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Synergies in jointly addressing climate change, health equity and gender equality

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Climate change is already impacting negatively on the health and well-being of individuals across the globe, and this burden is likely to become more important and debilitating over time. Due to deep-rooted systemic inequalities, the growing negative consequences disproportionately affect diverse women, girls and lesbian, gay, bisexual, transgender and intersex (LGBTI) people. The same structural and cultural factors that render them more vulnerable also limit their meaningful participation in mitigation and adaptation planning and marginalize their needs. This policy brief argues the case that to enable gender-transformative, intersectional and rights-based approaches, climate change, gender and other social determinants of health must therefore be considered and addressed jointly where possible. A systems-based approach can improve the understanding of important synergies and co-benefits, feedback loops, trade-offs and unanticipated consequences that are critical to priority-setting and effective responses. It can also foster critically needed cross-sectoral collaboration among the policymakers and advocates who work on climate, health and gender equality.

Climate change has been described as the biggest global health threat of the 21st century.[2] Its nefarious impacts have had and will continue to have enormous negative implications on the health and well-being of billions of people, threatening to reverse many of the significant health and development gains made over the last 50 years.[3]

Climate change directly and indirectly impacts human health and well-being in many ways. The direct impact through death and illness resulting from extreme weather events such as heatwaves, storms, floods and other disasters is readily visible. Other impacts are mediated by natural systems, manifesting through changes in the patterns of transmission of water- and vector-borne diseases, respiratory illnesses linked to reduced air quality and exposure to allergens, as well as malnutrition and food-borne disease in the face of growing food scarcity. Indirect human-mediated health impacts add to the burden through complex pathways. Climate change undermines many of the social determinants of health, such as livelihoods, social inclusion and equality, and access to health and social services. This exacerbates

economic and social inequalities and conflict leading to displacement, disruptions in food supply, accelerating threats to mental health and increasing risks linked to gender-based violence (GBV). This syndemic also adds a significant burden on health systems and leads to disruptions in essential services, including sexual and reproductive health services.[4] A very conservative estimate by WHO projects that an additional 250,000 deaths will result from climate change annually by 2030, without accounting for the impact of several major causal pathways such as migration, conflict, economic damage, major heatwave events, river flooding or water scarcity.[5]

This burden of ill health disproportionately falls on the most vulnerable and disadvantaged, including diverse women and lesbian, gay, bisexual, transgender and intersex (LGBTI) people. As gender-based vulnerability intersects with other forms of discrimination based on income status, race, ethnicity, sexuality, HIV, indigeneity, age and/or migrant status, the people who most frequently face stigma and discrimination have the least personal autonomy or influence on decisions that impact their health and face the highest structural barriers to access to health care services ultimately suffer the worst health outcomes. Climate change exposes and amplifies existing inequalities both between and within countries: in a vicious cycle, initial inequality contributes to the disproportionate suffering of disadvantaged groups, resulting in greater subsequent inequality.[6] Existing inequities also mean that women and LGBTI people's specific health and well-being needs are frequently deprioritized, especially in crisis situations.

However, vulnerability in the face of climate change is not an innate, fixed property that must define certain groups of people but rather the result of systemic and deep-rooted discrimination and inequity. It is telling that, despite obvious disparities between genders and in their differentiated healthcare needs, gender-disaggregated health data are often non-existent or underrepresented in assessments of the health impacts of climate change in research as well as in mitigation and adaptation policy and planning.[7] To break the vicious cycle that replicates and reinforces systemic inequality in health outcomes and to enable gender-transformative, intersectional and rights-based approaches, women and LGBTI people must be recognized and included as leaders, decision-makers and experts, not as passive beneficiaries, in the design, implementation, monitoring and evaluation of effective and sustainable mitigation and adaptation actions.[8]

The disproportionate impact of climate change on the health and well-being of women and LGBTI people

Vulnerability in the face of climate change is not inevitable but is a function of systemic and deep-rooted discrimination and inequity. The risks to health posed by climate change are the product of the nature of the hazard, the extent of exposure to the hazard and underlying vulnerability,[9] which in turn depends on factors such as health status, socio-economic status and access to health care services. These vulnerability factors are further compounded by social determinants such as inequalities associated with sociocultural factors, including gender norms, roles and relations, and characteristics like sexual orientation, race, ethnicity, disability and citizenship.[10]

The increased health risks of climate change for women, girls and LGBTI people are heavily influenced by sociocultural factors that include gender norms, discrimination and marginalization. These largely determine power and privilege or, conversely, disenfranchisement and disadvantage. Gender norms and gendered expectations directly impact the availability of resources and options that allow individuals to respond and adapt to shocks and stressors that result from climate change,[11] which translate to differential health outcomes.

For example, women and girls have been found to be at a far higher risk of mortality or serious injury from exposure to disasters than men and boys. Male survivors of the 2004 Indian Ocean tsunami outnumbered female survivors by a ratio of almost 3:1 in parts of Banda Aceh, Indonesia, with females accounting for nearly 77 percent of deaths.[12] Women represented an estimated 61 percent of fatalities in Myanmar after Cyclone Nargis in 2008, 70 percent after the 2004 Indian Ocean tsunami in Banda Aceh, and 91 percent after Cyclone Gorky in Bangladesh in 1991.[13] Physiological differences alone do not account for these disparities: gender-specific social norms and expectations also play a key role. For example, women are often less likely to be taught potentially life-saving skills such as swimming and climbing and have more limited access to practical information on disaster mitigation and preparedness.[14] They may also lack the agency to make decisions about the hazard event, be more likely to face evacuating with children and elderly or wear clothing that restricts

their movements.[15] The social marginalization, stigma and poverty experienced by many LGBTI people also dramatically increase their susceptibility to climate-related shocks.[16] Research conducted in the aftermath of the 2008 tsunami and other natural disasters has highlighted how LGBTI individuals are often ignored or sidelined during and after emergencies.[17] Criminalization, discrimination and marginalization create vulnerabilities before disasters, leading to specific and disproportionate disaster impact on gender and sexual minorities. The difficulties in accessing justice, health, education, employment, housing, and other services are exacerbated in crisis situations, and exclusion from families, communities and religious and other organizations adds to the lack of safety nets direly needed in crisis. Lack of legal identity may hamper the ability of transgender people to access food aid, shelter and other emergency assistance, as has been documented through research in, for example, India, Indonesia, Pakistan, the Philippines and Samoa.[18]

Meanwhile, unpredictable weather patterns caused by climate change are having serious effects on human food production and distribution systems globally, often negatively affecting the availability of nutritious food for the poorest. Sociocultural norms and practices in many countries mean that women and girls are often worst hit by hunger and malnutrition because their nutritional needs are considered secondary to those of men and boys.[19] Women are more likely to be primarily responsible for household food provisions, which becomes more burdensome during food crisis, and research shows that reduction in women's consumption is more likely to act as the household buffer in these situations. Women also carry a higher unpaid care work burden in general and are more likely to work in the informal sector without access to social security, making it more difficult for them to migrate for work in response to shocks.[20] Similarly, increasing water scarcity is having a disproportionate impact on poor women and girls in many low-income countries, where women are spending increasing time and energy travelling to and from water sources, with serious health implications. For example, during the dry season in rural India, 30 percent or more of a typical woman's daily energy intake is spent fetching water. Carrying heavy loads over long periods of time can cause cumulative damage to the spine, neck muscles and lower back, leading to early ageing of the spinal column.[21]

To add to the growing body of evidence on gendered health impacts driven by climate change, UNDP's Communities of Practice on Health, Gender and Environment convened an online public consultation—*Ensuring integration of women and LGBTI people's needs in health and climate change action*—in 2021. The inputs collected highlight specific barriers to the realization of rights and access to services in the context of the impact of climate change on women and LGBTI people's health. Participants stressed the importance of an intersectional lens to unpack the complex ways in which gender identities interact with other forms of disadvantage. In addition to the vulnerability more directly generated by extreme weather events, environmental degradation and disease outlined above, participants highlighted three emerging areas where harmful gender norms and stereotypes interact with climate change, with particularly harsh implications for women and LGBTI people: sexual and reproductive health and rights (SRHR), GBV and mental health.

Sexual and reproductive health and rights (SRHR)

Climate-related weather events and disasters strain the capacity of health systems and curtail access to SRHR services, which can lead to unwanted pregnancies, complications and deaths during childbirth and increases in sexually transmitted infections. Climate change also creates conditions that result in harmful practices and violence. For example, increased stresses on household finances and climate-related conflict further constrain access to health services and increase the risks of early marriage, maternal mortality and morbidity, sexual violence and human trafficking.[22] Barriers to SRHR not only hinder progress towards gender equality but may also impede climate action by restricting women's ability and opportunities to pursue education, improve their livelihoods and access resources and services.[23] Conversely, when women, girls and LGBTI people enjoy full autonomy, they are empowered to make informed decisions about their own health and future. Moreover, they can make better decisions to manage risks and pursue new livelihood strategies, strengthening their resilience to climate change.[24] Recognizing the links between climate change and SRHR is key to identifying and implementing effective, adapted and sustainable responses to climate change while also improving gender equality and access to SRHR services.[25]

Gender-based violence

A recent systematic review found that most studies conducted showed an increase in one or several GBV forms during or after extreme events, often related to economic instability, food insecurity, mental stress, disrupted infrastructure, increased exposure to men, tradition and exacerbated gender inequality.[26] The social, financial and

infrastructure stresses linked to climate change can heighten gender inequalities and gender-based violence. Conflicts triggered or exacerbated by resource scarcity strengthen conditions for GBV to thrive, while attempts by families to cope with the compounding impacts of climate change and disasters may increase harmful GBV practices such as child marriage.[27] Emerging evidence indicates that in the aftermath of disasters, women and girls are more likely to be displaced as a result of water and fuel scarcity that forces them to travel farther, exposing them to higher risk of GBV.[28] Conversely, crises that confine people in their residence can also have an adverse impact, as documented during the COVID-19 pandemic. Violence against women and girls, particularly domestic violence, was found to be exacerbated by measures—such as lockdowns, social distancing and other forms of restrictions on movement—that were put in place to mitigate the spread of the virus. Meanwhile, safe access to support services—like shelters and legal aid—was curtailed due to the diversion of resources to pandemic responses.[29] Losses in livelihoods were found to increase vulnerability to GBV and contribute to an increase in exploitative transactional survival sex. Sexual exploitation and abuse in relation to accessing and controlling pandemic response services and resources to cover basic needs were also documented, as well as targeting of women human rights defenders during lockdowns.[30] Women, girls and LGBTI people who face greater vulnerability to multiple forms of discrimination—including those who are older, those living with disabilities, those who are displaced, refugees or migrants, victims of armed conflict, those who are from indigenous communities, those living in informal settlements, as well as sexual and gender minorities—suffer even higher risks and additional obstacles in accessing essential services.[31] LGBTI people were also found to be at increased risk of violence and abuse in their places of residence due to forced cohabitation with unsupportive family or abusive partners during quarantines or lockdowns, while the closure of counselling and other services curtailed support options.[32] GBV has a wide range of public health implications, including physical injury, unwanted pregnancy, exposure to HIV or other sexually transmitted infections, fertility problems, internalized stigma, mental health conditions and ramifications for children (including those born out of rape).[33] Climate-related conflict and disasters will likely continue to expose women and LGBTI people to higher risks of GBV while simultaneously limiting their support options, continuing a vicious cycle that thwarts their ability to be change agents for climate resilience.

Mental health and well-being

To date, research on the impact of climate change on health has largely focused on physical health, largely overlooking the impact on mental health and emotional well-being. Evidence is still scarce, but recent research has explored the pathways that compromise mental health, including the impact of exposure to hotter temperatures, to higher rainfall and to cyclones; the impact of mass trauma from extreme climatic shocks; the impact of damage to physical and social environments; and the impact of increased anxiety, instability and social isolation.[34] Those particularly vulnerable to the mental health effects of extreme weather events include people with prior experiences of deprivation or mental health issues, women (particularly pregnant or postnatal), people with less social support and people experiencing inadequate medical care, welfare support or financial instability, as well as minority groups.[35]

The care burden women bear—both paid and unpaid—contributes to higher levels of mental health issues relative to men, while women also constitute the majority of frontline health workers in many contexts.[36] Minorities, including LGBTI people, are at risk of mental health effects from stress caused by pervasive stigma and discrimination and are more likely to face greater barriers to accessing care.[37] Disasters such as earthquakes may undermine or render inaccessible the support services, the physical spaces and the support networks on which LGBTI people often rely, while their needs often remain invisible and overlooked in disaster response planning.[38]

Inclusive governance for equitable outcomes

The 2030 Agenda for Sustainable Development encapsulates as an important overarching principle to ensure “no one will be left behind” and to “endeavour to reach the furthest behind first”. The framework analyses how people get left behind when they lack the choices and opportunities to participate in and benefit from development progress. Five factors drive who is left behind: discrimination, geographical location, weak governance, socio-economic status and vulnerability to shocks. A person may be left behind due to disadvantages related to one or more of these factors, with the furthest left behind typically facing multiple disadvantages.[39]

The framing of women and LGBTI people as 'inherently vulnerable' obscures systemic and deep-rooted discrimination derived from patriarchal structures, norms and cultural dynamics that results in the vulnerabilities in the first place. Effective, rights-based integrated approaches must take into account that the same structural and cultural factors that render them more vulnerable also limit their meaningful participation in mitigation and adaptation planning and marginalize their needs in policy impact assessments. Therefore, not only are the negative impacts of climate change on health unequally borne, but they are also unequally considered in traditional policy processes.

Lack of representation of different genders, sexual orientations, races, socio-economic status and disciplines is pervasive within health and climate-change governance mechanisms, often sidelining those who could offer unique perspectives and expertise. For example, a recent review found that a mere 3.5 percent of COVID-19 decision-making and expert bodies have achieved gender parity in their membership,[40] while another report found that women held just 24 percent of seats on COVID-19 task forces and one in 10 had no women representatives.[41] Similarly, only 38 percent of delegates and 27 percent of delegation heads at the 24th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP24) were women.[42] This overwhelming underrepresentation may contribute to the lack of gender responsiveness in climate change mitigation and adaptation research, planning and policies.

A 2020 review of National Adaptation Plan (NAP) processes found that although considerable progress had been made in just the previous two years, particularly in framing women as key stakeholders rather than just as a vulnerable group or beneficiaries of adaptation actions and in the utilization of targeted gender analysis and sex-disaggregated data, few of the current plans considered gender in the institutional arrangements for adaptation, and only one third of proposals to the Green Climate Fund globally mentioned the establishment of institutional arrangements to address gender.[43] Important progress has been made in improving the gender-responsiveness and inclusiveness of Nationally Determined Contributions (NDCs) and addressing integrated considerations. According to a 2021 review, 78 percent of NDCs submitted included explicit mention of women and/or gender, an improvement over the 32 percent reported in 2016. While roughly a quarter of NDCs remained gender-blind, and the type and frequency of gender references varied considerably, specific activities to address GBV, indigenous women and LGBTIQ+ inclusion, among others, were noted. An overall increase in referring to women as stakeholders or even, in some cases, as agents of change indicates progress in shifting the narrative; some (4 percent) reports also included specific references to LGBTQI+ groups.[44] A UNDP report published in 2022 found that 27 countries recognized national gender equality policies in their NDCs and 10 had an explicit policy linking gender and climate. Fifty-one percent of NDCs described mainstreaming gender into climate change programmes and instruments, compared to just 6 percent in 2015. Twenty-six countries were found to have gender references in adaptation efforts for the health sector.[45] Both awareness-raising among policymakers on the benefits of equal stakeholder engagement and capacity building of women and LGBTI people are needed to ensure meaningful participation.

In order to achieve equitable health outcomes for all, the policy processes themselves must effectively address these persistent systemic inequities and deliberately centralize and facilitate inclusion. Full, meaningful and equal participation of women and LGBTI people in all aspects of climate policy and action is vital for achieving medium- and long-term climate goals. To break the cycle of replicating and reinforcing systemic inequalities in health outcomes, women, girls and LGBTI people must be recognized and included as agents in developing health and climate-smart systems rather than being treated as passive beneficiaries or victims.[46] Significantly, gender analysis of climate change should not view women and girls as a monolithic group, as this leads to policy and programmes based on generalized assumptions, which are often ineffective or outright harmful, doing little to resolve the underlying structural issues.[47] An intersectional lens is critical to unpacking the complex ways in which gender identities interact with other forms of disadvantage and compound discrimination and to designing, through participatory and inclusive processes, interventions that work for all people.

The call for a gender-transformative, intersectional and rights-based approach to integrating the needs of women, girls and LGBTI people in health and climate action must be accompanied by an honest assessment of political will as well as a commitment by state representatives and other duty-bearers to respect, protect and fulfil their human rights to health. Despite the proliferation of gender integration guidelines, women, girls and LGBTI people remain underrepresented in decision-making and leadership, limiting their opportunities to exercise their agency, including in the aftermath of climate-related disasters.[48]

Systemic action for transformational change

Some climate change actions will also generate a positive impact on health,[49] while maladaptation has the potential to cause harm to health and widen inequalities.[50] These health co-benefits provide additional economic and ethical incentives for action. At the same time, health considerations remain poorly integrated into the climate action agenda.

For example, results from a 2021 survey show that fewer than one in five countries had conducted an assessment of the health co-benefits of their national climate mitigation policies. If health is not explicitly considered in a country's climate adaptation and mitigation planning, well-intentioned efforts to improve population health could be *undermined*.[51]

Systemic action: Examples of climate action-health-gender equality connections and potential co-benefits

Air pollution and non-communicable diseases (NCDs)

The systemic linkages at the nexus of health and climate are relatively well-researched with regard to air pollution as a driver of both global environmental change and the risk of NCDs. The combustion of fossil fuels—primarily coal, petrol and diesel for electricity generation and transport—accelerates climate change and simultaneously generates air pollutants such as tropospheric ozone and particulate matter (PM2.5), the most important predictor of mortality from long-term exposure.[52] The adverse impacts of air pollution are most heavily borne by vulnerable populations, such as children, women and people living in poverty and once again most of all by those who face intersectional discrimination.[53]

Greenhouse gas emissions and mental health

People who are particularly vulnerable to the mental health effects of extreme weather events include those with prior experiences of deprivation or mental health issues, women (particularly pregnant or postnatal), people with less social support, people experiencing inadequate medical care, welfare support or financial instability, and minority groups. Climate change also exacerbates mental distress, particularly among young people, even for individuals who are not directly affected (e.g., 'eco-anxiety'). The climate crisis also threatens to disrupt the provision of care for people with a mental illness diagnosis. Policies designed to reduce greenhouse gas emissions may generate co-benefits that also act as a preventive measure against the emergence of mental illness and improve overall population mental health, well-being and quality of life. Identifying and integrating these policies into carbon reduction plans can help decision-makers to make limited budgets go further by concurrently achieving multiple goals. For example, creating 'green' and 'blue' spaces (i.e., incorporating plants and water) in urban areas can help to limit the global increase in greenhouse gases while reducing psychological distress, preventing depression, and increasing well-being. Nature-based solutions to climate challenges, such as forest conservation, can be win-win-wins for boosting economies, protecting urban communities against the impacts of climate change and creating communities with more resilient mental health.[54]

SRHR and climate action

Powerful feedback loops exist in access to vital health services and the ability to engage in climate change and health action. For example, ensuring that bodily autonomy is respected and protected and that people are able to have their SRHR needs fulfilled without coercion and discrimination are enablers to participation as well as direct contributions to achieving the Sustainable Development Goals. As an emerging good practice example, Seychelles includes in its NDC a commitment to meeting SRHR needs of women and young people in an unstable and changing climate and improving information systems related to reproductive, maternal, neonatal, child and adolescent health, as well as ensuring that financing for climate resilience takes into account risks to maternal and neonatal health and takes measure to reduce these risks.[55]

Many determinants of health fall outside of the health sector's responsibilities, necessitating cross-sectoral action.[56] However, the connections among gender, health and climate change are not yet systematically made by decision-makers or translated into concrete assessments to inform actions, so current efforts remain largely siloed. Climate change, gender and social determinants of health must be considered together as targets for interventions in order to improve population health in a rapidly evolving policy and programmatic environment.

The relationship between human health and climate change can be non-linear and involve time delays and feedback loops. Such complex, dynamic interactions can lead to health outcomes that are hard to predict and result in unintended consequences.[57] Systems thinking—analysing the connections and interdependencies among climate, health and gender equality as a dynamic system—brings a coherent approach to informing relevant policies across sectors. Such a systems-based approach can improve understanding of important synergies and co-benefits, feedback loops, trade-offs and unanticipated consequences that are critical to priority setting and effective responses. It can also foster critically needed cross-sectoral collaboration among the policymakers and the advocates who work for climate, health and gender equality. Systems thinking underpins the three key elements needed for effective cross-sectoral collaboration to address the climate and health nexus: understanding the multisectoral impacts of human-driven climate change, assessing the climate and health benefits and costs of policies, and building the skills necessary to work across sectors, to share information and to coordinate policy action.[58] An understanding of critical climate and health relationships in the policy process can help prepare for mitigating the adverse health and climate impacts from the outset while deliberately positioning women and LGBTI people as key actors in decision-making processes and structures.

Key insights for the operationalization of UNDP's Gender Equality Strategy 2022–2025

Further deliberate and focused efforts by all stakeholders are needed to strengthen cross-sectoral collaboration and effectively address the intersection of climate justice, health equity and gender equality. Additional research is also needed to fully unpack and understand the climate change–health equity–gender equality interactions and design effective responses.
As an integrator working across Sustainable Development Goals, UNDP is uniquely positioned to facilitate the application of a systems-based approach in pursuit of better health outcomes that emerge from the complex interrelationships between natural and social systems while mainstreaming gender equity and equality. UNDP's current work across these thematic areas provides excellent opportunities to develop integrated solutions that cut across siloes and enhance collaboration among the different sectors.
Promising entry points for UNDP include:[59]

- Leveraging UNDP's internal capacities, such as the Accelerator Labs, to enhance understanding of systems thinking in relation to the linkages among climate change, health equity, and gender equality among all stakeholders.
- Building on successful programming on gender equality, GBV, LGBTI inclusion and enabling environments for the HIV response, facilitating effective engagement of marginalized groups in inclusive policy dialogue and programme planning across line ministries, civil society, the private sector and academia.
- Applying the Social and Environmental Standards to ensure identification, management and mitigation of intersecting climate change, health and gender risks across its programmatic portfolio.
- Strengthening climate-health-gender priorities in updated Nationally Determined Contributions (NDC) and in the implementation of NDCs and their health and related sector measures through the Support Programme and Climate Promise.
- Supporting integration of gender and health dimensions in national climate change policies and action plans such as *National Adaptation Plans of Action* and *Local Adaptation Plans of Action*.
- Promoting the use of tools like gender-responsive budgeting to ensure that resources are equitably allocated for the translation of commitments into action on gender equality in the context of climate change efforts and health service provision.
- Promoting data collection and analysis and application of research findings on the intersections of climate change, health and gender.
- Systematically cataloguing and disseminating promising policy interventions and other good practice examples.

Endnotes

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