

Walking on thin ice

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Changes in the climate system over tens of thousands of years brought about ice ages and interglacial warming periods. Science confirms that climate change, which is a large-scale and long-term change in the earth's weather patterns, is human-induced and not due to natural causes.

Globally, the past five years have been the hottest on record, extreme weather events such as heat waves, floods, and droughts have gone up five-fold, and economic losses have increased seven-fold over the past 50 years.

In India, temperature rose by 0.7°C in little over a century (1901 to 2018). During the recent 30-year period of 1986 to 2015, India recorded multiple extreme weather events including a rise in severe cyclonic storms over the Arabian Sea, heat waves, floods and droughts. In 2018 alone, extreme climate change events in India resulted in an economic loss of \$37 billion, equivalent to 10% of the Indian budget in FY2019.

India's first national assessment of climate change by the Ministry of Earth Sciences projects that by the end of the 21st century, the frequency of heat waves would be three to four times more, and their intensity would double. The report also warns of storms, floods and rising sea levels.

This is a grave threat to 70% of livelihoods in India that are dependent on climate-sensitive sectors such as agriculture, fishing and forests. It also places cities at risk as they become exposed and vulnerable to climate risks such as water shortages, floods and heat stress.

Consequently, combating climate change — one of the Sustainable Development Goals of the United Nations — is crucial for natural resource management, human security and development. Stressing the importance of a comprehensive strategy, Prime Minister Narendra

Modi stated at the recent G20 virtual summit, “Climate change must be fought not in silos but in an integrated, comprehensive and holistic way.”

Such an approach requires building awareness and systematic efforts at different levels by different participants, including think tanks.

International efforts

In 2015, Parties to the UN Framework Convention on Climate Change (UNFCCC) reached the landmark Paris Agreement. The Agreement referred to a two-pronged strategy—mitigation and adaptation—to keep the global temperature rise this century well below 2 degrees Celsius, above pre-industrial levels.

While mitigation suggests efforts to reduce and stabilise the emission of greenhouse gases, adaptation refers to the efforts to adapt to climate change that we cannot prevent. Fundamentally, while mitigation is a global issue, adaptation is a domestic and regional issue, given climate impacts vary based on geography, climate, inherent vulnerabilities and adaptive capacity.

Under the Paris Agreement, Intended Nationally Determined Contributions (INDC)—foundational to limit global warming—were submitted by 190 countries, including India. The INDC allows countries to define contributions tailored to national priorities.

State Action Plans

The State Actions Plans on Climate Change (SAPCCs) were conceived by India to help mainstream adaptation in developmental plans and decisions. Submitted during 2012-2015, the first version of SAPCCs lacked vision and concrete guidelines, and only broadly advocated incremental changes to the business-as-usual scenarios.

In many of the state plans, actions were ‘wish lists’ with no clear plan or budget tied to them. This was so because the states were unable to distinguish between business-as-usual development activities and measures required to address climate change in many sectors.

With the states presently revising their SAPCCs, we have an opportunity to make amends for the gaps in the first set of plans. To transform the state action plans into comprehensive policy documents, a few good practices will be required.

Firstly, district-level climate change projections should be used for identifying emerging risks. Secondly, this knowledge, coupled with assessment of vulnerabilities of different regions or communities or sectors should feed into the revised plans.

Thirdly, implementation of action plans should be decentralised with the participation of various state departments, district and city administrations. Finally, the plans should incorporate a clear estimate of the finances required, either through allocation of dedicated budgets in the developmental programmes or targeted plans for seeking finance. The ongoing revision of SPACCs is an opportunity to align state goals to the INDC commitments while chalking out domestic action on adaptation. A science-based approach will not only help build resilience of systems and communities over the long-term, but also address the immediate developmental needs.

The state action plans could also pave the way for all future developmental and infrastructural programmes to have risk-profiling and vulnerability-mapping integrated into the project design. Such mainstreaming could help attract private sector finance for adaptation in the future unlike today when private sector involvement is restricted to mitigation.

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