

# SLIPPING ON CLIMATE CHANGE

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

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The Ministry of Earth Sciences' new report — “Assessment of Climate Change over the Indian Region” — acknowledges that human activity is a major factor in climate change. The admission is significant because since the study of climate systems is not yet regarded as an exact science, governments are reluctant to attribute climate change to human-induced emissions. The gaps in knowledge have been amplified and misinterpreted to stall corrective action. So, for the ministry to finally acknowledge the linkages is a leap forward.

However, the report does well and at the same time falls short. As a purely scientific assessment, it invokes more concern over India's approach to combating climate change, and how much worse critical environmental systems would be under business-as-usual.

It projects that the average temperature over the country could rise by 4.4 degree celsius by 2100. To the uninitiated — some within the general populace and the policy machinery — it may not ring alarm bells, but it should. The temperatures for the hottest day and the coldest night of each year from 1986-2015 have already gone up by 0.63 degree celsius and 0.4 degree celsius respectively. So has the frequency of extreme weather events. Further rise in temperatures will cause damage worth billions of rupees and thousands may lose their lives.

Among other findings, the report goes on to show how a rise in the sea-level in the northern Indian Ocean (NIO) has accelerated from 1.6 – 1.75 mm per year during 1874-2004 to 3.3 mm a year from 1993-2017. Also, annual rainfall across the country has fallen by 6 per cent between 1951 and 2015. In the future we may have short but very heavy bursts of rainfall followed by long dry spells.

However, the report was not put together in wider consultation with the IITS, IISERs, the IISc, ISRO, CSIR or DST. Surprisingly, not even the Ministry of Environment, Forest and Climate Change, as the nodal ministry responsible for integrating climate action in policy making, was involved. And it sticks to the IPCC's formula of projecting future scenarios based on Regional Concentration Pathways (RCPs) under different trajectories of carbon emissions. This works on a macro scale by projecting the outcomes of broad economic policy, but is ineffective in assessing outcomes of specific regional interventions. Almost all Indian states have their own climate action plans for their unique conditions, so the RCP-based approach is not enough for our diversity of challenges.

The findings also stop short of prescribing policy action. That was perhaps outside the ministry's mandate, but at this point simply more clarity on climate science is of no use unless gelled into perfectly coordinated action. India has had a National Action Plan on climate change with eight distinct missions for 12 years, but the report doesn't take into account the progress made there.

As the country continues to face increasing climate impact in the form of more intense cyclones, heat waves, floods and droughts, the evidence of a changing climate must urgently be supplemented with solutions. Regional interpretation of the physical science and the potential implications for crucial sectors of our economy like energy planning, transportation, agriculture and air pollution management should have been in focus in such a report to allow for progress in interconnected decision-making on climate change.

Perhaps the report's greatest shortcoming is that it does not comment on the efficacy of India's climate action so far. How has it fared in mitigating climate impacts to date? How well is it prepared with disaster risk management for future extreme weather? How should existing programmes be stitched together to minimise vulnerability and losses? These are all important questions it had the perfect opportunity to answer.

At the moment, it's not more than a compendium of research data that was put together under the same isolated approach that plagues policy planning. It lacks the interconnectedness of similar reports by the developed world that use advanced modelling to chart very specific regional-level action. The ministry would do well to incorporate more expert inputs and re-release a document that truly addresses India's climate strategy.

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