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COP30, climate injustice and health inequity

In November 2024, my editorial considered climate change and the impact of extreme heat and heatwaves on health.[1] With change in climate continuing, I revisit the subject a year later, and this time from the perspective of social injustice and health inequities, matters that were discussed extensively at the recent Conference of the Parties (COP), the annual meeting of countries that have signed the United Nations Framework Convention on Climate Change.[2] The inevitable reality of climate change and its implications for health present huge challenges for public health, endanger historic health achievements and further pressurise already overwhelmed systems. Globally, these events, emergencies, health threats and major environmental changes have resulted in the health sector being at the forefront of the most strategic decisions of the 21st century. According to the COP30 Special Report on Climate Change and Health,[3] 'Protecting lives, reducing inequalities, and bolstering the resilience of health systems are no longer just goals – they have become ethical and democratic imperatives.'

Vulnerability increases as average temperatures worldwide rose >1.5°C above the pre-industrial average in 2024. Heat-related illness has given rise to >540 000 deaths per year – a 63% rise since the 1990s.[4] This vulnerability extends equally to the health systems that serve these people. A 2023 global assessment suggested that 1 in 12 of the world's hospitals will be at partial to high risk of total shutdown due to extreme events under a high-emissions scenario. Given that >70% of these hospitals are found in low- and middle-income countries (LMICs),[5] and that climate change presents the most significant threat to human health of this century,[6,7] the poorest and most vulnerable in the world are the most disproportionally affected.

While no-one anywhere in the world is immune to the health impacts of climate change, 3.3 - 3.6 billion people are currently living in high climate-vulnerability contexts[3] where rising temperature and extremes of heat directly injure their renal and cardiovascular systems.[8,9] Health effects have direct economic impacts, with the *Lancet* highlighting a loss of ~USD1.09 trillion (just <1% of global GDP) in 2024 because of resultant reduced labour capacity.[4] Increasing intensity and frequency of storms result in direct injuries, disruption of critical infrastructure and sanitation systems and a worsening of existing mental ill-health. Also impacted are freshwater and food systems, and severe stunting from malnutrition in children <5 years old is predicted to increase by 23% and 62% in sub-Saharan Africa and South Asia, respectively.[10] The main contributors and causative factors of global warming are responsible for >5 million premature deaths each year from fossil fuel-related air pollution. Other ramifications include an additional 132 million people living in extreme poverty by the end of the decade.[3]

As climate change intensifies, so do health inequities. While LMIC contexts are highly vulnerable to climate hazards, their risks are further augmented given their weak health systems and limited adaptive capacity.[3] More than 90% of deaths from climate-related disasters occurred in LMICs over the past two decades, underscoring the problem of climate injustice, because these 3.6 billion people (nearly 50% of the global population) generate <10% of global emissions.[11] Furthermore, issues of equity cut across the entire climate change quandary globally. The associated hazards such as floods and heatwaves are symptoms of deep underlying inequalities, with those contributing minimally to climate change being maximally affected by it. Moreover, those people with fewer resources are more likely to live or work in high-risk environments such as informal coastal settlements and agricultural fields without adequate protection. Additionally, vulnerability, which captures the capacity to anticipate, cope with and recover from impacts, is strongly influenced by access to healthcare, education, housing, infrastructure and social protection.[3]

Historic and continuing patterns of economic and political marginalisation, with resources, power and emissions concentrated away from where the impacts are felt, are the fundamental influencers of climate-related health inequities, resulting in many of the problems associated with structural determinants of health. These inequities will need to be addressed if climate justice is to be achieved, and a wide-ranging set of systems and sectors across society will need to be transformed. In the health context, this will entail serious actions within health systems to protect populations, redress inequities and build resilience. Without doubt, determinants of inequality extend way beyond health ministries. However, this sector indisputably plays vital roles as first responder to the human consequences of climate change and as an advocate for multidisciplinary action where health equity should form the core of climate policy.[3]

The concept of climate justice is highly contextual, and it differs appreciably across settings and applications.[12] Geopolitically, decision-makers have the responsibility to identify contextually relevant matters and to explicitly define how climate justice is to be conceptualised and operationalised in all cross-sector programmes. It was highlighted at COP30 that ultimately, leadership and governance are core to the integration of equity and climate justice into health adaptation, as they establish how power is distributed, whose interests are prioritised and whose voices control decisions. New equity metrics and indicators need to be integrated into existing climate and health programmes and governance processes in order to bolster accountability and transparency. Integrating equity into social, environmental and health impact assessments should be mandatory and enforced through legal and regulatory instruments. Government capacity to deliver equitable and holistic adaptation strategies across all sectors is to be augmented through cross-ministerial co-ordination mechanisms. However, the reality is that there are structural barriers impeding integration. These include limited financing, fragmented data systems, siloed communication and unclear accountability.[3]

Discussion on climate change and health equity will not be complete without considering the health workforce, which remains heavily concentrated (47% capacity) in high-income countries, which contain only one-fifth of the total world population.[13] Given that climate change increases the burden on health services, existing workforce shortages, particularly in already vulnerable LMICs, are intensified. However, workforce deployment remains imbalanced, with persistent shortages in rural, remote and underserved areas worldwide. The situation is made worse by the direct impact of climate change on health professionals themselves. COP30 recommended that adaptive workforce planning will need to focus on retention and equitable distribution, and should be supported by incentives, training and safe working conditions that allow staff to remain in high-risk settings. Protecting health workers from occupational hazards is not only an issue of equity, but also a prerequisite for sustained service delivery. To improve service responsiveness and cultural safety in care, competence in climate and health equity

through undergraduate and continuing education for healthcare workers and health policy-makers is essential.[3]

With South Africa (SA)'s participation in COP30 and its public announcement that it welcomes the outcomes of the 'COP of Truth',[14] and that the state stands ready to work with all parties to ensure that the decisions taken in COP30 will translate into action and the adoption of indicators to track progress into targets, it will be interesting to follow whether and how this is implemented, in particular in the health sector. It is hoped that the commitments do not remain lip service (as do many of the other promises from the state), and that the state's use of funds from SA citizens toward its participation in COP30 is not yet another example of wasteful spending.

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