

Call to Action: Enhancing the Ambition and Technical Feasibility of Delivering NDCs

Delivering the goals of the Paris Agreement, including limiting global temperature rise to no more than 1.5°C requires the setting and implementation of ambitious yet viable Nationally Determined Contributions, or NDCs¹. Article 4 of the Paris Agreement establishes a responsibility on each party to '*prepare, communicate and maintain*' successive NDCs, each more ambitious than the last. Parties are then encouraged to work at a domestic level to achieve their NDC objectives. In advance of COP28, here we set out our recommendations to enhance the ambition and technical feasibility of delivering NDCs.

1. Strengthen **opportunities for scientific input in the development of NDCs**, ensuring that the mitigation and adaptation pledges included are both comprehensive and scientifically feasible.
 - a. **Develop and share a standardised consultation process** that countries can use to seek input on draft NDCs from diverse expertise related to climate systems, mitigation, and adaptation solutions. While recognising that consultation processes need to align with country-specific institutional infrastructures and regulatory environments (etc), a template and operational guidance note² may help to strengthen the science-policy interface.
 - b. **Form diverse scientific advisory boards**, working with elected representatives and civil servants to develop NDCs. These advisory boards should **include those with expertise in the subsurface, groundwater, and mineral resources** to ensure NDCs are ambitious and technically feasible.
 - c. Improve engagement by **national and international Earth science groups** (e.g., geological societies) **in existing and proposed** (see 1.a) **consultation processes**, sharing their insights on Earth systems, dynamics, and resources through written contributions, informing the development and strengthening of NDCs.
2. Publish an **aligned implementation strategy** alongside the NDC, to aid the shaping of coherent strategies and a cross-governmental approach to addressing climate change.
 - a. Publication of **clear recommendations for those responsible for higher education**, including an articulation of the human resources required if NDCs are to be achieved in full. NDC implementation relies on access to appropriate knowledge and skills. NDCs should identify potential skills gaps, and work with the higher education sector to make appropriate recommendations to address these.
 - b. Publication of **clear recommendations for those responsible for research and innovation**. NDC implementation relies on advances in research and innovation (e.g., understanding how country-specific environmental dynamics affect the viability of certain technologies). NDCs should identify key themes for future research, and work with the research sector to make appropriate recommendations to address these.
 - c. Where training and/or research gaps are identified, **targeted investment from both public and private sectors, and international finance mechanisms, will be required** to support NDC implementation.
 - d. Include **an informed description of the natural resources required to deliver on pledges in NDCs**, within this implementation strategy. This will inform planning and improve transparency around the viability of adopting stated technologies.

A lack of engagement with appropriate expertise when developing NDCs may result in pledges that are not viable and/or the omission of feasible and impactful options. A lack of appropriate implementation planning, and policy coherence, may result in a skills shortage that hinders implementation of actions set out in NDCs and therefore the ability to deliver the mitigation and adaptation ambitions of the Paris Agreement. Collectively, actions (1) and (2) would strengthen the NDC process, while also supporting global ambitions to improve education for sustainable development (SDG 4.7), employment opportunities (SDG 8.5, 8.6), and research capacity (SDG 9.5).

Notes:

Recommendations adapted from a wider analysis of NDCs in eastern Africa, to be published in 2024.

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¹ Nationally Determined Contributions, or NDCs, are countries' self-defined national climate pledges under the Paris Agreement, detailing what they will do to help meet the global goal to pursue 1.5°C, adapt to climate impacts and ensure sufficient finance to support these efforts' ([UNDP, 2023](#))

² This could be modelled on the ["Implementing Science, Technology, and Innovation \(STI\) for SDG Roadmaps at the Country Level: Operational Note"](#) (UNDESA, 2020).