



A Care-Led Transition to a Sustainable Future



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Executive Summary

The world today faces grave challenges that go beyond inflation, financial crises, economic slowdowns and recessions that have gripped countries, namely the emerging crisis of care and the climate crisis. The crisis of care for people refers to the lack of access and growing imbalances within and across societies with respect to support for care of people and the fulfilment of rights in terms of access to inputs that sustain life and promote well-being e.g., food, water and energy (Sepúlveda 2013). The size of the unmet need for childcare throughout the world is substantial. An estimated 23 per cent of children worldwide (nearly 350 million) need childcare but do not have any access to it. Similarly, as the world's population ages rapidly, only a small proportion of those elderly people needing assistance are able to access care services provided in an institution or paid home care; the majority of them are cared for by family members or other unpaid caregivers. Much of the unpaid care and formal care work are provided by women. This heavy and unequal responsibility for unpaid care is a barrier to women's greater involvement in the labour market, affecting productivity, economic growth and poverty reduction. Most importantly, however, the unequal distribution, and lack of recognition of unpaid care work undermines the dignity of women caregivers, obstructs their enjoyment of several human rights on an equal basis with men, undermines progress towards gender equality, and entrenches their disproportionate vulnerability to poverty across their lifetime.

However, the fact that most of care work is unpaid has made it statistically invisible to policymakers. Provisioning of affordable care services has been accorded low political priority, except in welfare states as well as in countries with very low fertility rates and rapidly ageing populations. Caregiving is still assumed to be primarily the responsibility of the family in many countries and to have little impact on economic development. When the centrality of care provisioning in the functioning of economies and reproduction of societies is not recognised and the crucial interconnection between human economic activities and our ecosystem is ignored, then growth in material output can lead to widening inequalities, the denial of human rights for many, and the erosion of the fundamental natural foundations of life on earth.



At the same time, the world is already witnessing the consequences of climate change. These involve not only global warming and more frequent heat waves, but also stronger storms and more weather-related damage, intense flooding and droughts, reduced agricultural productivity, water crises and increased biodiversity loss.

At the same time, the world is already witnessing the consequences of climate change. These involve not only global warming and more frequent heat waves, but also stronger storms and more weather-related damage, intense flooding and droughts, reduced agricultural productivity, water crises and increased biodiversity loss. Although there has been progress in the development of sustainable agricultural practices, clean energy and green technologies, most actions of countries worldwide have failed to sufficiently address the climate crisis (Romanello et al. 2023). Governments and international organizations have promoted and implemented development strategies and policies that either ignore or give little importance to the serious effects on the care economy and the environment in the pursuit of economic growth. Underlying structural inequalities in society, including between men and women, shape the ways in which climate-related shocks and stressors are distributed and impact people, as well as the capacities and options men and women have at their disposal to respond to them.

The compounding effects of climate change on families and communities challenge their abilities to meet their care needs. Not only does climate change heighten the demand for care in terms of sudden illnesses and sudden disabilities, but it also brings about new challenges that undermine the availability of family caregivers to provide care and their ability to access care support services. Climate-related consequences can lead to re-composition of traditional units of caregiving e.g., households and communities and create new situations in which meeting care needs are particularly difficult, such as in displaced person settlements. Compounding these effects are the threatening consequences on the necessary inputs for care. The climate-land-water-food-energy-nexus demonstrates the enormity of the interdependence of human systems and the ecosystem so that the threats to the ecosystem erode the capacity for care and societies' ability to thrive and survive. The heightened inability of societies to meet care needs due to the interplay of climate change and various factors has immediate and long-lasting effects on well-being in terms of depletion of capabilities and loss of life; these are experienced unequally by people around the world.





Misguided and feeble steps undertaken by policymakers and government inaction to support gender just transition have led to human rights violations and undermined efforts to effectively tackle ill-health, hunger and the care, food, water and energy needs of marginalized populations. Gender, economic, and social inequalities within and between countries have widened as a result. Efforts to address these problems must be comprehensive in scope and based on principles of equality, universality, participation, and responsibility shared by all. These measures range from public investment in care provisioning and social protection to implementation of gender-sensitive labour, food, energy and macroeconomic policies that support just transition. A transformative shift is necessary in the decision-making processes and in the actions of governments, businesses, communities, households, and individuals in order to improve the health of the ecosystem and achieve a sustainable future.

Policy Recommendations

- 1. Tackling uneven power relations in climate mitigation and adaptation policies
- 2. Ensuring quality care services for all
- 3. Mobilising resources to finance universal care services and effective climate action
- 4. Developing sustainable, climate-resilient and innovative quality care systems
- 5. Ensuring participatory and democratic decision-making processes
- 6. Ensuring access to justice

Introduction

The world today faces grave challenges that go beyond inflation, financial crises, economic slowdowns and recessions that have gripped countries, namely the emerging crisis of care and the climate crisis. These are largely the results of the relentless expansion of market production worldwide that rely on the overexploitation and undervaluation of the ecosystem and the unpaid labour used in sustaining human life, reproducing societies and maintaining the labour force.

The crisis of care for people refers to the unmet needs and growing imbalances within and across societies with respect to support for care of people and fulfilment of rights such as food, water, and health. It is experienced at local as well as national levels in many countries in terms of low government priority and support to meet adequately the care needs of the young, frail elderly, and persons with disabilities and/or suffering from illness, to address the chronic stress and long working hours of caregivers, and to eradicate the inequalities in access to food, water and clean energy.

The size of the unmet need for childcare throughout the world is substantial. An estimated 23 per cent of children worldwide (nearly 350 million) need childcare but do not have any access to it (Devercelli and Beaton-Day 2020). This unmet need disproportionately impacts families in low- and lower-middle-income countries, with nearly eight out of ten children who need childcare but do not have access to it. Similarly, as the world's population ages rapidly, only a small proportion of those elderly needing assistance are able to use formal care (i.e., care in an institution or paid home care); the majority of them are cared for by family members or other unpaid caregivers (Gruber et al. 2023). As explained in the next section, much of the unpaid care and formal care work is provided by women. Access to health care services for hundreds of millions of people around the world remains challenging. Expansion of access to essential health services has slowed compared to pre-2015, with no significant progress in reducing financial hardship due to increasing health care costs (WHO 2023). Inequalities persist in these care systems, with the disadvantaged populations having lower levels of access to health and related services. Not surprisingly, progress in many of the health indicators worldwide has markedly stalled since 2015, as evidenced by the falling annual rate of reduction in maternal mortality ratio, under-five and neonatal mortality rates, premature mortality from non-communicable diseases (WHO 2023).

At the same time, the world is witnessing climate destabilization and increasing fragility of the ecosystem that are closely tied with the rapid consumption of fossil fuels and other human activities, which have led to greenhouse gases (GHGs) buildup in the atmosphere (IPCC 2023). In fact, the world experienced this year (2023), the highest global temperatures in over 100,000 years, and heat records were broken in all continents through 2022 (Romanello et al. 2023). The world is already witnessing the consequences of climate change. These involve not only global warming



and more frequent heat waves, but also stronger storms and more weather-related damage, intense flooding and droughts, reduced agricultural productivity, water crises and increased biodiversity loss. The recent increase in global hunger is in large part attributed to high rates of land degradation and desertification, particularly in countries heavily dependent on rainfed agricultural systems (Randell et al. 2022; FAO 2023). The science is clear – the planet is far off track from meeting its climate goals, according to a 2023 World Meteorological Organization (WMO) report (Stuart et al. 2023). Observed global surface temperature in 2013–2022 already reached 1.15 °C above pre-industrial levels (1850–1900) (IEA 2023a). And yet greenhouse gas emissions continue to rise; the share of renewable energy in total energy consumption was merely 19.1 per cent (or 12.5 per cent excluding the use of biomass) in 2020 (IEA 2023a).

It is unequivocally clear that although there has been progress in the development of sustainable agricultural practices, clean energy and green technologies, the actions of countries worldwide remain insufficient to address the climate crisis effectively (Romanello et al. 2023). Governments and international organisations unwittingly promote and implement development strategies and policies that either ignore or give little importance to the serious effects on the care economy and the environment as they pursue economic growth and increase material consumption. There is growing evidence of the links between materials use, economic growth and climate change. For example, the study on resource use in the Asia-Pacific region demonstrates how the rising output and income per capita growth contributed more strongly to growing material use than population growth (Schandl and West 2011). Policymakers have yet to consider the non-linear feedback effects of economic activities and the cascading and synergistic interactions between production processes, consumption and the ecosystem in decision-making processes and policy analyses (Daly 2014).

This briefing paper will illustrate how misguided and feeble steps and persistent government inaction in many cases have led to human rights violations and undermined efforts to effectively ensure access to health, food, water and the unmet care and energy needs of marginalised populations. It also will demonstrate how gender, economic and social inequalities within and between countries have widened as a result.

It argues that dramatic efforts are urgently required to address the interlinked causes of unsustainability and inequality including gender inequality. This is vital for the fulfilment of human rights and the health of the ecosystem amidst the accelerating effects of climate change, particularly among the most vulnerable and marginalised social groups.

The briefing will also show that a transformative shift is necessary in the decision-making processes and the actions of States, businesses, communities, households, and individuals towards a gender-just transition to improve health of the ecosystem and achieve a sustainable future. (Just Transition Collaborative 2018; GI-ESCR 2020; GI-ESCR 2021, Lozano 2022, McKernan et al. 2020). In this briefing, a gender-just transition is understood as the shift from extractive and fossil-fuel-based economies towards renewable energy and sustainable production practices that allow the realisation of fundamental rights within planetary boundaries and that pay attention to the differentiated outcomes on women and men. Given the many competing interests that need to be reconciled to advance a gender-just transition, international human rights law and standards can provide the framework for setting priorities and establishing objectives as well as parameters to ensure that actions aimed at achieving sustainability do not infringe on people's rights. Efforts to advance a gender-just transition need also to adopt an intersectional lens since women are not a homogenous group. The effects of climate change occur in local contexts with different power structures, institutions, infrastructure, and socio-cultural norms. So, women and men in different settings are differently affected by and respond to climatic conditions and extreme weather disturbances. Such an approach provides a deeper understanding of the multiple and overlapping forms of marginalization and inequality that exacerbate gender, racial, and ethnic discriminations.

The briefing paper is organised as follows. Section 2 demonstrates the importance of care systems in a gender-just transition towards ecologically sustainable development. Section 3 examines the gendered impact of climate change on care systems and identifies the challenges. Section 4 concludes the paper with care-focused policy recommendations that can deliver a gender-just transition to bridge gender gaps, reduce social and economic inequalities and societies' reliance on extractive practices and consumption.



Care Systems and Gender Inequalities: An Overview

Throughout the world, families provide much of the care that sustains standards of living, reproduce societies, develop capabilities, and maintain the labour force. Young and school-aged children, older persons, persons suffering from sickness, and persons with disabilities require assistance in meeting their physical, psychological, and developmental needs, such as feeding, bathing, dressing, reading, listening, and mobility. These hands-on, relational activities are referred to as direct or personal care (Esquivel 2014; ILO 2018). Able-bodied adults along with dependents i.e., persons requiring long-term help with activities of daily living, also rely on the household members performing domestic chores referred to as indirect care. They are household maintenance, domestic and subsistence activities that range from laundry

washing, cleaning the house, cooking meals, making appointments, grocery shopping, and coordinating care to gathering fuel and water and subsistence production. Caring for people involves the use of non-labour inputs to sustain life and promote the well-being of both, e.g., food, water, and energy.¹

Historically and to the present, women and girls perform many of these activities as evidenced by time-use studies (Benería et al. 2015; Hirway 2017; Connelly and Kongar 2017; ILO 2018; Charmes 2019; Floro 2021). Gender norms regarding the socially assigned roles of women and men continue to determine the household division of care labour and their relations with each other throughout the world. Although social norms are not static, they have been slow to change and have done so unevenly. Women in particular experience these strains in caring for their families while also seeking employment and participating in the labour force, accessing extension training and technologies and performing civic and other obligations. Most importantly, however, the unequal distribution, intensity and lack of recognition of unpaid care work undermines the dignity of women caregivers, obstructs their enjoyment of human rights on an equal basis with men, undermines progress towards gender equality and entrenches their disproportionate situation of vulnerability to poverty across their lifetime. The inability to successfully combine care responsibilities with other roles leaves many women disenfranchised and disempowered. Others may benefit more from new opportunities but suffer from increased work burden and stress (Floro and Meurs 2009). Time-use studies show that unpaid care work is particularly burdensome for women in low-income households, giving support to the idea that those living in poverty, more than those in wealthier households, often compensate for their lack of money income by engaging in more unpaid care work (Hirway 2017; Antonopoulos, Matheson and Zacharias 2013; ILO 2018).



¹ Some feminists such as Joan Tronto (2012) have broadened the definition of care to include those activities “that we do to maintain, continue and repair our ‘world’ so we can live in it as well as possible” i.e., care for the environment. Similarly, ECLAC uses this broader concept as well in their 2023 report (ECLAC 2023). This paper focuses on the human relational dimensions of care. It highlights the concept of care as a particular form of work and brings attention to who performs them and the conditions under which they are carried out.



As with unpaid care, the majority of the global care workforce are women: 66 per cent of workers in care occupations and 70 per cent of domestic workers. This feminisation of care employment has to do with the gender stereotyping of care work and the persistent association of care with women’s “natural” inclination and “innate” abilities.

In many communities, unpaid care is also provided by extended kin, neighbours, friends, and community members, especially in low and middle-income countries. They range from childcare, eldercare, and sick care to school maintenance, irrigation canal repairs, and forest management-conservation. Families that have traditionally been able to count on the care support of other female relatives and kin (cousins, aunts, grandmothers) for help are finding this option less feasible, however. In low and middle-income countries, urbanisation, migration, and the growth of nuclear households have undermined extended family support networks, so that families are further stressed to meet their care needs with women and girls bearing the brunt (Floro and King 2023).

The transformation of households and the increase in women’s labour market participation during capitalist development have led to the rapid growth of care services provided through the market, including health services, childcare, and long-term care. Whether for profit or pay, these arrangements take place in a variety of settings --from households (hiring domestic workers, nannies and home aides), for-profit care facilities to non-profit and public care services. As with unpaid care, the majority of the global care workforce are women: 66 per cent of workers in care occupations and 70 per cent of domestic workers (ILO 2018, p. 8). This feminisation of care employment has to do with the gender stereotyping of care work and the persistent association of care with women’s “natural” inclination and “innate” abilities (Himmelweit 2007).



The concept of care economy encapsulates the wide range of care labour that sustains standards of living and produces well-being. The goods and services that care labour produces occur in a variety of settings and care arrangements: households, communities, markets and the public sector. It denotes the fact that care work, whether paid or unpaid, produces ‘value’; therefore, all forms of care activities are considered productive even though most of them are invisible to conventional measures of production and of the economy.

Several countries have made some strides in allocating public resources and investing in care services, thereby alleviating some of the unpaid care work load of women and help reduce the tensions between employment (paid work) and unpaid care work in terms of demand for labour time (Carrasco and Dominguez 2011; Galvez-Muñoz et al. 2011; Tronto 2012; Hirway 2017; Esquivel and Kaufmann 2017; Connelly and Kongar 2017; Peng and Yeandle 2017, Gruber et al. 2023). These range from direct provision of care services to social protection policies such as payments and subsidies to caregivers or to people who need care, labour policies such as maternity benefits, paternity leaves and regulation of paid working times to complementary service provisions such as water and sanitation.²

Welfare states such as Sweden, Norway, Denmark and Finland introduced socialised care services and benefits for most of the population. Global South countries such as Costa Rica, South Africa and Chile have developed social protection schemes that address childcare needs (Niño Zarazúa et al. 2012, Patel 2012, Esquivel and Kaufmann 2017, Gromada and Richardson 2021). Child support grants are being used to help pay for childcare of all low-income people, regardless of their employment status. New initiatives are also emerging in some countries in Latin America in terms of the creation of child-care policies and the establishment of publicly provided or subsidised day care services such as Sistema de Cuidados in Uruguay, Estancias Infantiles in Mexico and Bogota’s care blocks program in Colombia (Government of Mexico n.d.; ILO 2018; Rodriguez-Franco 2022).

That said, only thirty-two countries in the world have public childcare services available after the birth of their children, and only 30 countries have statutory Early Childhood Education Division (ECED) programmes for at least 40 hours a week (Addati, Cattaneo and Pozzan 2022). As of 2022, only 26 other countries have set up a statutory universal and free long-term care service scheme (Addati, Cattaneo and Pozzan 2022).

² See Esquivel and Kaufmann 2017 for a review of care policies in Africa, Asia, and Latin America and the Caribbean region, and the ILO Global Care Policy portal which provides data and resources on non-discrimination and care-related policies and services in more than 180 countries (ILO n.d.)

However, the rapid growth of private investments in both childcare and long-term care sectors and cuts in public services since the 1990s have gradually eroded public care services even in the Nordic countries (Vaittinen, Hoppania & Karsio 2018). For example, Finland, Norway and Sweden's local governments, have increasingly outsourced eldercare to private or semi-private care providers (Connelly and Kongar 2017; Peng and Yeandle 2017). In Italy and the United Kingdom, care allowances and personal budgets have allowed some families and elderly people to purchase care through the market. In Austria and Germany, the existence of a cash benefit option allows people to purchase private care. Other countries, such as the Netherlands and France offer family allowances and paid parental leaves as well as publicly supported childcare and education. The marketisation of care services is evident in East Asia as well. Both Japan and Korea, for example, have public long-term care insurance (LTCI) but the private sector care providers play an important role in eldercare delivery (Peng and Yeandle 2017; Michel and Peng 2017). In Japan, strict government regulation has led to a quasi-market situation whereby eldercare is delivered through both public and private for- and not-for-profit sectors, while in Korea, weaker regulation has resulted in private market providers playing a more prominent role.

When States do not adequately value, provide and support care provisioning, women inevitably take on a significant share of the care workload, to the detriment of their enjoyment of human rights. Moreover, how States provide support and design social policies have different implications for affordability and access to care (Folbre 2006; Floro and Meurs 2009). They also have implications on the household division of care responsibilities. Cash benefits for childcare schemes tend to encourage gender-differentiated family roles. State-supported childcare services, on the other hand, facilitate the dual-earner model while parental (as opposed to maternity) leave legislation encourages dual-earning and care-sharing parenthood.

Nevertheless, even in countries with the most generous care policies, domestic responsibilities continue to fall more heavily on women than men. This is because care benefits cover only a portion of parental expenditures and total time spent on caregiving (OECD 2020; ILO 2018, Gromada and Richardson 2021). For example, the cost of non-parental childcare remains high in many OECD countries; it is equivalent to half of women's median full-time earnings for a two-earner family with two children in care in Japan and the United Kingdom. Although support programs, depending on the coverage and level of public investment, reduce the costs for low-income families and single mothers, out-of-pocket costs can still add up to a large share of family earnings, as in the case of Ireland, the Slovak Republic, and the United Kingdom (OECD 2020). In the Americas, there are still limitations to access despite national childcare systems for children aged 0–2 years in 12 countries (Gromada and Richardson 2021). For example, in Costa Rica, public provision is mainly in urban areas, and in Uruguay, parents still have to pay the largest share of childcare fees.





The fact that most of care work is unpaid has made it statistically invisible to policymakers. Provisioning of affordable care services has been given low political priority, except in welfare States and in countries with very low fertility rates and rapidly ageing populations, including Korea, Taiwan, Japan, and Singapore. This is mainly because caregiving is assumed to be primarily the responsibility of the family in many countries and to have little impact on economic development. Moreover, conventional development models and mainstream economic theories that provide the framework for policymaking fail to integrate the care economy (Blecker and Braunstein 2022; Reksten and Floro 2020). In so doing, they have promoted public policies and development strategies that are blind to their impact on social reproduction and the natural environment that supports human life. When the centrality of care provisioning in the functioning of economies and reproduction of societies is not recognised, and the crucial interconnection between human economic activities and the state of our ecosystem is ignored, then growth in material output and consumption can lead to widening inequalities, the systemic denial of human rights for many, and the erosion of the fundamental natural foundations of life on earth.

The promotion of privatisation by market liberalisation policies helps reinforce the notion that workers and their families can find their own solutions to deal with family care responsibilities and their need for external care support can be addressed through the promotion of private investments in the care industry. From a rights perspective, the privatisation of care raises severe concerns about the availability, accessibility, affordability and quality of care services. It also raises concerns about potential abuses when private providers are not adequately regulated.

The expansion of the childcare and long-term care market is often advanced through a programme of incentives, including implicit and explicit subsidies as well as legislative and policy reforms that restructure the labour market in favour of 'flexible' and contingent employment contracts. (Longhurst, Ponder and McGregor 2020). However, recent studies of private equity-based care services show severe frictions and misalignment of for-profit incentives and the social goal of affordable quality care. A study of nursing homes in the United States, for example, shows that private equity ownership increases the short-term mortality of patients by 10 per cent due in part to declines in nursing staff and weak compliance with standards (Gupta et al. 2021). This is paired with declines in other measures of patient well-being, such as lower mobility. The marketisation approach to care provisioning also underscores the socio-economic inequalities in societies as well as gender inequalities in the household division of care. Domestic workers, typically women, are a common solution

for middle- and upper-class families in middle and low-income countries. In the Arab states, for example, domestic work represents the largest share of employees (14.8 per cent), while in Latin America and the Caribbean, it is 8.4 per cent; in Africa, it is 7.3 per cent; and in Asia and the Pacific, it is 4.6 per cent (ILO 2020). Women continue to make up the majority of the domestic service sector (76.2 per cent), which accounts for 4.5 per cent of female employment worldwide.

For the working, poor and low-income households, using paid childcare services, going to a private clinic or hiring a home-based aide or domestic worker are simply unaffordable. They are often compelled to engage their children, particularly daughters, to spend long hours to enable the family to meet its care needs. In many cases, it is the primary caregiver in the household who migrates to the cities or to another country to work as a domestic worker, nanny or nursing home aide (Parreñas 2015; Michel and Peng 2017; Gammage and Stevanovic 2018). In the global South, growing numbers of women are compelled to migrate to provide for the future of their families because of shortages of well-remunerated jobs at home. Often migrant women take on jobs abroad as domestic workers in what has been called the 'global care chain'. Migrant workers therefore, fill the unmet need for care services in wealthier destinations. At the same time, family members that remain at home must devise new strategies for re-organising tasks and care responsibilities in their absence. Overall, this intensifies the care deficit in the countries of origin. Income inequality has therefore generated a solution for the increased care need by generating a supply of female care workers to those who have the private means to hire them to the detriment of less wealthy countries and families.

Widening inequality also creates gaps in various aspects of human survival and maintenance. The Food and Agriculture Organization (FAO) 2023 report estimated that about 29.6 per cent of the global population – 2.4 billion people – were moderately or severely food insecure in 2022. Food insecurity disproportionately affects women in every region of the world (FAO 2023). To date, more than 10 per cent of people (close to 800 million) do not have access to drinking water, and more than 70 per cent (close to 5.5 billion) do not have access to a safe drinking water services, according to the United Nations University Institute for Water, Environment and Health (UNU-INWEH 2023). More than 22 per cent (1.71 billion) do not have access to even basic sanitation. Furthermore, about 675 million people are still without electricity in 2021 and 2.3 billion lack access to clean cooking fuel in 2021, according to the International Energy Agency 2023 Report. Currently, more than 40 per cent of the world's population relies on biomass fuels for heating and cooking. They are found to be not only highly inefficient but also cause indoor air pollution, which is responsible for close to 4 million premature deaths annually (Jodoin et al. 2021).





Underlying structural inequalities in society, including between men and women, shape the ways in which climate-related shocks and stressors are distributed and impact people, as well as the capacities and options men and women have at their disposal to respond to them (Njuki et al. 2022; Bryan, Ringler and Meinzen-Dick 2023). Members of the same household do not necessarily face the same set of risks or have the same capacities, vulnerabilities and decision-making power (Kabeer 1999; Doss et al. 2018; Bryan, Ringler, and Meinzen-Dick 2023). Gender disparities in access to and control over productive assets like land and livestock reduce women's ability to undertake mitigation and adaptation strategies that involve expenses. In some cases, women's assets, such as jewellery, may be drawn down in response to shocks if the owner has weaker bargaining power within the household, or the asset is easier to sell (Quisumbing et al. 2017). Similarly, men and women in rural communities face different challenges and have different resilience capacities and response options than in urban areas, as they are situated in different settings. These differences can result in differential well-being outcomes, e.g., food security, health, and nutrition, as women and men deal with the effects of climate change, thereby exacerbating existing gender gaps in the exercise and fulfilment of economic and social rights.



Climate Change Impacts on Care Systems and Care Provisioning

Climate change is bringing steady, gradual, and long-lasting changes in temperature and rainfall as well as more intense and frequent extreme weather events such as hurricanes, super-typhoons, heat domes, and severe flooding (IPCC 2023), all of which have compounding effects on families and communities to meet their care needs. First, it heightens the need for care in terms of sudden illnesses and unexpected disabilities due to climate-related disasters. Second, it can bring about new challenges that undermine the availability of family caregivers to provide care as well as access care support services due to damages in physical and social care infrastructures. Third, it reduces access to important inputs for care, such as water, food and safe shelter. Moreover, it can lead to breakdowns or re-composition of traditional units of caregiving (e.g., households and communities), while it creates new situations in which meeting care needs are particularly difficult, such as the increase in displaced person settlements. The heightened inability of societies to meet care needs due to the interplay of climate change and various factors, including government neglect and bad policies, have immediate and long-lasting effects on well-being in terms of depletion of capabilities and loss of life.

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The above effects of climate change are experienced unequally by people around the world. The worst effects of these adverse climate changes are being felt by those who have least contributed to climate change: poor households and disadvantaged segments of the population living in vulnerable regions of the world (Kreft et al. 2014; Romanello et al. 2023). Severe and prolonged drought has affected parts of Australia, Latin America and the United States as with the Sahel and East Africa, while many parts of Western Africa and Asia are experiencing record floods, where tens of thousands have perished and production of food crops and source of livelihood for many have been severely impacted. Rising seas and typhoons have already displaced several million people in South Asia, with India, Pakistan, Bangladesh, Sri Lanka and Indonesia experiencing the worst effects (Romanello et al. 2023).

Impact on the Demand for Care

The 2023 Lancet Countdown report reveals the dire health situation that the world is facing due to climate change: 'Adults older than 65 years and infants younger than 1 year, for whom extreme heat can be particularly life-threatening, are now exposed to twice as many heatwave days as they would have experienced in 1986–2005' (Romanello et al. 2023). These conditions are also putting more populations at risk of life-threatening infectious diseases, such as dengue, malaria, vibriosis, and West Nile virus (Carleton and Hsiang 2016).

Climate change interacts with human health in complex ways. Its impact is highly uneven across populations, depending not only on the geographical region but also on the income, education, social norms, migration, level of economic development, and the institutional capacity and accessibility of health systems. Africa experienced the biggest increase in a heat-related mortality rate since 2000–05, with more frequent health-threatening temperatures and a growing population of people older than 65 (Romanello et al. 2023). Africa was also the region most affected by droughts, with 64 per cent of its land affected by at least one month of extreme drought per year on average in 2013–22, followed by Oceania (55 per cent of its land) and South and Central America (53 per cent) (Romanello et al. 2023).

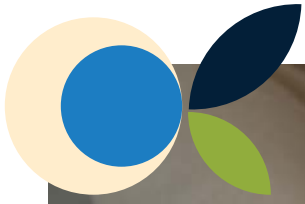
Scientific evidence also points to increases in health inequalities caused by climate change. It has disproportionately aggravated the health of marginalised and disadvantaged groups and those with pre-existing health conditions. Vulnerability to heat stress is linked to person-specific, physiological characteristics of women and men as well as socio-economic, location's specific factors. For example, old age and young age are the most important intrinsic risk factors for heat-related mortality (Maccini and Yang 2009; WHO 2021). Women of lower socio-economic status and lower education levels are relatively more vulnerable to heat stress compared to women from upper socio-economic status, such as wealthy women or those belonging to a higher caste and with higher education (Merzel 2000; Stanke et al. 2013; Pega et al. 2023; Benevolenza and DeRigne 2018;

Simmonds et al. 2021; Deivanayagam et al. 2023). This is partly due to their exposure to pollution in the absence of clean cooking fuel and to extreme heat, as they walk longer distances to gather water and fuel and/or engage in brickmaking, street vending, and other outdoor informal employment.

Elderly women and men, as well as those of lower socioeconomic status, are also more vulnerable to the health effects of droughts, floods, typhoons, and hurricanes than the rest of the population (Stanke et al. 2013; Novales 2014; Benevolenza and DeRigne 2018). For example, sewage in impoverished urban areas has increased the incidence of waterborne diseases (UN 2018; WHO 2023). Increases in incidences of diarrhoea are also connected to elevated salinity levels of groundwater in coastal regions, which can increase maternal mortality and morbidity (Nelormi et al. 2009; WHO 2021). Importantly, lack of access to healthcare facilities and the means to pay for medicines make it difficult for women and men in poor and low-income households to recover from illnesses (Merzel 2000; Floro and Poyatzis 2019; Deivanayagam et al. 2023).

Mental health issues are being attributed to climate change as well (Romanello et al. 2023; Salick and Byg 2007). Studies show that the degradation of or forced displacement from familiar or culturally valued environments can bring about direct emotional impacts, ranging from extreme anxiety and apprehension to depression.





Women who provide most of the direct caregiving in their families are constantly challenged by these climate related effects on the health of the population. The care demands of the illnesses and health issues faced by family members add further strain on women's time. The unequal sharing of care work and attempts by women to meet the time demands of both care work and paid work impose significant costs on their wellbeing, especially in asset-poor and low-income households with no access to care support services. Women's health is also more vulnerable in terms of exposure to infections and viruses compared to men, because in many societies caring for persons suffering from sickness falls principally to women and girls (Deivanyagam et al. 2023; Budlender and Moussie 2013). Moreover, adverse rainfall in the year of birth lowers adult female health outcomes and educational attainment, and droughts experienced by toddlers lowers childhood growth and education (Carleton and Hsiang 2016). These rainfall-related impacts likely operate through agricultural income loss, social norms regarding intra-household food allocation, and lower nutrition. The increased time spent on care obligations is likely to further constrain women's labour force participation and the type of jobs they can undertake, as evidenced by the gender-differentiated employment effects of Typhoon Haiyan in the Philippines, the most powerful tropical cyclones in history (Novales 2014; Floro and Poyatzis 2019). It also impacts women's right to health. There are limits to how much care a person can give without negative impacts on their own health. It also significantly reduces their time for rest and self-care.

Impact on Physical and Social Care Infrastructures

Climate change is simultaneously damaging other parts of the care system on which people rely for good health and outside care support. Extreme weather events such as severe flooding and hurricanes, cyclones or typhoons and other climatic conditions that can lead to increases in infectious diseases have brought extensive damage to care facilities (e.g., hospitals, clinics, daycare centres, nursing homes, and schools) that stop or disrupt their operations (Floro and Poyatzis 2019).

Climate change-induced resource scarcities can weaken social cohesion and local safety nets such as informal care support mechanisms operating in communities (Mpanje et al. 2018; Khalil et al. 2021). This can occur in two ways. First, social reciprocity can decline and stress on social networks tends to occur following droughts and floods that lead to impoverishment of households. Women are reported to be more affected than men since they are responsible for maintaining the networks through gift and labour exchange and more dependent on mutual aid arrangements (Theis, Bryan and Ringler 2019). Second, the devastation of livelihoods, factories, housing, and communities in general brought about by climatic conditions can lead to migration as a coping mechanism, which can affect the extended kinship or neighbourhood care support that women rely upon. Land degradation due to drought and desertification, for example has resulted in mass migrations as well (UNEP 2016, Myers et al. 2024).



Impact on Care-Related Inputs: Food, Water, Sanitation, and Energy

Compounding these direct impacts on the care systems and the well-being of female caregivers are the threatening effects of environmental degradation and climatic events on the necessary inputs for human survival. The climate-land-water-food-energy nexus demonstrates the enormity of the interdependence of human systems and the ecosystem so that the threats to the ecosystem—even in remote parts of the planet—erode the capacity for care, and hence societies' ability to survive. The adverse climatic conditions are leading to increased soil erosion, biodiversity loss, dry spells and water shortages, pest infestations, deforestations, wildfires, and the destruction of crops, among others, making it harder to grow food (Arora-Jonsson 2011; Nico and Azzari 2022; Béné and Devereux 2023; FAO 2017; FAO 2023). Climate change not only affects food production but also has ripple effects throughout the value chains and food distribution systems and on its quality and access. Higher temperatures and prolonged exposure to high levels of CO₂ concentration could lead to losses in nutrient content of key food crops and increase the incidence of foodborne pathogens and mycotoxins (Moretti et al. 2010; Myers et al. 2014). Storage, marketing, and retail systems are also affected as the climate becomes hotter. Food transport is challenged more frequently by flooded roads and damaged port infrastructure (Nicholls and Cazenave 2010). Increasing threats to food security brought about by climatic conditions create a vicious cycle of hunger, poverty, and diseases. Given women's lower access to resources, including land, credit and training in adaptation and mitigation strategies, compared to men, time and mobility constraints due to care responsibilities and lack of voice in key agricultural policy decisions, women and girls in low-income and vulnerable households are more likely to suffer from food insecurity and malnutrition compared to men and boys (Tirado et al. 2015; Botreau and Cohen 2020).

Climate variability and extreme weather shocks have differential effects on women and men's participation in agriculture (FAO 2017; Jordan 2018; Bryan, Ringler and Meinzen-Dick 2023; Tantom et al. 2021). In West and Central Africa, as well as East and Southern Africa, where weather variability is high and dependence on rainfed agriculture is significant, women are more likely than men to engage in agriculture in drought-prone areas or areas affected by heat waves (Doss et al. 2018; Nico and Azzari 2022). Women are also more likely to work longer hours under such conditions compared to men, even though the low productivity of these lands tend to lower an individual's effort in agriculture and reduce the number of working hours (Nico and Azzari 2022). In addition, the increase in women's work in agriculture compensates for men's absence as the latter tend to move to other areas as they seek employment outside agriculture.



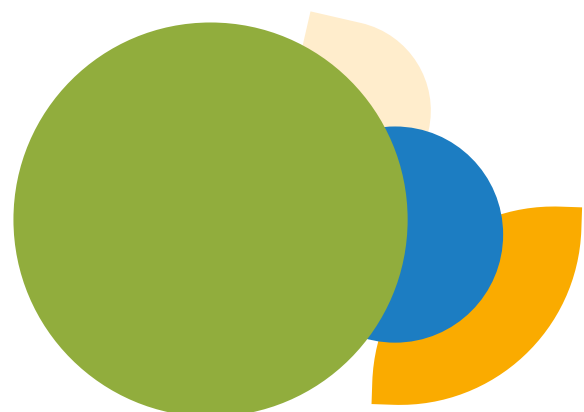
Climate change, combined with water management decisions and a lack of infrastructures, such as reservoirs, treatment plants, and water distribution systems, make the water situation even more critical. Drier areas are now more prone to drought, and humid/wetter areas are more prone to flooding (FAO 2023; Romanello et al. 2023). Globally, water scarcity already affects between 1 and 2 billion people, most of whom live in drylands, where the gap between the demand for and supply of water is highest (MacAlister et al. 2023). One of its worst effects is the rapid decline in water availability for domestic use. By 2017, one in ten people in the world lacked basic services for safe water, forcing at least 144 million people to drink untreated surface water (UNICEF and WHO 2019). Projected climate changes indicate that, in a matter of a few decades, many millions more people will be living under conditions of high-water stress (MacAlister et al. 2023).

Climate impact on water security is highly gendered in many countries, where domestic responsibility, including fetching and managing household water supplies, falls primarily to women and girls (Tandon et al. 2022). Growing water scarcity, for example, has increased the time spent by women and girls who are traditionally responsible for collecting water and fuelwood by travelling longer distances thereby increasing their care work burden (Sugden et al. 2014; Tantoh et al. 2021). In some cases, women travel through dangerous terrain to find water or would fetch water at odd hours of the day, which increases the risk of women experiencing domestic, sexual, and physical violence (Carney et al. 2020; Gambe 2019; Shrestha et al. 2019; Sugden et al. 2014). The lack of access to adequate water, sanitation, and hygiene (WaSH) has specific gender implications as well (UNICEF and WHO 2019; Geere & Hunter 2020; Torondel et al. 2022). Adaptive behaviour in response to the loss of latrines due to flooding places women and girls at greater risk of experiencing gender-based violence as well as leading them to adopt unsanitary behaviours that increase the likelihood of source water contamination (UN 2018).

The impacts of climate change on water security go beyond access to safe water. These are intertwined with other dimensions of sustainable development and the fulfilment of human rights, including an adequate

standard of living. For example, more intense droughts and frequent flooding increase the likelihood of drinking water contamination and increase the prevalence of respiratory diseases and diarrhoea (Signorelli et al. 2016; Stringer et al. 2021). Climate change also affects the structure and functioning of the ecosystem that supports agriculture, forestry, and other livelihoods. As access to food, water and resources becomes more strained, the number of displaced people from fierce competition over scarce resources has risen, as well as the potential for more conflicts and civil wars.

Access to energy is fundamental to the functioning of care systems and the provisioning of care, and the fulfilment of economic, social, and cultural rights. However, the current global energy system, which is also the single largest source of greenhouse gas (GHG) emissions and thus the main driver of climate change, has done little to improve the lives of marginalised populations. About 790 million people remain without access to electricity, and about 2.6 billion still depend on polluting fuels such as coal and biomass for cooking (Bouckaert et al. 2021). The use of 'dirty' energy fuels in domestic work increases the exposure of household members to air pollutants that can lead to respiratory illnesses. With women and girls often performing this domestic work, the burden of disease falls disproportionately on them (Parikh 2011; Kumar and Mehta 2016). They are also usually tasked with searching for biomass, which exposes them to violence and injuries and, due to the time allocated to these activities, limits their ability to pursue education and engage in personal growth activities (WHO 2016; Romanello et al. 2023). Lack of access to clean energy, therefore, accentuates gender health inequities and injustices.



Differential access to energy is both a driver and consequence of growing inequality between and within countries. Energy-related GHG emissions are the biggest single contributor to climate change. Still, these emissions vary across regions, with countries that contribute the least tending to experience the brunt of climate effects. At the global level, access to clean energy remains highly unequal, with the poorest 40 per cent of the world's population disposing of some 10 per cent of final energy use and the richest third of two-thirds (Bouckaert et al. 2021). Inequalities in the distribution of clean forms of energy also persist, with a much higher dependence on solid biomass fuels in the least developed countries. For example, the lack of access to electricity has significantly contributed to the continued marginalisation of people in rural areas and poor communities. They are caught in a cycle of deprivations: lack of access to clean energy affects health, productivity, care workload, opportunities for income generation, and the overall ability to have an adequate standard of living.

The relationship between climate and energy is unique as fossil fuels are the largest contributor to climate change, and energy systems are directly at risk of being affected by climate-related extreme weather events. For example, global warming and heat waves lead to demand surges while straining supply and transmission. Without any significant reductions in fossil fuel extraction and use, climate change projections indicate that net energy demand will grow with further increases in high-temperature days, increasing the use of cooling appliances, despite fewer cold days requiring energy for heating.

Renewable energy generation, such as wind power and solar panels, is increasing in all regions of the world, but it has not substantially replaced fossil fuels. Moreover, their access and use are unequally distributed across the world regions. Only 1 per cent of renewable energy investments in 2022 were in Africa (IRENA 2023). Despite having abundant renewable energy resources, clean renewables accounted for just 1 per cent and 0.4 per cent of the energy supply in Africa and small island States in 2020, respectively, compared with 2.4 per cent in North America, 2.7 per cent in Asia and South and Central America, 3.0 per cent in Europe, and 6.0 per cent in Oceania. This situation perpetuates reliance on polluting fuels, particularly in countries with scarce access to energy (Romanello et al. 2023). That said, there are cautionary tales regarding the potential effects of renewable energy production, as they can have both positive and adverse consequences on local and indigenous communities and can either uphold or undermine women's rights (Carley and Konisky 2020; Mang-Benza 2021).



Building a Resilient Care System in a Gender-Just Transition

The preceding discussion demonstrates how the evolving care crisis and climate crisis are deeply intertwined. There are reasons to believe that solutions to effectively address the unmet care needs also can help mitigate the effects of climate change. Similarly, actions to meet carbon-zero goals, mitigate biodiversity loss, and promote regeneration of our ecosystem can significantly reduce the care work burden that falls heavily on families and women. Any effort to address these grave problems must be comprehensive in scope and based on principles of equality and non-discrimination, universality, and responsibility sharing (Lozano 2022; Just Transition Collaborative 2018; Jodoin et al. 2021). It must uphold the right to the highest attainable standard of health; the right to an adequate standard of living, including food, and clothing; the

right to housing; and the right to security during sickness, disability, old age and unemployment. (United Nations 1948, Article 25; United Nations (General Assembly) 1966a, Articles 12, 11; United Nations (General Assembly) 1966b, Article 9).

People need care throughout their lives to survive and thrive. Yet care is considered to be the 'natural' responsibility of women, so they provide most of the unpaid care in households and communities and are the majority of paid care workers. The difficulties, intensity and gendered distribution of unpaid care work create gender inequality and obstruct the enjoyment of several human rights – including economic, social, cultural, civil, and political rights – on an equal basis with men, including the rights to work, health, and participation. This is evident if one considers that providing unpaid care includes long working hours, chronic stress, and foregone opportunities in education, employment, and earnings, as well as civic and political participation. Hence, getting care onto the gender-just transition agenda is vital to ensure gender equality and the enjoyment of women's rights.

However, the default approach undertaken by many governments on the heavy care work burden that women face is to enable the expansion of the private care market. Households can alleviate some of their care work by outsourcing, e.g., employing a domestic worker, nanny, or a home-based aide; purchasing pre-cooked meals; and paying for institutional care services, such as childcare centres and nursing home facilities. One major problem with relying on the growth of marketised care services is that it exacerbates inequalities. Given the large costs, households with little means to afford them are excluded from the care market. In the United States, childcare consumes a significant percentage of median family income across all care types, age groups, and county population sizes, which price out even middle-income families (Landivar et al. 2023). Globally, the estimated average annual cost of full-time childcare is USD 12,771. Therefore, it is unsurprising that over 40 per cent of all children below primary school age (nearly 350 million) worldwide need childcare but do not have access (Devercelli and Beaton-Day 2020). Similar problems beset the provision of long-term care when populations worldwide are ageing rapidly (Gruber et al. 2023). In the United



States, the median private nursing home costs over USD 100,000 per year, which is greater than the income of over 90 per cent of the elderly (Gruber et al. 2023). Only a minority of the elderly needing care rely on institutional or paid home care; the majority receive them from family and other unpaid female caregivers.

Given the market mechanism of supply and demand and the profit maximisation incentive among for-profit service providers, it is not surprising that childcare, long-term care, and even healthcare systems are patchy and often fragmented in many countries.

Given the market mechanism of supply and demand and the profit maximisation incentive among for-profit service providers, it is not surprising that childcare, long-term care, and even healthcare systems are patchy and often fragmented in many countries. There is considerable evidence that the quality of care offered by private care service providers can be low, especially when there are weak or non-existent regulatory frameworks and oversight mechanisms in place (Gupta et al. 2021; Landivar et al. 2023; Barber et al. 2021). About 1 in 6 persons aged 60 or older globally have experienced some form of elder abuse in community settings (Yon et al. 2017; Yon et al. 2018; WHO 2022). Two-thirds of long-term care staff around the world reportedly committed elder abuse (Yon et al. 2017).

The market for care services can also evolve in a manner that heightens the care inequalities between North and South countries as well as the differentiation among women in different socio-economic positions. As mentioned earlier, the crisis of care in high and upper-middle-income countries has been partially met with migrant labour by hiring women from South and Southeast Asia, North Africa, former transition economies, and Latin America and the Caribbean. European countries in particular, have been meeting the deficiencies in public care services provision with female foreign labour (Beneria 2023). For migrant worker-sending countries, exporting women's labour generates a "depletion of care resources", affecting their ability to provide care for the family left behind (Parreñas 2015; Gammage and Stevanovic 2018; Floro and King 2023). Female migrant households must negotiate who will be responsible for domestic chores and the children and other family members left behind. Middle and upper-class families in the South also rely on cheap domestic female labour provided by impoverished women and girls, immigrants, indigenous or women of colour.



However, the seemingly abundant supply of domestic workers, childcare workers, and nursing home aides is rapidly changing. Households and formal care service providers in emerging and high-income economies are struggling to find care workers, given the increased demand for care and high turnover. Low wages, job insecurity, and long working hours with few or no benefits characterise the working conditions faced by many care workers in various settings (Bonnet et al. 2022). Care workers are among the vulnerable and feminised segments of the labour force.

The significant social benefits of care work and the fact that it produces public goods and sustains human life bring attention to the question of how responsibility for the care of particular groups of dependents should be distributed between families, communities, the State, and the market, referred as the 'care diamond' (Razavi 2007). Without comprehensive and adequate public support, the unmet care needs will only grow, and gender, economic and social inequalities will widen. The economic and welfare costs of care would be beyond the means of households and the capacities of women to shoulder them, leading to major human rights concerns. The lack of recognition and support they receive for this work is one of the main obstacles to gender equality, the enjoyment of women's rights, and economic empowerment.

Concerning climate effects on care-related inputs, countries' efforts to address growing food insecurity, water scarcity, and demand for energy in a sustainable manner involve a wide range of mitigation and adaptation strategies and interventions. In some cases, they contribute to long-term adaptation and help reduce gender inequalities. One such measure is the Economic Community of West African States (ECOWAS) Policy for Gender Mainstreaming in Energy Access for West Africa (McKernan 2020). Other strategies and interventions, however, are being implemented without assessing the longer-term impacts nor taking the underlying inequalities and power relations into account. For example, in Mumbai, installing rainwater-harvesting technologies has increased the resilience of middle-class communities to water supply shortages. However, this has resulted in normalising State water rationing, which disadvantage those in informal settlements that depend on State provided water resources, as well as those responsible for collecting water (Button 2017). Studies on India, Nepal, Mexico, Bangladesh, Zimbabwe, Tanzania, and China have found that implementation of initiatives can have moderate to severe maladaptive consequences for women (Tandon et al. 2022). Despite the prevalence of gender strategies in various funding initiatives such as the Green Climate Fund, the Adaptation Fund, and Global Environment Facility mechanisms, gender sensitivity often takes the form of disaggregating data by gender, but the designs of interventions do not necessarily account for how the intersectionality of gender and socio-economic status shape the exercise of power (Persson & Remling 2014; UN 2023b).



Despite intentions towards meeting the needs of the disadvantaged and those vulnerable to climatic shocks and stresses, powerful interests can shape adaptation interventions for their objectives. For example, in Zambia, Conservation Agriculture is promoted as an environmentally and socially sustainable agricultural development strategy. A study demonstrates, however, that environmental and participation concerns are sidelined in practice. A new green revolution, or in other words, an increase in production through technology is promoted instead focusing on private sector-led agricultural development (Westengen et al. 2017). In Vietnam, agricultural practices, such as sediment depositions and the building of high dyke rings can disproportionately benefit those with land, while penalising those without land. In São Tomé and Príncipe adaptation measures, such as the introduction of agricultural green technology and the construction of greenhouses to increase productivity and crop diversification, are found to exclude women in decision-making, exacerbate inequitable labour relations, and pushed small-scale farmers into becoming casual labourers to larger landowners (Mikulewicz 2020).

Climate strategies can also lead to 'elite capture' when all stages in the decision-making processes do not include the affected communities, such as workers and marginalised groups.

Climate strategies can also lead to 'elite capture' when all stages in the decision-making processes do not include the affected communities, such as workers and marginalised groups (Hallegatte et al. 2019; Mehta et al. 2019; Eriksen et al. 2021; Newell et al. 2021). There is considerable evidence on how large corporations, the relatively wealthy and influential community members, monopolise benefits and manipulate policy-making processes and agreements towards their interests (Yates 2012; Nightingale 2017). Maladaptive and inequitable outcomes can occur as a result. For instance, several countries have passed laws granting control over the rights to access mineral resources to national governments instead of local communities. This gives the government considerable power to negotiate contracts with resource extraction companies and control the revenues generated by resource extraction. Resource-dependent countries typically rely on foreign companies to extract energy resources. As a result, host governments would promote foreign investors, negotiate terms of engagement with them, and receive resource rents from extraction (Mahdavi 2020; Sandbakken 2006). The vast government subsidies to fossil fuel industries, which amount to \$7 trillion (Black et al. 2023), are helping push the climate crisis towards cataclysmic proportions and bringing about the disproportionately negative impact of events such as heatwaves, droughts, and water shortages among vulnerable groups.



A large body of literature documents how the extraction of iron ores, fossil fuels such as oil, iron and minerals for renewable energy production such as lithium, cobalt, nickel and graphite, as well as infrastructure construction for energy generation, including nuclear reactors and the commercial distribution of energy for domestic uses adversely impact local and indigenous communities and undermine efforts to protect women's rights (Sterner 2015; Del Bene et al. 2018 Mang-Benza 2021; Carley and Konisky 2020; Martínez-Alier 2023). Studies show how large-scale renewable energy projects can repeat the abuses and rights violations committed by the extractive industries, such as invading lands, failing to obtain the prior and informed consent of local communities and failing to adequately compensate or resettle those displaced (Del Bene et al. 2018; Roy and Schaffartzik 2021; Hallegatte et al. 2019; McKernan 2020; Lozano 2021). A growing movement for environmental justice has emerged from these ecological conflicts. They range from famous court cases, such as Chevron-Texaco in Ecuador and Shell in the Niger Delta to the development of resistance movements, such as Rios Vivos in Colombia to Justiça Ambiental in Mozambique (Martínez-Alier 2023).



Moving Forward with Key Policy Recommendations

Calls for a just transition, or in other words, shifting from extractive fossil-fuel-based societies to societies with renewable energy systems and sustainable production and consumption patterns have increased with the extensive evidence of social, gender, economic and environmental injustices aggravated by climate change.

Given that the value of unpaid household care services can range from 12 per cent to over 40 per cent of GDP, depending on the country and method of valuation, its exclusion from just transition discourses is difficult to justify (Benería et al. 2015). Feminist and ecological economists have called for assessing climate, economic and social policies from a gender perspective, as one can no longer assume them to be gender-neutral (Nelson 2008; Nelson 2009; Nelson 2013; Reksten and Floro 2020).

The following is a set of key policy recommendations to move forward with a gender-just transition to ecological societies:

1. Tackling uneven power relations in climate mitigation and adaptation policies

Mitigation and adaptation policies towards carbon-zero goals and sustainable societies require shifting unequal power relations and re-thinking frameworks, paradigms and decision-making processes. The influences of patriarchy should be considered by States when identifying causal relationships and developing solutions to tackle climate change. Moreover, given the uneven capacities across countries and populations within countries, adaptation and mitigation measures must respond to diverse contexts and ensure equal rights for all. A right-based framework places analysis of power in its various forms at the centre of the transition process. Thus, any adaptation and mitigation policy must deal with the intersecting set of inequalities that profoundly shape responses to the care crisis and climate change.

2. Ensuring quality care services for all

Ensuring that everyone, regardless of economic status, race, and ethnicity, has access to quality care requires co-responsibility of the State and society and comprehensive and effective policy measures (ECLAC 2010; ECLAC 2022; Esquivel 2011). States have a prominent role to play. When States do not adequately value, provide, fund and regulate care, women inevitably take on a greater share of its provision, to the detriment of their enjoyment of human rights. States must invest in care and adopt all necessary policy measures, including social protection, labour, health, and macroeconomic policies. Public policies should position care as a social and collective responsibility rather than an individual problem and treat unpaid caregivers and those they





care for as rights holders. Policies should also be transformative. This means that they should promote decent work for care workers, support family caregivers and reduce care burdens while challenging the notion that care work is intrinsically “female” and of lesser importance than paid market work.

States must also adopt robust regulations of private and public care service provisioning to prevent abuses, ensure quality care, and protect the rights of care workers. In this regard, they should consider ratifying and implementing international conventions and decent work standards in the care sector, such as ILO Convention No. 189 on domestic workers. States also have a fundamental coordinating role to reduce fragmentation of services and to ensure the rights of care workers.

3. Mobilising resources to finance universal care services and effective climate action

Public provisioning of care should be based on a sustainable and reliable source that reduces any inequities in the availability of care services. Thus, the development of gender-aware, care-embedded macroeconomic policies is vital in addressing the socio-economic disparities in accessing care services and in providing the adequate fiscal space to meet these needs (Blecker and Braunstein 2022; Cicowiez et al. 2023).

In many countries, fiscal priorities hamper the transition to clean, renewable energies. This occurs for example, when States provide subsidies for fossil fuels. In 2023, the subsidies for oil, coal and natural gas reached \$7 trillion dollars, the equivalent of 7.1 per cent of the global gross domestic product, according to an IMF study (Black et al. 2023). This amount is higher than governments’ annual spending on education (4.3 per cent of global income) and about two-thirds of governments’ spending on health-care (10.9 per cent).

The expansion of oil and gas extractive activities has also been supported through private financial flows. During 2017–21, 40 banks that lend most to the fossil fuel sector collectively invested \$489 billion annually in fossil fuels (annual average), with 52 per cent increasing their lending from 2010–16 (Black et al. 2023).

The elimination of fossil fuel subsidies and implementation of progressive environmental tax policies, such as carbon taxes levied on fossil fuel and other polluting industries, are critical to achieving the 2050 carbon-zero goal. This is primarily through the form of tax-induced price increases in carbon-based energy. These climate policies can also help address climate injustices, reduce inequalities, and alleviate poverty by generating revenue that can then be invested in the energy transition, social protection, health, education, climate reparations, and other climate measures (Sterner 2015; Budolfson et al. 2021).

However, studies that examined the distributional effects of carbon taxation show mixed results (Chalifour 2010; Metcalf 2021; Cronin et al. 2019; Röhr 2021). The distributional impact on consumer prices, factor prices, and household incomes heavily depend on the carbon price level, which households are affected, and the way the revenues are spent to mitigate the adverse distributional effects and to address the growing care and climate crises. For this reason, the implementation of environmental tax policies and its resulting distributional effects as well as the accompanying 'revenue recycling' measures need to be critically monitored and examined, and when necessary, implemented in tandem with compensatory measures that can offset any adverse social consequences.

To mobilise sufficient resources to address the dual crises of care of people and the environment also requires international cooperation. It is essential in this regard that developed countries comply with their international commitment to provide US\$100 billions of climate finance annually for developing countries to implement mitigation and adaptation actions. (UNFCCC 2023; OECD 2023). However, at this point, it is evident that that amount would not be sufficient even if it is attained.

4. Developing sustainable, climate-resilient and innovative quality care systems

Achieving a gender-just transition requires the development of a public care sector and innovative and climate-resilient care arrangements that rely on clean energy and the expansion of decent care jobs. They should have the ability to adapt to challenges and to rapidly changing contexts. To achieve these goals, the care agenda should be broad enough in scope and compliant with the different social and cultural settings (Neuman et al. 2014; Bernal et al. 2019). Specifically, a gender-just care agenda requires an understanding that women, indigenous populations, migrants, and ethnic groups are not homogeneous: their interests, constraints, sources of vulnerability and capacities for adaptation differ (ILO 2022).

The issues of hours, form and location of care service that accommodate the needs of working parents, geographical setting and cultural norms are also critical. For example, providing quality childcare after childbirth improves women's labour market opportunities. In most countries, self-employed and part-time parents do not have parental leave that full-time formal sector employees can access. A review of the childcare and long-term care policies demonstrates how the alignment of care services to the specific work schedules of family caregivers is a hallmark of good quality care services (ILO 2022).

Public investment in care services and a regulatory framework are also necessary to develop sustainable care systems. To this end, they should rely on decent-paid workers. Childcare and long-term care services that are run based on voluntary or low-paid workers tend to be unsustainable in the long run.



In addition, public provisioning of care services should be accompanied by policies that encourage co-responsibilities of women and men and promote a renegotiation of household responsibilities, leading to a more equitable division of care labour. With men taking on more share in domestic chores and caregiving, the demand for non-household care services is reduced. Policies should also support and incentives local communities and employers to provide affordable, good-quality care services for their members and workers, respectively.

Considering the serious impacts that climate change has on quality care provisioning, care arrangements should be implemented considering the principle of incremental learning and should create climate resilience at the local level. Care arrangements should also become climate-resilient and sustainable by including climate actions seeking safe water provision, shifts towards renewable energy, and sustainable foods systems.

5. Ensuring participatory and democratic decision-making processes

A gender-just transition aims to open climate policy deliberations and decisions to a wide range of parties, particularly those most vulnerable and disadvantaged. In other words, the operationalisation of a gender-just transition agenda needs to ensure that all stages of the design, implementation and evaluation of policies and interventions consistently include the participation and voices of different marginalised stakeholders, including women in lower socio-economic status, workers, small landholders, and indigenous peoples (Newell et al. 2021). This means making transparent and opening to public scrutiny the various decision-making stages in core areas such as energy, financing, fiscal, trade and industrial policies. Underpinning these approaches are principles of reciprocity and equality between the affected parties, practitioners, governments, civil society groups, and scientific and other experts.

Participation requires equality among participants, and this is not easy to achieve. The literature demonstrates that powerful actors, from governments to multinational corporations and other elite groups often initiate these processes, define the scope for participation and can better articulate their proposed solutions. These unequal power relations are often present from the outset and are even more pronounced when actions involve powerful business interests and negotiations between North and Global South stakeholders (Hallegatte et al. 2019).



6. Ensuring access to justice

Ensuring access to the justice system is also critical to counter the undue interference by powerful interests in decision-making. Access to justice is also essential to protecting the rights of disadvantaged and marginalised groups and environmental justice organisations (Rodríguez and Inturias 2018; Adelman and Lewis 2018; Wewerinke-Singh 2019; Martínez-Alier 2023, Sovacool 2021).

Today, there are good examples of judicial cases where powerful actors such as fossil-fuel companies are being held accountable for climate change and its consequences. Of note is Greenpeace Southeast Asia and Others vs. Chevron and Others case, in which environmental organisations and Filipino citizens petitioned the Philippines Commission on Human Rights to investigate the responsibility of 50 investor-owned fossil fuel companies for ‘the human rights implications of climate change and ocean acidification and the resulting rights violations in the Philippines (Ohdedar 2022; Wewerinke-Singh 2019; Martínez-Alier 2023; Newell et al. 2021). While this case did not directly address human rights concerns based on care, it was focused on the environmental degradation created by the climate crises which adversely impacts the resilience of care systems and contributes to exacerbating gender inequality.

Alliances and collective action among diverse actors and advocacy groups engaged in human rights, gender, environmental, and economic justice are key in holding power actors into account and bringing about transformative shifts in power dynamics underpinning uneven care systems and fossil-fuel based economies (Gonda 2019; Jordan 2018).



Final Concluding Remarks

A gender-just transition involves a profound structural change which cannot be achieved through siloes steps. Climate action requires comprehensive and wide range of mutually supporting policies, going from investments in public services and infrastructure, that reduce inequalities and promote adequate quality universal care, to adopting economic and fiscal tools, that provide States adequate fiscal space and resources to meet this ambitious agenda.

In these efforts, human rights obligations must be at the centre. Using a right-based framework enables to identify and address power asymmetries throughout the transition process. This is essential to ensure fairness as adaptation and mitigation strategies are constantly confronting intersecting sets of inequalities that profoundly shape responses to the care crisis and climate change. It provides a set of obligations, norms, and principles that can shape priorities responses to the needs of people and the planet. For example, the principles of participation and transparency require the opening to public scrutiny of all decision-making processes in areas essential to a just transition, such as energy, financing, fiscal, trade, and industrial policies. A rights framework also requires putting gender equality as a priority. To this end, all just transition policies and interventions must consider care issues. Just transition cannot be achieved without a wide variety of policy measures that ensure sustainable quality care systems.

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The care agenda needs to be broad in scope and culturally appropriate (compliant with the different social and cultural settings). It may therefore involve different types of care arrangements, ranging from small, home-based care centres to large-scale, institutional facilities, to community-run care services. Care arrangements should be climate-resilient, rely on clean energy, and contribute to the expansion of decent care jobs. There is a need for coordinated efforts across all sectors of society: households, States, and businesses to collectively address the climate and care crises. This requires improving cooperation to effectively manage and regulate the use of natural resources to meet the needs and realise the rights of present and future generations.

This policy brief has identified several recommendations to achieve a gender-just transition. However, it must be considered that although there are, by now, comprehensive assessments of the threats and impacts of climate change, multiple gaps remain in understanding its effects on care systems. This is partly due to a lack of data and consistent failure to consider the care economy and its distributional and ecological consequences when addressing climate change. The relative scarcity of data disaggregated by gender, ethnicity, race, migration status and other socio-economic characteristics limits the ability to monitor the climate emergency's impact on those who receive and provide care. Therefore, developing a better understanding about the climate-care-gender nexus is essential to designing and implementing quality care arrangements.

Finally, although this briefing paper focuses on human rights, an important lesson from the climate crisis we face today is that an overly anthropocentric perspective has reached the point of hubris. Concern for the protection of the ecosystem, although quite central for indigenous peoples, multi-disciplinary and ecological research communities and environmental justice groups, does not feature in development models, policy-making, production and consumption decisions. Mainstream economics fuelled this neglect by characterising the human person as a self-interested, individualistic 'homo-economicus'. It is not surprising that predominant decision-making processes exclude social costs, including harm done to other persons who are not a party to the decision as well as ecological costs and ignore the existence of planetary boundaries. A key challenge for a just transition is to move from a purely utilitarian and instrumental view of what nature does for us humans to one where the intrinsic value of nature is also recognised. Placing care at the centre of the just transition agenda is an important and necessary step towards redefining the relationship between humans and their environment.



Bibliography



Bibliography

- Addati, Laura, Umberto Cattaneo, and Emanunela Pozzan. 2022. *Care at Work: Investing in Care Leave and Services for a More Gender Equal World of Work*.
- Adelman, Sam, and Bridget Lewis. 2018. "Symposium Foreword: Rights-Based Approaches to Climate Change." *Transnational Environmental Law* 7 (1): 9–15. <https://doi.org/10.1017/s2047102518000067>.
- Antonopoulos, Rania, Thomas Masterson, and Ajit Zacharias. 2013. *The Interlocking of Time and Income Deficits: Revisiting Poverty Measurement, Informing Policy Responses*.
- Arora Jonsson, Seema. 2011. "Virtue and Vulnerability: Discourses on Women, Gender and Climate Change." *Global Environmental Change* 21 (2): 744–51. <https://doi.org/10.1016/j.gloenvcha.2011.01.005>.
- Barber S.L., K. van Gool, S. Wise, M. Woods, Z. Or, A. Penneau et al. 2021. *Pricing Long-Term Care for Older Persons*. World Health Organization, Organisation for Economic Co-operation and Development. <https://iris.who.int/bitstream/handle/10665/344505/9789240033771-eng.pdf>
- Beauregard, Charles, D'Arcy Carlson, Stacy Ann Robinson, Charles E. Cobb, and Mykela Patton. 2021. "Climate Justice and Rights-Based Litigation in a Post-Paris World." *Climate Policy* 21 (5): 652–65. <https://doi.org/10.1080/14693062.2020.1867047>.
- Béné, Christophe, and Stephen Devereux (eds.). 2023. *Resilience and Food Security in a Food Systems Context*. Palgrave Studies in Agricultural Economics and Food Policy. <https://doi.org/10.1007/978-3-031-23535-1>.
- Benería, Lourdes. 2023. "The Long Road to the Care Economy." Paper presented at *El Futuro de los Derechos Humanos con Perspectiva de Género* Lateinamerika Institute, Freie Universität, Berlin. April 19-20.
- Benería, Lourdes, Günseli Berik, and Maria Floro. 2015. *Gender, Development, and Globalization: Economics as If All People Mattered*.
- Benevolenza, Mia A., and LeaAnne DeRigne. 2018. "The Impact of Climate Change and Natural Disasters on Vulnerable Populations: A Systematic Review of Literature." *Journal of Human Behavior in the Social Environment* 29 (2): 266–81. <https://doi.org/10.1080/10911359.2018.1527739>.
- Bernal, R., Attanasio, O., Peña, X., and Vera-Hernández, M. 2019. "The effects of the transition from home-based childcare to childcare centers on children's health and development in Colombia." *Early Childhood Research Quarterly* 47: 418-431.
- Black, Simon, Antung A. Liu, Ian W.H. Parry, and Nate Vernon. 2023. *IMF Fossil Fuel Subsidies Data: 2023 Update*. International Monetary Fund.
- Blecker, Robert A., and Elissa Braunstein. 2022. "Feminist Perspectives on Care and Macroeconomic Modeling: Introduction to the Special Issue." *Feminist Economics* 28 (3): 1–22. <https://doi.org/10.1080/13545701.2022.2085880>.
- Bonnet, Florence, Françoise Carré and Joann Vanek. 2022. "Domestic workers in the world: a statistical profile. WIEGO Statistical Brief No. 32". <https://www.wiego.org/publications/domestic-workers-world-statistical-profile>
- Botreau, H., and M. Cohen. 2020. "Gender Inequality and Food Insecurity: A Dozen Years after the Food Price Crisis, Rural Women Still Bear the Brunt of Poverty and Hunger." In *Advances in Food Security and Sustainability*, edited by M. Cohen, Vol. 5:53–117. Elsevier.
- Bouckaert, S. et al. 2021. *Net Zero by 2050: A Roadmap for the global energy sector*. International Energy Agency (IEA).
- Bryan, Elizabeth, Claudia Ringler, and Ruth Meinzen-Dick. 2023. "Gender, resilience, and food systems." In *Resilience and Food Security in a Food Systems Context*. Palgrave Studies in Agricultural Economics and Food Policy., edited by Béné, Christophe, and Stephen Devereux. <https://doi.org/10.1007/978-3-031-23535-1>.
- Budlender, Deborah and Rachel Moussié. 2013. *Making Care Visible: Women's unpaid care work in Nepal, Nigeria, Uganda and Kenya*. ActionAid.
- Budolfson, Mark, et al. 2021. "Climate Action with Revenue Recycling Has Benefits for Poverty, Inequality and

- Wellbeing." *Nature Climate Change* 11 (12): 1111–16. <https://doi.org/10.1038/s41558-021-01217-0>.
- Buechler, Stephanie. 2016. "Gendered Vulnerabilities and Grassroots Adaptation Initiatives in Home Gardens and Small Orchards in Northwest Mexico." *AMBIO: A Journal of the Human Environment* 45 (S3): 322–34. <https://doi.org/10.1007/s13280-016-0832-3>.
- Button, Cat. 2017. "Domesticating Water Supplies through Rainwater Harvesting in Mumbai." *Gender and Development* 25 (2): 269–82. <https://doi.org/10.1080/13552074.2017.1339949>.
- Carleton, Tamma, and Solomon Hsiang. 2016. "Social and Economic Impacts of Climate." *Science* 353 (6304). <https://doi.org/10.1126/science.aad9837>.
- Carley, Sanya, and David M. Konisky. 2020. "The Justice and Equity Implications of the Clean Energy Transition." *Nature Energy* 5 (8): 569–77. <https://doi.org/10.1038/s41560-020-0641-6>.
- Carrasco, Cristina, and Màrius Domínguez. 2011. "Family Strategies for Meeting Care and Domestic Work Needs: Evidence from Spain." *Feminist Economics* 17 (4): 159–88. <https://doi.org/10.1080/13545701.2011.614625>.
- Carney, I. Castañeda, L. Sabater, C. Owren, and A.E. Boyer. 2020. *Gender-Based Violence and Environment Linkages: The Violence of Inequality*. <https://doi.org/10.2305/iucn.ch.2020.03.en>.
- Chalifour, Nathalie J. 2010. "A feminist perspective on carbon taxes." *Canadian Journal of Women and the Law* 22 (1): 169–212. <https://ssrn.com/abstract=1684097>
- Chapman, Alexander, Stephen E. Darby, Hoàng M. Hồng, Emma L. Tompkins, and Tri P. D. Van. 2016. "Adaptation and Development Trade-Offs: Fluvial Sediment Deposition and the Sustainability of Rice-Cropping in An Giang Province, Mekong Delta." *Climatic Change* 137 (3–4): 593–608. <https://doi.org/10.1007/s10584-016-1684-3>.
- Charmes, Jacques. 2019. *The Unpaid Care Work and the Labour Market: An Analysis of Time Use Data Based on the Latest World Compilation of Time-Use Surveys*.
- Chanamoto, Nicola J. C., and Stephen J. G. Hall. 2015. "Gender Equality, Resilience to Climate Change, and the Design of Livestock Projects for Rural Livelihoods." *Gender and Development* 23 (3): 515–30. <https://doi.org/10.1080/13552074.2015.1096041>.
- Cicowiez, Martín, Hans Löfgren, Ana Tribín, and Tatiana Mojica. 2023. "Women's Market Work and Childcare Policies in Colombia: Policy Simulations Using a Computable General Equilibrium Model." *The Philippine Review of Economics* 60(1): 65–98. <http://doi.org/10.37907/4erp3202j>
- Connelly, Rachel, and Ebru Kongar. 2017. *Gender and Time Use in a Global Context*. Palgrave Macmillan US eBooks. <https://doi.org/10.1057/978-1-137-56837-3>.
- Cronin, Julie Anne, Don Fullerton, and Steven Sexton. 2019. "Vertical and Horizontal Redistributions from a Carbon Tax and Rebate." *Journal of the Association of Environmental and Resource Economists* 6 (S1): S169–208. <https://doi.org/10.1086/701191>.
- Daly, Herman E. 2014. *Beyond Growth: The Economics of Sustainable Development*. Beacon Press.
- Deivanayagam, Thilagawathi Abi, Sonora English, Jason Hickel, Jon Bonifacio, Renzo R Guinto, Kyle Hill, Mita Huq, et al. 2023. "Envisioning Environmental Equity: Climate Change, Health, and Racial Justice." *The Lancet* 402 (10395): 64–78. [https://doi.org/10.1016/s0140-6736\(23\)00919-4](https://doi.org/10.1016/s0140-6736(23)00919-4).
- Del Bene, Daniela, Arnim Scheidel, and Leah Temper. 2018. "More Dams, More Violence? A Global Analysis on Resistances and Repression around Conflictive Dams through Co-Produced Knowledge." *Sustainability Science* 13 (3): 617–33. <https://doi.org/10.1007/s11625-018-0558-1>.
- Devercelli, Amanda E. and Beaton-Day, Frances. 2020. "Better Jobs and Brighter Futures: Investing in Childcare to Build Human Capital." December 1, 2020. <http://hdl.handle.net/10986/35062>.
- Doss, Cheryl R., Ruth Suseela Meinzen-Dick, Agnes R. Quisumbing, and Sophie Theis. 2018. "Women in Agriculture: Four Myths." *Global Food Security* 16 (March): 69–74. <https://doi.org/10.1016/j.gfs.2017.10.001>.

- Economic Commission for Latin America and the Caribbean (ECLAC). 2010. "Time for Equality: Closing Gaps, Opening Trails." (LC/G.2432(SES.33/3)). Santiago. <https://repositorio.cepal.org/server/api/core/bitstreams/a99324c6-0c1b-455a-9faf-bcdf2124a10f/content>
- Economic Commission for Latin America and the Caribbean (ECLAC). 2022. "The Care Society: A Horizon for Sustainable Recovery with Gender Equality." (LC/CRM.15/3). <https://hdl.handle.net/11362/48362>.
- Eriksen, Siri, E. Lisa F. Schipper, Morgan Scoville-Simonds, Katharine Vincent, Hans Nicolai Adam, Nick Brooks, Brian Harding, et al. 2021. "Adaptation Interventions and Their Effect on Vulnerability in Developing Countries: Help, Hindrance or Irrelevance?" *World Development* 141 (May): 105383. <https://doi.org/10.1016/j.worlddev.2020.105383>.
- Esquivel, Valeria. 2011. *The Care Economy in Latin America: Putting Care at the Centre of the Agenda*. United Nations Development Programme, Regional Centre for Latin America and the Caribbean, Gender Practice Area.
- Esquivel, Valeria. 2014. "What Is a Transformative Approach to Care, and Why Do We Need It?" *Gender and Development* 22 (3): 423–39. <https://doi.org/10.1080/13552074.2014.963303>.
- Esquivel, Valeria, and Andrea Kaufmann. 2017. *Innovations in Care: New Concepts, New Actors, New Policies*.
- Floro, Maria S. 2021. "Time Allocation and Time-Use Surveys." In *Handbook of Feminist Economics* edited by Günseli Berik and Ebru Kongar. Routledge.
- Floro, Maria S. and Georgia Poyatzis. 2019. "Climate Change, Natural Disasters and Spillover Effects on Unpaid Care: The Case of Super-Typhoon Haiyan." In *Feminist Political Ecology and the Economics of Care – In Search of Economic Alternatives* edited by Christine Bauhardt and Wendy Harcourt, 70-93. Edward Elgar.
- Floro, Maria S., and Meurs, M. 2009. *Global Trends in Women's Access to "Decent Work."* Geneva: Friedrich-Ebert-Stiftung.
- Floro, Maria S. & King, E. M. 2023. "Introduction to the Symposium on the Care Economy." *Ideas.Repec.Org*. <https://ideas.repec.org/a/phs/prejrn/v60y2023i1p10-18.html>.
- Food and Agriculture Organization (FAO). 2017. *The State of Food and Agriculture 2016: Climate Change, Agriculture and Food Security*. <https://www.fao.org/3/i6030e/i6030E.pdf>
- FAO. 2023. *The State of Food Security and Nutrition in the World 2023*. <https://www.fao.org/3/cc3017en/cc3017en.pdf>
- Folbre, Nancy. 2006. "Demanding Quality: Worker/Consumer Coalitions and 'High Road' Strategies in the Care Sector." *Politics & Society* 34 (1): 11–32. <https://doi.org/10.1177/0032329205284754>.
- Gálvez-Muñoz Lina, Paula Rodríguez Modroño, and Monica Domínguez Serrano. 2011. "Work and Time Use by Gender: A New Clustering of European Welfare Systems." *Feminist Economics* 17 (4): 125–57.
- Gambe, Tazviona Richma. 2019. "The Gender Dimensions of Water Poverty: Exploring Water Shortages in Chitungwiza." *Journal of Poverty* 23(2): 105-122. <https://www.tandfonline.com/doi/full/10.1080/10875549.2018.1517399>
- Gammage, Sarah and Natacha Stevanovic. 2018. "Gender, Migration and Care Deficits: What Role for the Sustainable Development Goals?" *Journal of Ethnic and Migration Studies* 45 (14): 2600–2620. <https://doi.org/10.1080/1369183x.2018.1456751>.
- Geere, Jo Anne, and Paul R. Hunter. 2020. "The Association of Water Carriage, Water Supply and Sanitation Usage with Maternal and Child Health. A Combined Analysis of 49 Multiple Indicator Cluster Surveys from 41 Countries." *International Journal of Hygiene and Environmental Health* 223 (1): 238–47. <https://doi.org/10.1016/j.ijheh.2019.08.007>.
- Global Initiative for Economic, Social and Cultural Rights (GI-ESCR). 2021. *Women's Participation in the Renewable Energy Transition: A Human Rights Approach. Towards a Gender-Just Transition*.
- Global Initiative for Economic, Social and Cultural Rights (GI-ESCR). 2021. *Women and public services ESC rights: PUSHING THE FRONTIERS #1*
- Government of Mexico. n.d. "Programa de Estancias Infantiles para Apoyar a Madres Trabajadoras." [gob.mx. https://www.gob.mx/bienestar/acciones-y-programas/estancias-infantiles-para-apoyar-a-madres-trabajadoras](https://www.gob.mx/bienestar/acciones-y-programas/estancias-infantiles-para-apoyar-a-madres-trabajadoras).

- Gonda, Noémi. 2019. "Re-Politicizing the Gender and Climate Change Debate: The Potential of Feminist Political Ecology to Engage with Power in Action in Adaptation Policies and Projects in Nicaragua." *Geoforum* 106 (November): 87–96. <https://doi.org/10.1016/j.geoforum.2019.07.020>.
- Gromada, Anna and Dominic Richardson. 2021. *Where do rich countries stand on childcare?*. UNICEF.
- Gruber, Jonathan, Kathleen McGarry, and Charles Hanzel. 2023. "Introduction to Long-Term Care around the World." In *Long-Term Care around the World* edited by Gruber, Jonathan and Kathleen McGarry. University of Chicago Press. <https://www.nber.org/system/files/chapters/c14789/c14789.pdf>.
- Gupta, Atul, Sabrina T. Howell, Constantine Yannelis, and Abhinav Gupta. 2021. "Owner Incentives and Performance in Healthcare: Private Equity Investment in Nursing Homes." <https://doi.org/10.3386/w28474>.
- Hallegatte, Stéphane, Jun Rentschler, and Julie Rozenberg. 2019. "Resilient Infrastructure: A Lifeline for Sustainable Development." In *The World Bank eBooks*, 25–29. https://doi.org/10.1596/978-1-4648-1430-3_ch1.
- Himmelweit, Susan. "The Prospects for Caring: Economic Theory and Policy Analysis." *Cambridge Journal of Economics* 31, no. 4 (2007): 581–99. <http://www.jstor.org/stable/23601660>.
- Hirway, Indira. 2017. *Mainstreaming Unpaid Work*. Oxford University Press eBooks. <https://doi.org/10.1093/acprof:oso/9780199468256.001.0001>.
- International Energy Agency (IEA). 2023a. *World Energy Outlook*. <https://iea.blob.core.windows.net/assets/614bb748-dc5e-440b-966a-adae9ea022fe/WorldEnergyOutlook2023.pdf>
- International Energy Agency (IEA). 2023b. *Tracking SDG7 Energy Progress Report* <https://iea.blob.core.windows.net/assets/9b89065a-ccb4-404c-a53e-084982768baf/SDG7-Report2023-FullReport.pdf>
- International Labour Organisation (ILO). 2018. *Care work and Care jobs: For the future of decent work*. https://www.ilo.org/global/publications/books/WCMS_633135/lang-en/index.htm
- ILO. 2020. *Making decent work a reality for domestic workers*. https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_802553.pdf
- ILO. 2022. *Care at Work: Investing in Care Leave Policies and Care Services for a More Gender-Equal World of Work*. https://www.ilo.org/global/topics/care-economy/WCMS_838653/lang-en/index.htm
- ILO. n.d. "ILO Global Care Portal." <https://www.ilo.org/globalcare/>.
- Intergovernmental Panel on Climate Change (IPCC). 2023. "IPCC, 2023: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (Eds.)]. IPCC, Geneva, Switzerland." <https://doi.org/10.59327/ipcc/ar6-9789291691647>.
- International Renewable Energy Agency (IRENA). 2023. *World energy transitions outlook 2023: 1.5°C pathway*. <https://www.irena.org/Publications/2023/Jun/World-Energy-Transitions-Outlook-2023>
- Jodoin, Sébastien, Annalisa Savaresi, and Margaretha Wewerinke Singh. 2021. "Rights-Based Approaches to Climate Decision-Making." *Current Opinion in Environmental Sustainability* 52 (October): 45–53. <https://doi.org/10.1016/j.cosust.2021.06.004>.
- Jordan, J. C. 2018. "Deconstructing Resilience: Why Gender and Power Matter in Responding to Climate Stress in Bangladesh." *Climate and Development* 11 (2): 167–79. <https://doi.org/10.1080/17565529.2018.1442790>.
- Just Transition Collaborative. 2018. *Mapping Just Transition(s) to a Low Carbon World*. UNRISD, Rosa Luxemburg Stiftung, University of London Institute in Paris. <https://www.unrisd.org/en/library/publications/mapping-just-transitions-to-a-low-carbon-world>
- Kabeer, Naila. 1999. "Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment." *Development and Change* 30 (3): 435–64. <https://doi.org/10.1111/1467-7660.00125>.

- Khalil, Momtaj Bintay, Brent Jacobs, and Kylie McKenna. 2021. "Linking Social Capital and Gender Relationships in Adaptation to a Post-Cyclone Recovery Context." *International Journal of Disaster Risk Reduction* 66 (December): 102601. <https://doi.org/10.1016/j.ijdrr.2021.102601>.
- Kreft, Sönke, Lisa Junghans, David Eckstein, and Ursula Hagen. 2014. *Global Climate Risk Index 2015: Who Suffers Most From Extreme Weather Events? Weather-Related Loss Events in 2013 and 1994 to 2013*.
- Kumar, Praveen, and Sumi Mehta. 2016. "Poverty, Gender, and Empowerment in Sustained Adoption of Cleaner Cooking Systems: Making the Case for Refined Measurement." *Energy Research & Social Science* 19 (September): 48–52. <https://doi.org/10.1016/j.erss.2016.05.018>.
- Landivar, Christin, Nikki L. Graf, and Giorleny Altamirano Rayo. 2023. *Childcare prices in local areas initial findings from the national database of childcare prices*. U.S. Department of Labor. https://www.dol.gov/sites/dolgov/files/WB/NDCP/WB_IssueBrief-ND-CP-final.pdf
- Longhurst, A., S. Ponder, and M. McGregor. 2020. "Labor Restructuring and Nursing Home Privatization in British Columbia, Canada." In *The Privatization of Care: The Case of Nursing Homes*, edited by P. Armstrong & H. Armstrong, 102-121. Routledge.
- Lozano, Alejandra. 2021. *Women's Participation in the Renewable Energy Transition: A Human Rights Perspective*, Briefing Paper 2. Towards a Gender-Just Transition. Global Initiative for Economic, Social and Cultural Rights.
- Lozano, Alejandra. 2022. *Setting a Roadmap for a Feminist Green Transformation: Using Economic, Social, Cultural and Environmental Rights as Guiding Tools for a Gender-Just Transition*, Briefing Paper 3. Global Initiative for Economic, Social and Cultural Rights and the Friedrich Ebert Stiftung, Berlin.
- MacAlister, C., G. Baggio, D. Perera, M. Qadir, L. Taing, and V. Smakhtin. 2023. *Global Water Security 2023 Assessment*. United Nations, University Institute for Water, Environment and Health, Hamilton, Canada. <https://www.unwater.org/news/unu-inweh-global-water-security-2023-assessment>
- Maccini, Sharon, and Dean Yang. 2009. "Under the Weather: Health, Schooling, and Economic Consequences of Early-Life Rainfall." *The American Economic Review* 99 (3): 1006–26. <https://doi.org/10.1257/aer.99.3.1006>.
- Mahdavi, Paasha. 2020. *Power Grab*. Cambridge University Press. <https://doi.org/10.1017/9781108781350>.
- Mang Benza, Carelle. 2021. "Many Shades of Pink in the Energy Transition: Seeing Women in Energy Extraction, Production, Distribution, and Consumption." *Energy Research & Social Science* 73 (March): 101901. <https://doi.org/10.1016/j.erss.2020.101901>.
- Martínez Alier, Joan. 2023. "Environmental Conflicts and the Making of World Movements for Environmental Justice." *Economia Política* 40 (3): 765–79. <https://doi.org/10.1007/s40888-023-00306-x>.
- McKernan, Lucy et al. 2020. *Renewable Energy and Gender Justice*. Briefing Paper. Global Initiative for Economic, Social and Cultural Rights.
- Mehta, Lyla, Shilpi Srivastava, Hans Nicolai Adam, Alankar, Shibaji Bose, Upasona Ghosh, and Vikas Kumar. 2019. "Climate Change and Uncertainty from 'above' and 'below': Perspectives from India." *Regional Environmental Change* 19 (6): 1533–47. <https://doi.org/10.1007/s10113-019-01479-7>.
- Merzel, Cheryl. 2000. "Gender Differences in Health Care Access Indicators in an Urban, Low-Income Community." *American Journal of Public Health* 90 (6): 909–16. <https://doi.org/10.2105/ajph.90.6.909>.
- Metcalf, Gilbert E. 2021. "Carbon Taxes in Theory and Practice." *Annual Review of Resource Economics* 13 (1): 245–65. <https://doi.org/10.1146/annurev-resource-102519-113630>.
- Michel, Sonya, and Peng, Ito. 2017. *Gender, Migration, and the Work of Care*. Springer eBooks. <https://doi.org/10.1007/978-3-319-55086-2>.
- Mikulewicz, Michael. 2020. "Disintegrating Labour Relations and Depoliticised Adaptation to Climate Change in Rural São Tomé and Príncipe." *Area* 53 (3): 422–30. <https://doi.org/10.1111/area.12630>.

- Moretti, Celso Luiz, L. M. De Mattos, Adonai Gimenez Calbo, and Steven A. Sargent. 2010. "Climate Changes and Potential Impacts on Postharvest Quality of Fruit and Vegetable Crops: A Review." *Food Research International* 43 (7): 1824–32. <https://doi.org/10.1016/j.foodres.2009.10.013>.
- Mpanje, Desire, Pat Gibbons, and Rónán McDermott. 2018. "Social Capital in Vulnerable Urban Settings: An Analytical Framework." *Journal of International Humanitarian Action* 3 (1). <https://doi.org/10.1186/s41018-018-0032-9>.
- Myers, Samuel S., Antonella Zanobetti, Itai Kloog, Peter Huybers, Andrew D. B. Leakey, Arnold J. Bloom, Eli Carlisle, et al. 2014. "Increasing CO₂ Threatens Human Nutrition." *Nature* 510 (7503): 139–42. <https://doi.org/10.1038/nature13179>.
- Myers, Emily, Audrey Sacks, Juan F. Tellez, and Erik Wibbels. 2024. "Forced Displacement, Social Cohesion, and the State: Evidence from Eight New Studies." *World Development* 173 (January): 106416. <https://doi.org/10.1016/j.worlddev.2023.106416>
- Nelson, Julie A. 2008. "Economists, Value Judgments, and Climate Change: A View from Feminist Economics." *Ecological Economics* 65 (3): 441–47. <https://doi.org/10.1016/j.ecolecon.2008.01.001>.
- Nelson, Julie. 2009. "Between a Rock and a Soft Place: Ecological and Feminist Economics in Policy Debates." *Ecological Economics* 69 (1): 1–8. <https://doi.org/10.1016/j.ecolecon.2009.08.021>.
- Nelson, Julie. 2013. "Ethics and the Economist: What Climate Change Demands of Us." *Ecological Economics* 85 (January): 145–54. <https://doi.org/10.1016/j.ecolecon.2011.07.029>.
- Neuman, Michelle J., Christin McConnell, and Foster Kholowa. 2014. "From early childhood development policy to sustainability: the fragility of community-based childcare services in Malawi." *International Journal of Early Childhood* 46: 81–99.
- Nicholls, Robert J., and Anny Cazenave. 2010. "Sea-Level Rise and Its Impact on Coastal Zones." *Science* 328 (5985): 1517–20. <https://doi.org/10.1126/science.1185782>.
- Nico, Gianluigi and Azzarri Carlo. 2022. "Weather Variability and Extreme Shocks in Africa: Are Female or Male Farmers More Affected?" *Intl Food Policy Res Institute* 2115. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4087553
- Newell, Peter, Shilpi Srivastava, Lars Otto Næss, Gerardo a. Torres Contreras, and Roz Price. 2021. "Toward Transformative Climate Justice: An Emerging Research Agenda." *WIREs Climate Change* 12 (6). <https://doi.org/10.1002/wcc.733>.
- Nightingale, Andrea J. 2017. "Power and Politics in Climate Change Adaptation Efforts: Struggles over Authority and Recognition in the Context of Political Instability." *Geoforum* 84 (August): 11–20. <https://doi.org/10.1016/j.geoforum.2017.05.011>.
- Neelormi, Sharmind, Neelopal Adri, and Akhlas Ahmed. 2009. "Gender Dimensions of Differential Health Effects of Climate Change Induced Water-Logging: A Case Study from Coastal Bangladesh." *IOP Conference Series* 6 (14): 142026. <https://doi.org/10.1088/1755-1307/6/14/142026>.
- Niño Zarazúa, Miguel, Armando Barrientos, Sam Hickey, and David Hulme. 2012. "Social Protection in Sub-Saharan Africa: Getting the Politics Right." *World Development* 40 (1): 163–76. <https://doi.org/10.1016/j.worlddev.2011.04.004>.
- Novales, Clementine Louise. 2014. *Typhoon Haiyan Gender Snapshot: Leyte, Eastern Samar & Northern Cebu*. OXFAM Philippines.
- Njuki, Jemimah, Sarah Eissler, Hazel J. Malapit, Ruth Suseela Meinzen-Dick, Elizabeth Bryan, and Agnes R. Quisumbing. 2022. "A Review of Evidence on Gender Equality, Women's Empowerment, and Food Systems." *Global Food Security* 33 (June): 100622. <https://doi.org/10.1016/j.gfs.2022.100622>.
- Ohdedar, Birsha. 2022. "Climate Adaptation, Vulnerability and Rights-Based Litigation: Broadening the Scope of Climate Litigation Using Political Ecology." *Journal of Human Rights and the Environment* 13 (1). <https://doi.org/10.4337/jhre.2022.01.06>.
- Organisation for Economic Co-operation and Development (OECD). 2020. *Is Childcare Affordable? Policy Brief on Employment, Labour and Social Affairs*. <https://www.oecd.org/els/family/OECD-Is-Childcare-Affordable.pdf>

- OECD. 2023. Climate Finance and the USD 100 Billion Goal Climate Finance Provided and Mobilised by Developed Countries in 2013-2021. OECD Publishing. <https://doi.org/10.1787/e20d2bc7-en>.
- Parreñas, Rachel. 2015. *Servants of Globalization: Migration and Domestic Work*. Stanford University Press.
- Parikh, Jyoti. 2011. "Hardships and Health Impacts on Women Due to Traditional Cooking Fuels: A Case Study of Himachal Pradesh, India." *Energy Policy* 39 (12): 7587–94. <https://doi.org/10.1016/j.enpol.2011.05.055>.
- Patel, Leila. 2012. "Poverty, Gender and Social Protection: Child Support Grants in Soweto, South Africa." *Journal of Policy Practice* 11 (1–2): 106–20. <https://doi.org/10.1080/15588742.2012.625344>.
- Pega, Frank, Natalie C. Momen, Ahmed Abubakar, Rola Al-Emam, Mohd Rohaizat Hassan, John Howard, Sajid Hussein, et al. 2023. "Monitoring Workers' Health: Focus on Rights, Determinants, and Equity." *The Lancet* 402 (10410): 1306–8. [https://doi.org/10.1016/s0140-6736\(23\)02049-4](https://doi.org/10.1016/s0140-6736(23)02049-4).
- Peng, I. and S.M. Yeandle. 2017. *Eldercare policies in East Asia and Europe: Mapping policy changes and variations and their implications*. UN Women discussion paper series. UN Women.
- conflicts in Andean Countries. *Ecological Economics*, 157, 80–91. No. 19, December 2017
- Persson, Åsa, and Elise Remling. 2014. "Equity and Efficiency in Adaptation Finance: Initial Experiences of the Adaptation Fund." *Climate Policy* 14 (4): 488–506. <https://doi.org/10.1080/14693062.2013.879514>.
- Quisumbing, Agnes R., Neha Kumar, and Julia A. Behrman. 2017. "Do Shocks Affect Men's and Women's Assets Differently? Evidence from Bangladesh and Uganda." *Development Policy Review* 36 (1): 3–34. <https://doi.org/10.1111/dpr.12235>.
- Randell, Heather, Clark Gray, and Elizabeth H. Shayo. 2022. "Climatic Conditions and Household Food Security: Evidence from Tanzania." *Food Policy* 112 (October): 102362. <https://doi.org/10.1016/j.foodpol.2022.102362>.
- Razavi, Shara. 2007. *The political and social economy of care in a development context conceptual issues, Research Questions and Policy Options*. Gender and Development Programme, UNRISD.
- Razavi, Shahra, and Silke Staab. 2014. *Global Variations in the Political and Social Economy of Care: Worlds Apart*. Routledge.
- Reksten, Nick and Maria Floro. 2020. "Feminist Ecological Economics: A Care-Centered Approach to Sustainability." In *Sustainable Production and Consumption* edited by Ranjula Bali Swain and Susanna Sweet, Vol. 1. Palgrave MacMillan.
- Rodriguez-Franco, Diana. 2022. *The Bogota care system*. Brookings Center for Sustainable Development. https://www.brookings.edu/wp-content/uploads/2021/12/City-playbook_Bogota.pdf
- Rodríguez, Lukiñe, and Inturias, Mirna. 2018. "Conflict Transformation in Indigenous Peoples' Territories: Doing Environmental Justice with a 'Decolonial Turn.'" *Development Studies Research* 5 (1): 90–105. <https://doi.org/10.1080/21665095.2018.1486220>.
- Röhr, Ulrike. 2021. *Carbon pricing from a feminist perspective-a gender analysis*. GenderCC Women for Climate Justice. https://www.researchgate.net/profile/Ulrike-Roehr/publication/356128156_Carbon_pricing_from_a_feminist_perspective_-_a_gender_analysis/links/618cc02d07be5f31b767578b/Carbon-pricing-from-a-feminist-perspective-a-gender-analysis.pdf
- Romanello, Marina; Di Napoli, Claudia; Green, Carole; Kennard, Harry; Lampard, Pete; Scamman, Daniel; Walawender, Maria et al. 2023. "The 2023 Report of the Lancet Countdown on Health and Climate Change: The Imperative for a Health-Centred Response in a World Facing Irreversible Harms." *The Lancet*, November. [https://doi.org/10.1016/s0140-6736\(23\)01859-7](https://doi.org/10.1016/s0140-6736(23)01859-7).
- Roy, Brototi, and Anke Schaffartzik. 2021. "Talk Renewables, Walk Coal: The Paradox of India's Energy Transition." *Ecological Economics* 180 (February): 106871. <https://doi.org/10.1016/j.ecolecon.2020.106871>.
- Salick, J., and A. Byg. 2007. *Indigenous Peoples and Climate Change*. Oxford: Tyndall Centre for Climate Change Research.

- Sandbakken, Camilla. 2006. "The Limits to Democracy Posed by Oil Rentier States: The Cases of Algeria, Nigeria and Libya." *Democratization* 13 (1): 135–52. <https://doi.org/10.1080/13510340500378464>.
- Schandl, Heinz, and James West. 2010. "Resource Use and Resource Efficiency in the Asia Pacific Region." *Global Environmental Change* 20 (4): 636–47. <https://doi.org/10.1016/j.gloenvcha.2010.06.003>.
- Sepúlveda, Magdalena. 2013. Report of the Special Rapporteur on extreme poverty and human rights. A/HRC/23/36. United Nations.
- Shrestha, Shobha, Prem Sagar Chapagain, and Motilal Ghimire. 2019. "Gender Perspective on Water Use and Management in the Context of Climate Change: A Case Study of Melamchi Watershed Area, Nepal." *SAGE Open* 9 (1): 215824401882307. <https://doi.org/10.1177/2158244018823078>.
- Signorelli, S., Azzarri, C. and Roberts, C.. 2016. Malnutrition and climate patterns in the ASALs of Kenya: A resilience analysis based on a pseudo-panel dataset. International Livestock Research Institute (ILRI) and International Food Policy Research Institute (IFPRI).
- Simmonds, Katherine, Julie Jenkins, Bradley Patrick White, Patrice K. Nicholas, and Jéssica Bell. 2021. "Health Impacts of Climate Change on Gender Diverse Populations: A Scoping Review." *Journal of Nursing Scholarship* 54 (1): 81–91. <https://doi.org/10.1111/jnu.12701>.
- Smith, J. M., L. Olosky, and J.G. Fernández. 2021. The climate-gender-conflict nexus. Georgetown Institute for Women, Peace and Security.
- Smyth, Ines, and Caroline Sweetman. 2015. "Introduction: Gender and Resilience." *Gender and Development* 23 (3): 405–14. <https://doi.org/10.1080/13552074.2015.1113769>.
- Sovacool, Benjamin K. 2021. "Who Are the Victims of Low-Carbon Transitions? Towards a Political Ecology of Climate Change Mitigation." *Energy Research & Social Science* 73 (March): 101916. <https://doi.org/10.1016/j.erss.2021.101916>.
- Stanke, Carla, Marko Kerac, Christel Prudhomme, Jolyon M. Medlock, and Virginia Murray. 2013. "Health Effects of Drought: A Systematic Review of the Evidence." *PLOS Currents*, January. <https://doi.org/10.1371/currents.dis.7a2cee9e980f91ad7697b570bcc4b004>.
- Sterner, Thomas. 2015. *Fuel Taxes and the Poor: The Distributional Effects of Gasoline Taxation and Their Implications for Climate Policy*. RFF Press.
- Stringer, Lindsay C., Alisher Mirzabaev, Tor A. Benjaminsen, Rebecca Mb Harris, Mostafa Jafari, Tabea Lissner, Nicola Stevens, and Cristina Tirado-Von Der Pahlen. 2021. "Climate Change Impacts on Water Security in Global Drylands." *One Earth* 4 (6): 851–64. <https://doi.org/10.1016/j.oneear.2021.05.010>.
- Stuart, Lauren, World Meteorological Organization et al. 2023. United in Science. <https://library.wmo.int/records/item/68235-united-in-science-2023>
- Sugden, Fraser, and Sanjiv De Silva. 2014. *A Framework to Understand Gender and Structural Vulnerability to Climate Change in the Ganges River Basin: Lessons from Bangladesh, India and Nepal*. IWMI.
- Tandon, Indrakshi, Corinne J. Schuster Wallace, Martina Angela Caretta, Sumit Vij, and Alison Irvine. 2022. "Urban Water Insecurity and Its Gendered Impacts: On the Gaps in Climate Change Adaptation and Sustainable Development Goals." *Climate and Development*, April, 1–12. <https://doi.org/10.1080/17565529.2022.2051418>.
- Tantoh, Henry Bikwibili, Tracey T. J. M. McKay, Felix Ekwabena Donkor, and Mulala Danny Simatele. 2021. "Gender Roles, Implications for Water, Land, and Food Security in a Changing Climate: A Systematic Review." *Frontiers in Sustainable Food Systems* 5 (July). <https://doi.org/10.3389/fsufs.2021.707835>.
- Theis, S., E. Bryan, and C. Ringler. 2019. "Addressing gender and social dynamics to strengthen resilience for all." In *2019 Annual Trends and Outlook Report (ATOR): Gender equality in rural Africa. From commitments to outcomes* edited by A. Quisumbing, R. Meinzen-Dick, & J. Njuki. International Food Policy Research Institute (IFPRI).
- Tirado, María Cristina, Dana Ellis Hunnes, Marc J. Cohen, and Anna Lartey. 2015. "Climate Change and Nutrition in Africa." *Journal of Hunger & Environmental Nutrition* 10 (1): 22–46. <https://doi.org/10.1080/19320248.2014.908447>.

- Torondel, Belén, Jane Ferma, Suzanna C. Francis, Bethany A. Caruso, Parimita Routray, Heather Reese, and Thomas Clasen. 2022. "Effect of a Combined Household-Level Piped Water and Sanitation Intervention on Reported Menstrual Hygiene Practices and Symptoms of Urogenital Infections in Rural Odisha, India." *International Journal of Hygiene and Environmental Health* 239 (January): 113866. <https://doi.org/10.1016/j.ijheh.2021.113866>.
- Tronto, Joan C. 2012. "Democratic care politics in an age of limits." In *Global variations in the political and social economy of care*. *Worlds Apart* edited by Shahra Razavi and Silke Staab, 29- 40. Routledge.
- United Nations. 2018. Sustainable development goal 6 synthesis report on water and sanitation. UN. https://www.unwater.org/publication_categories/sdg-6-synthesis-report-2018-on-water-and-sanitation/
- United Nations. 2023a. New analysis of national climate plans: insufficient progress made, COP28 must set stage for immediate action. <https://unfccc.int/news/new-analysis-of-national-climate-plans-insufficient-progress-made-cop28-must-set-stage-for-immediate>
- United Nations. 2023b. Nationally determined contributions under the Paris Agreement: Synthesis report of the Secretariat. UNFCCC. https://unfccc.int/sites/default/files/resource/cma2023_12.pdf
- United Nations Children's Fund (UNICEF) and World Health Organization (WHO). 2019. Progress on household drinking water, sanitation and hygiene 2000-2017: Special focus on inequalities. <https://www.unicef.org/reports/progress-on-drinking-water-sanitation-and-hygiene-2019>
- United Nations Environmental Programme (UNEP). 2016. Gender, equality and the environment. A guide to UNEP's work. <https://wedocs.unep.org/bitstream/handle/20.500.11822/7642/>
- United Nations Framework Convention for Climate Change (UNFCCC). 2023. Climate Finance. <https://unfccc.int/topics/climate-finance/the-big-picture/climate-finance-in-the-negotiations/climate-finance>
- United Nations. 1948. Universal Declaration of Human Rights.
- United Nations (General Assembly). 1966a. "International Covenant on Economic, Social, and Cultural Rights." *Treaty Series* 999 (December): 171.
- United Nations (General Assembly). 1966b. "International Covenant on Civil and Political Rights." *Treaty Series* 999 (December): 171.
- United Nations University Institute for Water Environment and Health (UNU-INWEH). 2023. Global water security 2023 assessment. https://inweh.unu.edu/wp-content/uploads/2023/04/23-116_UNU_Water_Security_WEB_Final_updated.pdf
- Vaittinen, Tiina, Hanna-Kaisa Hoppania, and Olli Karsio. 2018. "Marketization, Commodification and Privatization of Care Services." In *Handbook on the International Political Economy of Gender* edited by Juanita Elias and Adrienne Roberts, 379-391. Edward Elgar Publishing. <https://doi.org/10.4337/9781783478842.00036>.
- Wewerinke-Singh M. 2019. *State Responsibility, Climate Change and Human Rights under International Law*. Bloomsbury Publishing. <https://hdl.handle.net/1814/62004>.
- Westengen, Ola Tveitereid, Progress H. Nyanga, Douty Chibamba, Mònica Guillén-Royo, and Dan Banik. 2017. "A Climate for Commerce: The Political Agronomy of Conservation Agriculture in Zambia." *Agriculture and Human Values* 35 (1): 255-68. <https://doi.org/10.1007/s10460-017-9820-x>.
- World Health Organization (WHO). 2016. Burning opportunity: clean household energy for health, sustainable development, and wellbeing of women and children. World Health Organization. <https://www.who.int/publications/i/item/9789241565233>
- WHO. 2021. Health and climate change survey report. World Health Organization. <https://www.who.int/publications/i/item/9789240038509>
- WHO. 2022. Tackling abuse of older people: five priorities for the United Nations Decade of Healthy Ageing (2021-2030). World Health Organization. <https://www.who.int/publications/i/item/9789240052550>
- WHO. 2023. World Health Statistics 2023 Monitoring health for the SDGs. World Health Organization. <https://www.who.int/publications/i/item/9789240074323>

Yates, J. S. 2012. Uneven interventions and the scalar politics of governing livelihood adaptation in rural Nepal. *Global Environmental Change*, 22(2): 537–546. <https://doi.org/10.1016/j.gloenvcha.2012.01.007>

Yon, Ma Yongjie, Christopher Mikton, Zachary D. Gasoumis, and Kathleen H. Wilber. 2017. "Elder Abuse Prevalence in Community Settings: A Systematic Review and Meta-Analysis." *The Lancet Global Health* 5 (2): e147–56. [https://doi.org/10.1016/s2214-109x\(17\)30006-2](https://doi.org/10.1016/s2214-109x(17)30006-2).

Yon, Yongjie, María D. Ramiro-González, Christopher Mikton, Manfred Huber, and Dinesh Sethi. 2018. "The Prevalence of Elder Abuse in Institutional Settings: A Systematic Review and Meta-Analysis." *European Journal of Public Health* 29 (1): 58 -67. <https://doi.org/10.1093/eurpub/cky093>.

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**Ministry for Foreign
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A Care-led Transition to a Sustainable Future

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