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National policy response to climate change in South Africa

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The South African government has taken several steps in response to climate change and its associated threats to human health. The National Climate Change Response Plan White Paper defines government's vision for effective climate change response and transitioning to a climate-resilient, low-carbon economy. The White Paper identifies potential health challenges for South Africa (SA), including vector- and water-borne diseases and heat stress. The National Climate Change and Health Adaptation Plan (the Plan), prepared by the National Department of Health, expands on these health challenges, raising not only additional ones, but also related socioeconomic risk factors, such as housing and settlements. Community participation was adopted as one of the guiding principles for implementing the Plan, especially as behavioural change is likely to be important for adaptation and coping strategies. Multisectorial co-operation is also imperative, as many of the climate-related health risks involve multiple multidisciplinary stakeholders to implement appropriate interventions. Addressing inequalities and poverty in SA is critical to ensure that the health impacts from climate change are mitigated, particularly as current evidence suggests that the largest health risks are possibly among communities already most impacted by climate-related diseases. More research is needed to determine the impact of climate on health and which communities are the most vulnerable. Tailored monitoring and evaluation systems, linked with climate surveillance, will provide an opportunity to collect health data on key health risks to inform decision-making.

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South Africa (SA) launched its National Climate Change Response Plan White Paper (NCCRP) in 2011,^[1] prior to hosting the 17th session of the Conference of the Parties (COP 17) to the United Nations Framework Convention on Climate Change (UNFCCC) in Durban. The NCCRP outlines '... the South African Government's vision for an effective climate change response and the long-term, just transition to a climate-resilient and lower-carbon economy and society'.^[1] It has two objectives: (i) on climate change adaptation, to 'effectively manage inevitable climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity'; and (ii) on climate change mitigation, to 'make a fair contribution to the global effort to stabilise GHG (greenhouse gas) concentrations'. Accordingly, the NCCRP outlines actions for climate change adaptation and mitigation. Human health is one of seven sectors focused on for climate change adaptation measures.

The NCCRP outlines the potential health challenges that may be experienced owing to climate change. These include vector- and water-borne diseases, heat stress and diseases related to air pollution exposure. Additionally, it calls for increased data collection and research on links between climate and health, and the tracking of climate-related diseases as part of a national Monitoring and Evaluation (M&E) system.

The National Department of Health expands further on the potential health impacts of climate change in their draft National Climate Change and Health Adaptation Plan.^[2] The objectives of the Plan are to:

- 'Effectively manage inevitable climate change impacts on health through interventions that build and sustain South Africa's socio-economic and environmental resilience and emergency response capacity;

- Describe the environmental and health contexts for the proposals contained in the plan;
- Outline a broad programme of activities to be undertaken or spearheaded by the South African health sector, giving specific examples; and
- Indicate relevant partners, time frames and financial implications.^[2]

In this Plan, nine health and environmental risks are highlighted as potential key risks: (i) heat stress; (ii) natural disasters; (iii) housing and settlements; (iv) communicable diseases; (v) exposure to air pollution and respiratory diseases; (vi) non-communicable diseases; (vii) vector- and rodent-borne diseases; (viii) food insecurity, hunger and malnutrition; and (ix) mental ill health. To further develop and implement the Adaptation Plan, several guiding principles (key principles are discussed below) will be followed. These support the fulfilment and alignment of the Negotiated Service Delivery Agreement for outcome 2: 'A long and healthy life for all South Africans'.^[3]

Key guiding principles

Community participation is critical for effective planning and implementation. In addition, for some potential risks, such as increased health impacts resulting from high temperatures, a key adaptation pathway is by means of behavioural change (e.g. drinking more fluids and reducing physical activity during excessively high ambient temperature conditions). Therefore, it is imperative to have community participation in the development of plans for heat-health interventions to be successful.

Many of the health risks outlined in the Adaptation Plan have stakeholders across multiple sectors. For example, increased health risks from natural disasters would include the involvement of stakeholders in emergency response and disaster management for

immediate impacts, but may also include those from the water sector in the case of longer-term flooding or disruption of water supplies. Therefore, to adapt effectively to climate change, there is a strong need for inter-sectoral co-operation.

As mentioned in the review article^[4] in this issue of CME, in the Intergovernmental Panel on Climate Change (IPCC) 5th Assessment Report, WGII report on human health,^[5] the largest human health risks due to climate change will be among communities and populations currently most impacted by climate-related diseases. Additionally, the abovementioned diseases listed in the Adaptation Plan have already been identified as health risks in SA. Hence, there is currently a need to start addressing these health risks with a system and plans that will be flexible into the future to mitigate health impacts. The vulnerability of communities and populations in SA to climate-related health impacts varies greatly. In 2013, the Long-Term Adaptation Scenarios Flagship Research Programme for South Africa produced a technical report on 'Climate Change Implications for Human Health in South Africa'.^[6] In this report, the potential public health risks that were highlighted in the Adaptation Plan, as set out above, together with occupational health, were highlighted as key issues of concern. A quantitative vulnerability and risk assessment for the health sector was recommended as an important next step to identify the most important climate impacts and the most vulnerable populations or communities in SA.

Addressing inequalities and poverty in SA is critical to ensure that health impacts from a changing climate are mitigated across all communities and populations. In *State of the Nation: South Africa 2012-2013*, chapter 19^[7] addresses climate change and health in SA. It emphasises that climate risks are daily realities for some SA households, and sudden or prolonged changes in these risks may make these households even more vulnerable. Preventing morbidity and mortality will require flexible modifications of societal services

and programmes to ensure resilience, especially in impoverished communities.

Conclusion

Currently, there is very little knowledge on the extent and magnitude of health risks associated with climate change in SA. Where there is information about such risks, the links to climate are not well understood; for example, we do not know how increasing temperatures have already affected public health. Therefore, there is a very strong need for further evidence, as well as a platform for this evidence to inform policy. The M&E system, once implemented, will provide an opportunity to collect health data on key risks that can be used to understand if and how the incidence, spread, and severity of selected diseases are being impacted by climate. It is of paramount importance that such systems are linked to climate surveillance systems and that the data are freely available for research. Such analyses can lead towards early warning systems and improved adaptation policies, plans and interventions.

Finally, while most effort in the health sector will be in adapting to climate change, there is an important role for this sector in mitigation through ensuring a decrease in its carbon footprint.

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