



## Editorial

# Climate justice for women: Achieving equity in a warming world

Climate change has long been recognized as one of the greatest threats facing humanity contributing directly to humanitarian emergencies from hotter temperatures to more severe storms, and increased drought. Currently, almost half the world's population (about 3.6 billion people) are residing in areas highly susceptible to climate change<sup>1</sup>. A growing body of evidence suggests the adverse impact of climate change on multiple health outcomes including infectious diseases, non-communicable diseases and mortality<sup>2</sup>. By 2050, climate change is projected to cause a significant strain on healthcare systems globally, leading to 14.5 million deaths and an estimated US \$12.5 trillion in economic losses, alongside the immense impact on health<sup>3</sup>. It is not merely an environmental issue but also a profound social justice challenge that exacerbates existing inequalities worldwide. With the prevailing levels of food insecurity and population displacements, hazards due to climate change pose an additional burden on already vulnerable population groups including women and children, who are more susceptible to adverse consequences due to a variety of social, economic, and cultural factors.

Deeply embedded gender inequalities leave women at a disadvantage from an early age, making them less likely to prepare for and survive disasters and consequently more prone to devastating impacts. Extreme weather events and shifts in climate patterns often place additional burdens on families, forcing girls to drop out of school to assist with household responsibilities, farming, or income generation. This limits educational opportunities for girls and young women, presenting a significant barrier to their personal and professional growth. In some cases, this may lead to early marriage, cutting short their education and diminishing their chances for future empowerment and economic independence<sup>4,5</sup>. The loss of educational opportunities perpetuates the cycle of vulnerability and inequality, as these young women are less equipped to secure stable, well-paying jobs in the future. Moreover, traditional gender roles often place women in unsafe

situations during climate emergencies. As caregivers, they may put their families' safety before their own, exposing themselves to greater risks during extreme weather events. For instance, women may be tasked with rescuing children or the elderly, often delaying their safe escape. In many regions, women may lack access to information, critical resources, mobility, or decision-making autonomy and these disparities further exacerbate their vulnerability<sup>6,7</sup>.

The impact of climate change is expected to be most striking in developing nations as it can compound existing poverty. In low- and middle-income countries, women are more likely to rely on agriculture and fieldwork for their livelihoods, making them especially vulnerable to climate-induced disruptions such as droughts, floods, and unpredictable weather patterns. Health and safety risks compound the already complex challenges faced by women and girls residing in the developing parts of the world during climate-related events<sup>4</sup>. Women and girls in these regions are traditionally tasked with household chores that disproportionately expose them to health and safety risks. For example, they are often responsible for bringing biomass for household energy, making them increasingly exposed to gender violence and physical harm as they have to travel longer distances<sup>4,5</sup>. Furthermore, exposure to air pollution from low-quality fuel while performing traditional household chores can make them more prone to premature deaths due to associated lower respiratory infections, ischemic heart disease, chronic obstructive pulmonary disease, stroke and other adverse health conditions<sup>8</sup>.

Climate-induced displacement and migration pose unique challenges for women. Displaced women often find themselves in precarious and dangerous situations, facing vulnerabilities such as exploitation, trafficking, and limited access to resources and legal protection. Rising social tensions during the crisis can also lead to increased gender-based violence, exploitation, and abuse, presenting further challenges for women and

girls. This lack of security and stability leads to long-term setbacks in education, employment, and mental and physical health, perpetuating cycles of poverty and inequality.

The deleterious impact of climate change is further exacerbated during pregnancy when the mother and the developing foetus have distinct physiological needs that might potentially be threatened by adverse environmental conditions<sup>9</sup>. Extreme weather events increase the incidence of vector-borne illnesses like dengue fever, malaria, and Zika virus, leading to worse maternal as well as neonatal outcomes. Pregnant women, children, and the elderly are especially vulnerable to untreated illnesses and complications. Limited access to healthcare services contributes to the risk, particularly in rural and remote areas. Women and girls encounter obstacles in accessing relief and assistance in the aftermath of any calamity, which jeopardizes their livelihoods, well-being, and recovery.

Despite the unequivocally unjust impact of climate change on women's health, these impacts are underreported, underestimated and more often than not, neglected according to the World Health Organization's (WHO) report on maternal, newborn and child health protection from climate change impacts<sup>8</sup>. Women's voices are often marginalized in climate policy and decision-making processes, which restricts their ability to influence adaptation and mitigation strategies feeding into the cycle of vulnerability and inequality. Despite these challenges, women have demonstrated remarkable resilience and leadership in the face of adversity. Women-led initiatives are leading to tangible change in many regions. These include promoting agroecological farming practices and establishing community-based disaster preparedness programmes<sup>10</sup>. It is essential to include women in these discussions because their unique perspectives and experiences can lead to more inclusive, sustainable solutions that benefit entire communities. Emerging evidence from the developing nations supports the fact that women's empowerment and capacity building can make significant contributions towards social, economic, and ecological resilience<sup>11-15</sup>. Women's unique insights is crucial to design and implement mitigation strategies owing to their lived experiences. For instance, their intimate knowledge of local ecosystems and resources allows them to develop context-specific strategies for adaptation and conservation. As primary caregivers and nurturers, they understand the importance of creating safe, stable environments for future generations. Empowering women and amplifying their voices

can enable society to tap into a wealth of wisdom and creativity, offering effective solutions to address the climate crisis. Hence, future research to support evidence-based policymaking to respond to climate change would benefit from adopting a mixed methods approach incorporating gendered considerations<sup>16</sup>.

Across the world, more diversified community-based strategies to climate change are increasingly being adopted and advocated to promote sustainable practices and drive innovation in areas such as clean energy and water management<sup>17</sup>. Women's role in shaping a resilient and sustainable future is increasingly being recognized as critical as they continue to pave the way for meaningful changes in the face of the global climate crisis. However, gendered dimensions are often neglected. Moreover, the sustainability of such initiatives remains greatly dependent on a wide range of factors including the commitment of local authorities, resources to translate evidence into local policies and actions, the presence of women's social networks, and societal recognition of women's role in income generation. Furthermore, supporting women's education and leadership in climate action can have a ripple effect on entire communities. Educated and empowered women are more likely to advocate for environmental protection, promote sustainable livelihoods, and inspire others to take action.

The world has come together to respond to the threat of climate change. The Paris Agreement<sup>18</sup> provides a framework for global action to combat climate change, however, its implementation needs to be context-specific to accelerate and intensify the actions and investments needed. Global initiatives, like the Intergovernmental Panel on Climate Change by the World Meteorological Organization and the United Nations Environment, were taken to provide an objective source of scientific information to direct future initiatives. Following the 2015 Lancet Commission on Health and Climate Change, the Lancet Countdown was established and is currently tracking 47 indicators across five key domains namely climate change impacts, vulnerability, exposures, and planning, adaptation, resilience for health; health co-benefits and mitigation actions; finance and economics and public and political engagement<sup>19</sup>. Addressing the gendered dimensions of climate change in all such initiatives is essential to achieve comprehensive and effective solutions that benefit everyone. The Call to Action by the WHO, United Nations International Children's Emergency Fund and United Nations Fund for Population Activities last year provided targeted

recommendations for various stakeholders—such as governments, global financing mechanisms, donors and foundations, the private sector, and civil society—to ensure that the health needs of women, children, and adolescents are more effectively addressed in climate policies, financing, and programs<sup>9</sup>.

Recognizing and addressing the unequal impact of climate crises on women is critical to achieving climate justice and equitable progress. By elevating women's voices, ensuring their participation in decision-making, and supporting their leadership, we can pave the way for more just and effective responses to the climate crisis. This is not only a matter of fairness but a necessity for the collective resilience and sustainability of our planet and its people.

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