and well-being and the many competing demands on their time.”

Source: UN Women, *The Climate-Care Nexus*, 14.

Reforestation, land rehabilitation, waste management, composting, vermiculture, organic agriculture, and recycling are all important and effective climate change initiatives. However, if implemented without complementary initiatives to redistribute care workloads, these initiatives have been shown to inadvertently increase unpaid care workloads for women and girls.<sup>85</sup>

For example, during the early 2000s in Mumbai, municipal councils introduced water-saving, rainwater-harvesting technologies for individual households in replacement of bore-wells, tankers, and water tanks available for the general population. Yet poorer households did not have the same ability to install these technologies because they had limited space, did not have tenure over their property, and were not able to pay the upfront costs of installation. As a result, women living in informal settlements were still struggling to have regular access to clean water. Meanwhile, the middle-class households that installed the rainwater-harvesting technologies now had more water available to them, leading to a decrease in state-supplied water. In essence, this adaptation strategy did not improve the care workload for women in poorer households, as they continued to shoulder the responsibility of securing water, while state-supplied water became scarcer.<sup>86</sup>

Similarly, fossil fuel mitigation strategies, such as the production of biofuels, can increase care workloads. If land is diverted from subsistence food crops to the production of biofuels, this leads to more work for smallholder farmers who had relied on that land to provide food for their families, which is most often women’s responsibility.<sup>87</sup>

<sup>85</sup> UN Women, *The Climate-Care Nexus*, 14.

<sup>86</sup> Tandon et al., “Urban Water Insecurity and Its Gendered Impacts,” 191 and 193.

<sup>87</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*, 53.



## 3.2 Investments in renewable energy are overlooking the value of care work

The global community has rallied around renewable energy as a key solution for reducing fossil fuel emissions. Investments in the renewable energy sector are expected to reach \$2 trillion in 2024.<sup>88</sup> Yet around 70 percent of full-time jobs in this sector are dominated by men, who will therefore be the ones most likely to benefit economically from these investments. Women's underrepresentation in these high-value sectors is likely to continue to grow if more of their time continues to be diverted to growing care needs as described above.<sup>89</sup> The time spent on unpaid care work is time women could be spending on education, upskilling, and entrepreneurial and leadership opportunities in renewable energies.<sup>90</sup>

In addition, the global community is overlooking the value of paid care jobs as alternatives to jobs in fossil fuel and other high-carbon industries. Care jobs are low-carbon jobs. Analysis from the Women's Budget Group points out that a care job produces, on average, 26 times less greenhouse gases than a manufacturing job, 200 times less than an agricultural job, and nearly 1,500 times less than a job in the fossil fuel sector.<sup>91</sup> Yet these jobs—which include jobs in healthcare, education, childcare, eldercare, and disability care—are being excluded from investments in low-carbon industries.<sup>92</sup> Not only does this contribute to the gender and social inequalities of the paid care work sector, it is also a missed opportunity for climate policy.

“Most people think of green jobs as installing solar panels, working on wind farms or planting trees. These jobs will help us take better care of the planet, but caring for people is also inherently low-carbon work.”

Source: Women's Budget Group and Wen, *A Green and Caring Economy: Key Messages*, 3.

<sup>88</sup> Chestney, “IEA Expects Global Clean Energy Investment to Hit \$2 Trillion in 2024.”

<sup>89</sup> Grantham, *Mapping the Intersection of Women's Economic Empowerment, Care Work and Clean Energy*, 8, 12, and 14.

<sup>90</sup> Grantham, 15–16.

<sup>91</sup> Women's Budget Group and Wen, *A Green and Caring Economy*, 3.

<sup>92</sup> Women's Budget Group and Wen, *A Green and Caring Economy*, 7; Mozos et al., *Climate-Resilient Care for Older People*, 24–25.



# Care as a Solution for Climate Resilience and a Just Transition



To summarize, climate change places an increasing burden on the care economy, particularly unpaid care work, which is largely carried out by women and marginalized groups. Climate impacts such as extreme weather events, rising temperatures, resource scarcity (including food, water, and energy), and displacement drive up the need for care. During periods of crisis, caregiving becomes more time-consuming and physically taxing, with severe consequences for caregivers' health and wellbeing. The scarcity of resources and climate-related stressors also exacerbate social issues like GBV, further intensifying the demands placed on caregivers.

## Box B

### The Evolution of the Gender-Just Transition Agenda

The concept of a *Just Transition* grew out of a labor movement in the 1970s. Workers from fossil fuel industries wanted assurance of new livelihoods if fossil fuels were phased out. The concept of a Just Transition has gained traction in recent decades; it was referenced in the 2015 Paris Agreement in the context of creating decent work and quality jobs as part of climate action strategies. More recently, the Just Transition agenda has evolved to include a range of social and environmental justice concerns beyond workforce opportunities and livelihoods. Feminists have emphasized the importance of a gender-just transition that acknowledges and redresses power dynamics and social inequalities. A *Gender-Just Transition* “will help to transform the inequitable power dynamics between persons of different gender and the context-specific conditions that tend to leave women and girls behind.”

Source: Alejandra Lozano et al.,  
*Setting a Roadmap for a Feminist Green Transformation*, 6.



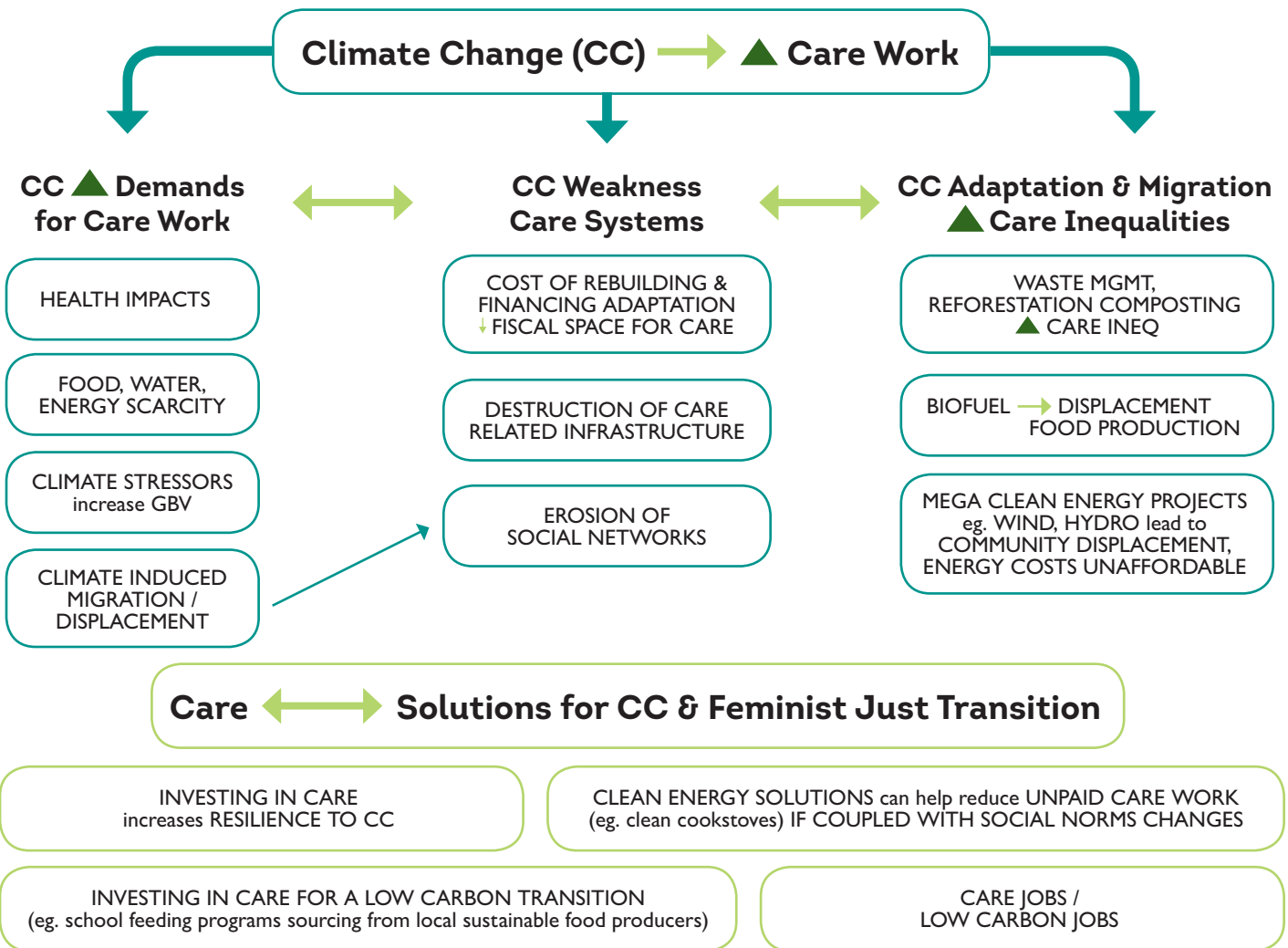
Photo: Rénzo D Souza © Unsplash





Weak care systems compound these challenges. When climate disasters strike, the destruction of critical infrastructure and the erosion of social networks mean that communities are less resilient to both immediate and long-term impacts. The high cost of rebuilding and financing climate adaptation efforts often limits fiscal space for investing in care systems, further weakening their ability to respond to crises.

## Mapping the Care and Climate Nexus



LEGEND: ▲ = Increase CC = Climate Change

At the same time, investing in the care economy can play a pivotal role in enhancing community resilience to climate change while advancing a just transition toward low-carbon economies. The care economy provides essential support systems that become even more critical during climate crises. By strengthening care systems, communities are better equipped to manage the impacts of climate change, such as extreme weather, displacement, and health challenges. Investments in care infrastructure help ensure that vulnerable populations receive the necessary support, which in turn reduces the overall social and economic costs of climate-related disruptions. Moreover, integrating care jobs into a low-carbon economy can create employment opportunities that are not only sustainable but also aligned with social equity goals. Care jobs are inherently low-carbon, as they rely on human labor rather than resource-intensive processes. By promoting care work as part of climate resilience strategies, governments and organizations can ensure that women—who are disproportionately responsible for unpaid care work—are included in the green economy. This shift would also address gender inequalities and improve economic opportunities for caregivers, particularly in low- and middle-income countries where care responsibilities often hinder women’s participation in the labor force.

By aligning investments in the care economy with climate action, communities can enhance both their social and environmental resilience. This intentional focus offers a path toward more sustainable, equitable responses to the climate crisis, ensuring that women and marginalized caregivers are empowered rather than further burdened by the ongoing shifts in the global climate.



## PART 2.

**JOINT SOLUTIONS FOR  
A JUST TRANSITION  
THAT ADVANCES  
CLIMATE AND  
CARE JUSTICE**



“The Just Transition agenda will not be possible if the importance of care work is not recognized, and unless initiatives are developed for it to be distributed fairly and channels for participation and leadership are opened for caregivers.”<sup>93</sup>

The global community is coalescing around a Gender-Just Transition agenda to guide policy, strategy, and resource mobilization in response to the devastation of climate change and other forms of environmental degradation (see Box C). Because there are many overlaps between the care and climate crises, it is possible—and even essential—to address the two crises simultaneously. Indeed, the Gender-Just Transition agenda must advocate for democratic, publicly available care systems that redistribute the work of care from a burden carried by the dispossessed to a priority distributed among all of society.

Joint solutions for a Gender-Just Transition Agenda to address the climate and care crisis are

1. Recognize the intersecting impacts of climate on care work in climate policy, strategy, action plans, and reporting
2. Expand data collection and research to fill knowledge gaps about the nexus of climate change and care work
3. Increase national revenue through climate finance and tax justice to fund a care-responsive Just Transition
4. Include care jobs and quality working conditions for care workers as part of the investment in green and blue jobs<sup>94</sup>
5. Invest in green care infrastructure and technologies
6. Widen democratic spaces to include experiences and representation of paid and unpaid care workers in climate policymaking and resource allocation processes

Each of these recommendations along with specific policy applications are discussed below. Together, these solutions address all five Rs of the International Labour Organization’s 5R framework for decent care work: Recognize, Reduce, Redistribute, Reward, and Represent.<sup>95</sup> As each solution is discussed in the subsequent sections, it references how it fits into the 5R framework. There is current discussion on increasing the 5Rs to 7Rs, including Resources and Resilience. More on this development can be found in the Climate & Care Initiative Framework ([www.climateandcareinitiative.org](http://www.climateandcareinitiative.org)).

## Box C

### References to Care Work in National Climate Plans

A review by UN Women of National Drought Plans (NDPs) found that only 9 addressed the connection between droughts and care work: Afghanistan, Bolivia, Central African Republic, Cote d’Ivoire, Grenada, Honduras, Turkmenistan, Venezuela, and Vietnam.

Although the review found that 90 percent of the Nationally Determined Contributions (NDCs) include reference to gender responsive or sensitive policies, only 12 of 133 had specific references to care: Albania, Argentina, Cabo Verde, Cambodia, Côte d’Ivoire, Cuba, Guinea, Namibia, Norway, Panama, Somalia, and Vanuatu. Only one, Cambodia, had specific actions to reduce workloads.

Source: UN Women, *The Climate-Care Nexus*, 16–20.

<sup>93</sup> ILO, “Mainstreaming Care Work to Combat the Effects of Climate Change,” 5.

<sup>94</sup> *Blue jobs* refer to work that involves the care of and sustainable use of ocean and coastal resources (e.g., aquaculture or certain types of ecotourism).

<sup>95</sup> Diane Elson is credited for coining the initial 3R Framework in 2008, which since evolved to 4Rs, 5Rs, and other related variations, all of which focus on various ways of valuing and improving the work of care for caregivers both paid and unpaid.



## **Policy Recommendation 1.** **Include targeted actions to address and support resilient care systems in multilateral and national climate policy frameworks and action plans**

Not only is care a form of work, but it is economically, socially, and environmentally valuable work.<sup>96</sup>

In the past, multilateral and national climate change bodies have not recognized care work in their policy, strategies, and action planning.<sup>97</sup> UN Women discusses at length the extent to which normative frameworks reference care in their report *The Climate-Care Nexus*. For example, the 2015 Paris Agreements (COP21) recognized gender equality and human rights, but it did not acknowledge care.<sup>98</sup> Few National Drought Plans (NDPs) under the United Nations Convention to Combat Desertification (UNCCD) and Nationally Determined Contributions (NDCs) under the United Nations Framework Convention on Climate Change (UNFCCC) included reference to care (see Box C.)

Although this is changing, much more improvement is needed by taking the following steps:

### **1.1 Include expansion of publicly funded care systems and social protection programs in national Long-term Strategies (LTSs)**

With the increased intensity of care work from climate change and environmental degradation, it is necessary to include planning and funding for systems of care as part of climate change planning and financing. Although care is a public good and should be funded as such, no country in the world currently does this at sufficient levels. Thus, expansion of publicly funded care systems must be part of national Long-term Strategies that coincide with national strategies to mitigate, adapt, and strengthen the resilience of communities to the effects of climate change. Integrating these plans into countries' Long-term Strategies, which are recommended by the UNFCCC under the Paris Agreement, is an ideal place to start.

### **1.2 Explicitly acknowledge and report on the implications and relationships between care and climate change in other key multilateral and national policy frameworks and reporting mechanisms**

The connections for care and climate should be acknowledged in the following:

- National Drought Plans (NDPs)
- Nationally Determined Contributions (NDCs)
- National Action Plans (NAP)
- National Long-term Strategies (LTS)
- UNFCCC COP29
- Multilateral Environmental Agreements (MEAs)
- Convention on Biological Diversity (CBD) Gender Action Plan
- UNCCD Gender Action Plan
- Intergovernmental Panel on Climate Change (IPCC) Assessment Reports

<sup>96</sup> Disability and feminist advocates often also point out that that care is more than a form of work, it is a relationship, which only adds to the reasons why care should be valued by society. See Mozos et al., *Climate-Resilient Care for Older People*, 16–17.

<sup>97</sup> UN Women, *The Climate-Care Nexus*, 16.

<sup>98</sup> UN Women, *The Climate-Care Nexus*, 11.



### 1.3 Develop an advocacy strategy, plan, and key messages to build support and awareness about including care in LTS and other policy frameworks

The strategy would identify its target audience, such as negotiators and representatives who draft and approve normative frameworks at COP, UNCCD, UNFCCC, and other key climate bodies. Messages could build on the work of the Feminist Green New Deal Coalition and their 2021 report *Building Narratives for a Caring Green Economy*. Although this report is based on research from the United States, it could be used to do similar advocacy research focused on the multilateral agencies mentioned above.

Examples of messages from that report include

“Care work is low-carbon work that doesn’t add to climate pollution and is necessary for health and wellbeing. Therefore, care work is a critical part of a green economy.”

“Care jobs, like child and elder care, are often unpaid or low-paying. However, they are essential jobs that provide meaningful and rewarding work. If care jobs paid wages that were more in line with other occupations and industries, they would be more attractive to a wider range of workers, including men.”<sup>99</sup>

### 1.4 Fund regional capacity building, advocacy, and action planning workshops for civil society to develop their advocacy and action planning around the care-climate nexus at local and national levels

These workshops should include organizations and trade unions that are led by and represent both paid and unpaid care workers.

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<sup>99</sup>Novello, *Building Narratives for a Caring Green Economy*, 15 and 18.





## Policy Recommendation 2.

# Expand data collection and research to fill knowledge gaps about the nexus of climate change and care work

More data and research are needed to accurately and fairly document the impacts of climate change on care work, care-related infrastructure, and care systems overall. More research is also needed to better understand the positive contributions of thriving care systems to climate mitigation, adaptation, and resilience. There have been several high-level policy briefs that document the overall connections between climate and care, such as this one. While recent research efforts, including [the Climate and Care Initiative](#), have started to address some of the gaps, key research and data gaps that need to be addressed include the following:

### 2.1 Track, count, and monetize the unpaid and underpaid time spent doing care work in response to climate disasters and other climate effects

This data is particularly important to be incorporated into loss and damage calculations as the costs of unpaid and underpaid care related to climate impacts are largely unrecognized and unaccounted for. This should include an intentional focus on demographic patterns (i.e., gender, migration status, age) of the groups most commonly doing this work. An example of research that has begun to track this type of data is the digital report “The Scorching Divide: How Extreme Heat Inflames Gender Inequalities in Health and Income” (see box D). Referenced earlier in this report, this research gathered data that quantified the effects of extreme heat on productivity through increased time dedicated to unpaid care work. Research can build on this to assess, calculate, and assign a monetary value to care, including but not limited to the following metrics:

- Time spent by unpaid caregivers, including on community-based caregiving, due to climate-related illnesses
- Amount of time children were out of school during and after emergencies and the related increase in unpaid work to care for children while not in school
- Time spent providing food, as well as collecting and managing water and energy sources, because of climate change impacts.

First, there should be an assessment of which countries track this data already. Then, donors can fill in the gaps by funding time-use studies and research, beginning with the countries’ most vulnerable to climate change to determine a baseline and track it periodically to see how it changes. In addition, the UNFCCC, ILO, World Bank, or other multilateral entities could set up a dashboard that makes this data available to the public.

#### Box D

##### Research Methods for Quantifying Costs of Extreme Heat on Unpaid Work

“The Scorching Divide” report used a comprehensive methodology to measure time spent on paid and unpaid labor, and how it was affected by extreme heat. It employed time use data to track the time spent on unpaid labor, divided into three classifications: household work, primary care work, and secondary childcare. It also cross-referenced this with time use data about four types of work environments to indicate exposure to heat: 1) outdoor, 2) indoor—active, 3) indoor—sedentary, and 4) air-conditioned environment.

Source: Adrienne Arsht-Rockefeller Foundation Resilience Center. Methodology created by Vivid Economics.



## 2.2 Routinely collect data after extreme weather events about their impact on physical care infrastructures

Care-related physical infrastructures include schools; hospitals; childcare centers; long-term care homes and centers; and infrastructure for WASH, and energy resources. Specific data needed includes

- The quantity of physical infrastructure damaged or destroyed, by category (e.g., the number of schools damaged and destroyed, the number of hospitals, etc.)
- The financial cost of the damage and repair to physical infrastructure categories (e.g., the cost of repairing schools damaged and destroyed)
- Comparison data between the number damaged/destroyed and the number that have since been fixed, and data on the length of time repair took.

This should be integrated into emergency response processes.

## 2.3 Conduct mixed methods research studies to better understand how climate adaptation, mitigation, and resilience funding and programming is impacting care workloads, focusing on the most vulnerable and minoritized communities

Importantly, research must be conducted with an intersectional lens to identify the nuances about which groups are disproportionately confronted with doing the bulk of intensified care work.

Specific research topics or products include

- An assessment of the impacts of unpaid care work on green care infrastructure<sup>101</sup> and clean technologies such as clean energy initiatives
- Research on the role and value of social networks and community care in building and sustaining the resilience of communities to climate change stressors and disasters
- Analysis of time spent on unpaid caregiving for the environment, such as maintaining water sources or protecting the forest, and how it changes over time and is impacted by climate change and environmental degradation
- Effects of direct and indirect climate impacts on GBV, violence against children, and violence and discrimination against other minoritized communities (e.g., members of the LGBTQIA+ community, sex workers, migrant workers, immigrants, racial or ethnic minorities, etc.) and how this impacts both their access to care and their own care workloads
- Effects of time spent on care work related to climate change on women's decision-making—particularly regarding climate policy and emergency responses—and ability to access paid work.

## 2.4 Theoretical and empirical research to inform the definition of green jobs

Despite the extensive discourse about “green jobs” and “blue jobs” there is still not a standard definition of what qualifies as a green or blue job. Researchers can clarify this by documenting how care jobs can be considered low-carbon green or blue jobs and by exploring how addressing the care crisis can enable women to participate in other green or blue jobs. Data on the environmental impact, carbon footprint, and resource efficiency of care jobs, as well as case studies demonstrating their role in sustainability, can provide concrete evidence of their green or blue job status.

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<sup>101</sup> *Green care infrastructure* refers to the integration of environmental sustainability into care systems and facilities. This includes designing and maintaining care environments that reduce ecological impact, enhance resource efficiency, and promote health and wellbeing. Examples include using eco-friendly materials in care facilities, implementing energy-efficient systems, and creating green spaces that support both environmental and personal wellbeing. By aligning care infrastructure with environmental goals, green care infrastructure helps address climate change while ensuring that care services are sustainable and resilient.



## 2.5 Conceptual and empirical research further substantiating the case for investing in care to build climate resilience

The research should focus on demonstrating how robust care systems can enhance community resilience to climate change. This includes exploring how investing in care infrastructure—such as childcare, eldercare, and disability support—can improve communities’ ability to adapt to and recover from climate-related shocks. Research should quantify the benefits of care investments, such as reduced vulnerability to climate impacts, improved health outcomes, and greater social stability. Additionally, studies should examine how care work contributes to climate resilience by enabling individuals to participate in climate action and recovery efforts. By providing concrete data and theoretical insights, this research can make a compelling case for integrating care investments into climate resilience strategies.

### **Policy Recommendation 3.** **Increase national revenue through climate finance and tax justice to fund a Care-Responsive Gender-Just Transition**

To implement a care-responsive Gender-Just Transition agenda, LMIC countries need access to significant financial resources. Climate financing mechanisms are one important resource and should be used to fund investments in public care systems. However, to date, most climate finance for LMICs has been distributed through high-interest loans.<sup>102</sup> This has contributed to the dangerous trend of growing national debts, which are the highest they have been in 60 years, particularly for LMICs.<sup>103</sup> As discussed above, high national debts make it even more difficult for countries to invest in care systems.

There is also a large climate finance gap, where the financial resources needed to adapt and respond to climate change far exceeds the funds that are available.<sup>104</sup> Therefore, innovative finance mechanisms, such as debt-for-care swaps, where national debt is forgiven in exchange for investments in care systems, should be explored. Strengthening discussions and research into these mechanisms is crucial to reduce debt burdens while increasing care funding. Additional revenue sources are needed to fully fund a care-responsive Just Transition.

### **3.1 Include unpaid and underpaid care as a cost that can be covered through the Loss and Damage and other climate funds**

The costs of unpaid and underpaid care related to climate impacts are largely unrecognized and unaccounted for. As one UN Women report points out, unpaid care has been an “uncounted cost” in loss and damage.<sup>105</sup> The UN Loss and Damage Fund is an opportunity to recognize and compensate for the costs of care. [Policy Recommendation 2](#) of this report proposes the collection of data that monetizes the costs of care related to climate change. This collection should then be used to determine costs to be covered by Loss and Damage and other climate funds. It is essential, however, to ensure that funds covered for care losses are used to invest in public care services, infrastructure, and social protection programs.

Other climate funds, such as the Green Climate Fund, should also be used to proactively invest in public care services, infrastructure, and social protection programs as solutions to climate adaptation and resilience. Investments in care build resilient societies that are better able to cope with disasters from climate change, and thus these investments should be funded as part of climate resilience efforts.<sup>106</sup>

<sup>102</sup> Achampong and Fresnillo, “Irresponsible Lending Prevents the Global South from Escaping the Debt-Climate Trap.”

<sup>103</sup> Turquet et al , *Feminist Climate Justice*, 29.

<sup>104</sup> United Nations, “Finance & Justice.”

<sup>105</sup> Turquet et al , *Feminist Climate Justice*, 31.

<sup>106</sup> Lake and Quaid, *Prioritizing Care Work Can Unlock a Just Transition for All*.





## 3.2 Support measures to alleviate LMICs climate debts

The global community needs to take action to address the growing crisis of LMIC national debt, which is making it even more difficult for LMICs to invest in care services, care infrastructure, and social protection programs, even though care demands and inequalities are growing.

The UN Global Crisis Response Group, for example, proposes a Roadmap to lessen national debts that includes making the international finance system more inclusive and expanding contingency financing for emergencies, “so that countries are not forced into debt as a last resort.”<sup>107</sup> The Roadmap also includes increasing concessional financing for climate finance, which should be used not only for mitigation measures, like transitioning away from fossil fuels, but also to fund urgently needed social protection and care programs to help communities adapt in the face of climate disasters.

Specific actions for how to alleviate LMICs climate debts are beyond the scope of this paper and are discussed in depth elsewhere.<sup>108</sup> However, it is necessary for advocates and policymakers working at the care-climate nexus to stay abreast of these trends and work in coalition with climate finance justice advocates to keep debt alleviation a priority.

## 3.3 Advocate for tax justice policies to increase revenue for climate and care financing

Tax policy can be a powerful tool for collecting revenue to fund a Just Transition agenda.<sup>109</sup> As the Tax Justice Network points out, the adoption of progressive tax policies including the elimination of subsidies for high-carbon-producing industries—particularly extractive and shipping industries—could bring in billions of dollars to help fill the climate finance gap.<sup>110</sup> Progressive tax policies on multinational corporations or billionaires are gaining traction among world leaders. As of publication of this report, ministers from Germany, Brazil, South Africa, France, and Spain have all called for a global tax on billionaires to be used to address climate change as well as poverty and hunger.<sup>111</sup>

It is essential for climate and care justice advocates to be a part of these negotiations to ensure growing movements for mobilizing tax revenue for climate finance are spent not only on biotechnical mitigation and adaptation measures but also on the social costs of climate change, including public care services, care infrastructure, and broad social protection systems.

<sup>107</sup> UN Global Crisis Response Group, *A World of Debt*, 15.

<sup>108</sup> United Nations, “Finance & Justice”; UN Global Crisis Response Group, *A World of Debt*; and Achampong and Fresnillo, “Irresponsible Lending Prevents the Global South from Escaping the Debt-Climate Trap.”

<sup>109</sup> Mager, Meinzer, and Millán, *How Corporate Tax Incentives Undermine Climate Justice*

<sup>110</sup> Floro, Sepúlveda Carmona, and Lozano Rubello, *A Care-Led Transition to a Sustainable Future*, 30 and Mager, Meinzer, and Millán, *How Corporate Tax Incentives Undermine Climate Justice*.

<sup>111</sup> Lo, “Global Billionaires Tax to Fight Climate Change.”





## **Policy Recommendation 4.** **Include care jobs and quality working conditions for care workers as part of the investment in green and blue jobs**

As discussed previously, care jobs are low-carbon jobs. Embracing care jobs—which include jobs in healthcare, education, childcare, long-term care, and disability care—as part of the growth in investments in green and blue jobs is both a necessity and an opportunity for countries as they pursue a decarbonization agenda. Care jobs also include environmental care jobs, such as jobs in ecotourism.

There is still not a standard definition of what is considered a “green” or “blue job.” As C40 Cities argues, an approach to addressing the care and climate crises together would acknowledge that all low-carbon jobs are green jobs—including care jobs.<sup>112</sup>

### **4.1 Leverage climate finance to invest in high-quality care jobs**

It is important that investments in care jobs as part of a Just Transition agenda include a focus on equity in access to care. As this brief shows, climate change is intensifying the demand for care work, particularly for those who do not have the resources to pay for private care service providers. Climate change is therefore intensifying the demand for care workers who can meet this need. There is an important role for the private sector in stimulating innovation in care service provision and infrastructure, training, and employing care workers through creating decent care jobs. However, care provision should be funded by the public sector. As the Women’s Earth and Climate Action Network (WECAN) International has pointed out, along with years of feminist economics research, “The privatization of care and other forms of social reproductive work has not only been a driver of women’s inequality, but of resource intensity and wastefulness.”<sup>113</sup>

### **4.2 Expand regulatory frameworks and social protection systems for care workers**

In order for alternatives to fossil fuel and other high-carbon sector jobs to be viable, there must be significant investments in the quality of jobs in care-related sectors. This aligns with the concept of Reward under the 5R Framework, as it speaks to the need to reward the work of caregivers with sufficient salaries and respectful, quality working conditions. A Just Agenda for green and blue jobs must therefore also include policy regulations to protect workers and support high-quality wages for care workers.

### **4.3 Invest resources in supporting upskilling, training, and education for women and other structurally marginalized groups in renewable energy and other low-carbon sectors, including ecotourism**

As more care jobs are created and filled to meet the demand for affordable and accessible care, and choice of care, it will free up time for other women to be able to upskill, train, and enter other low-carbon industries in which women are currently underrepresented, such as renewable energies.

An example of women being trained for environmental care jobs would be the “citizen scientists” at native tree nurseries in Jordan. Jordan’s Wadi Rum is popular because of its striking desert landscape; however, increased tourism has exacerbated ecological and resource issues caused by low rainfall. WADI and Disi Women’s Cooperative train local women to care for native plants, which help the soil hold water. Disi Women has partnered with Wadi Rum Visitor Center to involve tourists in planting activities. This program has created jobs for women who had no previous agricultural education while also promoting ecotourism and watershed restoration.<sup>114</sup>

<sup>112</sup> Mozos et al., *Climate-Resilient Care for Older People*, 24.

<sup>113</sup> Lake and Quaid, *Prioritizing Care Work Can Unlock a Just Transition for All*, 17.

<sup>114</sup> Barre et al., *Gender Just Climate Solutions*, 16; Sky News, *Jordan Is the World’s Second Most Water-Poor Country*; and UNDP, “Disi Women.”



## **Policy Recommendation 5.** **Invest in green care infrastructure and technologies**

Shifts toward green infrastructure are already underway. There are significant opportunities to use these shifts to simultaneously reduce and distribute care work by investing in green care infrastructure. Green care infrastructure refers to technologies, buildings, transportation, and other innovations that both 1) reduce energy use and carbon footprint; and 2) reduce the time and effort of the person performing the care-related task. This recommendation and the following sub-recommendations draw significantly from Oxfam International's paper *Caring in a Changing Climate*, which provides a detailed list of technologies and infrastructures that advance both climate and care justice together.<sup>115</sup>

### **5.1 Invest in building innovations for schools, housing, hospitals, and other care-related physical infrastructure that reduce energy use and are more resilient to extreme weather events**

School and hospital buildings are care infrastructure that often suffer significant damage during extreme weather events. They are an important space for applying green building technologies that not only reduce energy use but are also more resilient to climate disasters. These technologies could include rainwater harvesting technology, photovoltaic panels on roofs, and open building structures with native plants and vegetation that provide shade to reduce temperatures.<sup>116</sup> It is important to note that many of these innovations are costly and require significant mobilization of financial resources, especially to reach the communities who need them the most. However, there are lower-cost building elements: building design that avoids direct sunlight while also ensuring sufficient daylight, corrugated painted roofs that can reduce temperature, the inclusion of plants and vegetation, ceiling fans, and cross ventilation along with open areas.<sup>117</sup>

Trombe walls are another innovation that can be applied to various buildings, including housing.<sup>118</sup> They are a form of passive solar technology, meaning they use the sun's energy without using electrical or mechanical technology. A study of the effectiveness of Trombe walls in mountain villages of Ladakh, India, found that it was a successful source of home heating.<sup>119</sup> An example of its direct impact on care work is a woman who was able to leave her children at home alone safely because she no longer needed a stove to heat the home.<sup>120</sup> However, like with all technologies, there are limitations. It requires an upfront investment and only works in direct sunlight. Therefore, it would be rendered ineffective if another building was added that blocked the sun.<sup>121</sup>

Climate-resilient, water-protecting sanitation is another promising technology. In an example from rural Moldova, a school's grey and black water was sanitized and used for irrigation while fecal waste was treated using vermicomposting and then used as soil fertilizer. Implemented by the organization Women in Sustainable Development Moldova, the model is reported to have alleviated women's workload "via the automatic pumping and irrigation system."<sup>122</sup>

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<sup>115</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*, 71–74.

<sup>116, 117</sup> Wargocki, "Education Buildings."

<sup>118</sup> MacGregor, Arora-Jonsson, and Cohen, *Caring in a Changing Climate*.

<sup>119</sup> Arora-Jonsson, "A Study in Solar Housing Technology."

<sup>120</sup> Arora-Jonsson, 38.

<sup>121</sup> Arora-Jonsson, 11.

<sup>122</sup> Barre et al., *Gender Just Climate Solutions*, 17.



## 5.2 Invest in labor-saving domestic and agricultural technologies that both mitigate climate change and reduce the time and intensity of care work

Examples of labor-saving domestic technologies include

- Solar-powered lighting in homes, such as the Trombe walls mentioned in under [recommendation 5.1](#)
- Solar cookers that enable women to spend less time collecting firewood and less time cooking
- Affordable rainwater harvesting technologies that are publicly accessible
- Photovoltaic solar plants to power agricultural processing machines, such as one used by women shea butter producers in Togo (see Box E).

### Box E

#### Photovoltaic (PV) Solar Plant for Shea Butter Processing

The UNFCCC Women and Gender Constituency hosts the Gender Just Climate Solutions Awards to reward climate solutions that advance gender equality and women's rights. One of the winners was a group of 50 shea butter producers in Togo who installed a photovoltaic (PV) solar plant to power the shea butter processing mill. The solar plant enabled them to decarbonize the processing of shea butter. As described in the 2022 report *Gender Just Climate Solutions*, "The 8 KWh PV plant will also provide electricity to the 1,600 inhabitants of the village. This community-led project promotes a comprehensive approach, integrating the organic and fair-trade labelling of shea products (Fair For Life and EOS Ecocert)."

Source: Anne Barre et al., *Gender Just Climate Solutions*, 12.

It is important to note that the success of these technologies in reducing workloads depends significantly on how they are accessed and used by the public. Recall the examples shared in [section 3.1](#) of this paper about water-saving technologies in Mumbai and energy-saving technologies in Mexico that did not have the desired impact.

<sup>123</sup> Barre et al., *Gender Just Climate Solutions*, 12.





## **Policy Recommendation 6.**

# **Widen democratic spaces to include experiences and representation of unpaid and underpaid care workers in climate policymaking and resource allocation processes**

The fifth 'R' of the 5R Policy Framework for Care is representation. Representation emphasizes the rights of unpaid and paid care workers to participate and lead in policymaking about care. Given the deep interconnections between the care and climate crises, it is crucial that care workers are actively represented in climate-related policymaking, especially in decisions about how climate financial resources—such as loss and damage funds—are assessed and allocated.

However, there is a concerning global trend of shrinking democratic spaces for public participation, particularly for women, to influence and hold governments accountable for climate and related economic policies. Contributing factors include the rise of autocratic governments, many of which have gained power by fueling backlash against the progress made in gender equality and LGBTQIA+ rights. As these spaces for influence contract, the already limited platform for feminist and climate activists has become even smaller. UN Women's 2023 report, *Feminist Climate Justice: A Framework for Action*, delves into these concerning trends. To counter this, advocates and civil society organizations must work to expand democratic space for civil society influence, ensuring that unpaid and paid care workers are included at every level—from local to national to international.

Policymakers must be cautious not to fall into the stereotypical narrative that care workers are passive victims whose stories need to be heard solely for policymakers to rescue them. Care workers possess knowledge, experience, insights, and solutions that have long been overlooked and undervalued by powerful institutions and leaders. Their representation in policymaking and resource allocation is vital to crafting effective, inclusive policies, addressing the harms of climate change, and building resilient societies that promote the well-being of both people and the planet.

To ensure these objectives are met, the following actions should be prioritized:

**6.1 Protect and support the collective organizing of care workers through labor unions and civil society organizations.**

**6.2 Ensure care workers, both paid and unpaid, are fairly represented in climate justice advocacy spaces, including but not limited to the UNFCCC Women & Gender Constituency, with active participation in negotiations and processes related to establishing Procedural Rights.**

**6.3 Expand protections for environmental human rights activists, acknowledging that environmental activism is a critical form of care for the environment.**

**6.3 Ensure that procedural rights within climate frameworks safeguard the interests and representation of care workers, recognizing their role in achieving climate resilience.**

The intertwined crises of climate change and care work present both an urgent challenge and a unique opportunity. As climate impacts intensify, so do the demands on care systems, disproportionately burdening women, girls, and marginalized communities. At the same time, current climate adaptation and mitigation strategies often overlook or exacerbate these inequalities. Addressing these interconnected issues is not just a matter of social justice but is essential for achieving sustainable climate resilience.

A Gender-Just Transition that prioritizes care work is crucial for building more equitable and sustainable societies. By integrating care into climate policies, expanding research and data collection linking discussions on debt, taxation, and mobilizing targeted finance; promoting green care jobs; investing in resilient care infrastructure; and enhancing the representation of care workers in policymaking, we can pave the way for a just transition that supports both people and the planet.

The time for action is now. Governments, international organizations, and civil society must work together to implement these recommendations and ensure that both care and climate justice are at the heart of our response to the global climate crisis.





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