

India's Adaptation Imperative: CLIMATE RESILIENCE FOR GROWTH



Clockwise from the left: Amit Kapoor
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extreme weather events, climate shocks are no longer distant possibilities – they are regular, destabilizing occurrences.

For adaptation measures to be truly effective it needs to be approached as an economic strategy. Studies by World Bank and UNEP shows that every \$1 invested in adaptation can save \$4-10 in avoided damages. Regardless of the ease in realization of immediate benefits, adaptation finance is hard to come by. In the 2015 Glasgow Pact, the developed nations pledged to double adaptation finance by 2025 which never happened but even then, it was projected that the amount will only close five per cent of the existing gaps with annual needs being estimated at \$215-387 billion. India has not been oblivious to the challenges and is preparing to draw national policies and sectoral initiatives that incorporate resilience building into the policy agenda.

The renewed focus on a National Adaptation Plan is set to become a blueprint for mainstreaming climate resilience into governance. At the national level, the Mission on Sustainable Habitat (NMSH) aims to incorporate climate considerations into urban plan-

GLOBALLY, THE battle against climate change is fought on two fronts: one to slow the rising temperature by curbing emissions and the other to prepare for the irreversible impacts of changing climate on natural resources, infrastructure and every aspect of the society. Adaptation to Climate Change has often been treated as a secondary concern – more of a reactive measure than a strategic priority.

This year however India's *Economic Survey* pressed on the significance of Climate Adaptation recognizing that for countries like India where the vulnerabilities are already taking a toll, adaptation can no longer be treated as an afterthought. To safeguard India's economic future, adaptation is to be placed at the heart of our development agenda. What does this entail? What are the social and economic imperatives behind adaptation planning?

Unlike Mitigation which requires long-term and largescale investments, adaptation costs tend to be more localized and immediate. It often requires upfront investment in infrastructure, ecosystem resilience, disaster preparedness etc. While the benefits of mitigation are spread over decades, the benefits of adaptation are felt more immediately. Financial trade-offs also emerge in national budgeting; for instance, investing heavily in fossil fuel phase-out may limit resources for urgent disaster relief, while focusing on short-term adaptation projects can delay necessary long-term low-carbon investments. In India, estimates already show that annual economic loss from extreme weather events alone can be at 2.8 per cent of its GDP by 2030. The renewed focus on adaptation is therefore not abstract policy rhetoric but a response to hard economic realities. With more than 80 per cent of India's districts already vulnerable to



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ning to provide some protection against heat waves, floods and resource scarcity. The agricultural sector is also actively vying for resilience building as it supports more than half of the country's workforce. There are steps already taken to promote climate-resilient crop varieties, soil conservation and improved irrigation. For instance, the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) and the Jal Shakti Abhiyan aim to increase water-use efficiency and expand rainwater harvesting, reducing farmers' dependence on erratic monsoons.

To reduce the vulnerabilities in urban areas, the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and the Smart Cities Mission have included climate-conscious urban designs through better drainage and expansion of green spaces. More than 785 storm water drainage projects have been completed to address urban flooding, and efforts to promote green mobility and non-motorized transport are reducing both emissions and climate vulnerabilities.

The efforts to draw a new adaptation plan however should also consider that

the decision-making process of adaptation and mitigation differ in scale, timing and responsibility. Adaptation needs are local and immediate, addressing climate risks that already exist or are imminent. Devolving powers especially in terms of finances and decentralizing the implementation process can help bring adaptation to the forefront.

By 2023, 34 states/UTs in India completed the preparation of the State Action Plan on Climate Change (SAPCC) in line with NAPCC taking into account the State-specific issues relating to climate change. Yet, implementation lagged behind due to its lack of alignment with annual development plans and budget. There has been progress here and there but nothing much of scale.

The economic imperative for adaptation stems from the fundamental reality that climate risk is an economic risk that can erode productivity, disrupt markets and exacerbate financial instability. The damage to infrastructure, health, crop yields all translate to direct and indirect socio-economic impacts. Unlike traditional economic shocks, climate risks are

non-linear, compounding, and irreversible, meaning delayed adaptation not only escalates future liabilities but also constrains economic choices by locking economies into high-cost recovery cycles. India is moving in the right direction by bringing adaptation to the forefront but giving teeth to implementation, allocating finances and also scaling private financing is important.

The government alone cannot fill the investment vacuum in adaptation finance. Governments can incentivize private sector participation in adaptation through instruments like tax credits, public-private partnerships, and regulatory frameworks that encourage climate-resilient business practices. Strategic, well-timed investments in resilience can enhance economic stability, attract capital, and safeguard development gains, making adaptation not just a necessity, but an economically rational choice. **BW**

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