

# USD10 billion climate-change loss and INR80 crore to plug it. More bad news: The impact will worsen.

Studies have established that floods, cyclones, rising sea-levels, and heat stress are all going to become more frequent. This makes it imperative for India to shift the focus from what the studies say to what they mean — the country needs policy measures to build resilience against climate change and has to invest way more in it than it now does.



Aesha Datta

22 Jun 2020

6 Mins Read

A A FONT SIZE



SAVE



GIFT ARTICLE



A tree uprooted during the cyclone, Amphan, in Kolkata last month. The frequency of such extreme-climate events is expected to increase in the future.

Last year when ET Prime took to the hinterland to produce a [five-part series](#) on climate-induced migration, it was not even an issue of note for policymakers. A lot has changed since then, thanks primarily to the ongoing pandemic which revealed the fault lines in India's migration policy. While the Covid-19 crisis may be resolved in a year or more, partly due to the research on vaccines the world over, it's time now to look at how the country recovers.

There have been three key developments in the past couple of weeks:

- The country is preparing to recover lost economic gains caused by the sudden shocks to its systems by lifting the lockdown gradually.
- The government has released its first climate-change assessment report
- Commercialisation of coal mines took off, opening up the sector to private players.

For now, let's focus on the second – the climate-change assessment report and how it informs economic recovery.

India, on average, loses USD9 billion to USD10 billion annually to climate-change impact. The devastation caused by cyclone Amphan that hit West Bengal late last month, is just a drop in the bucket.

What the report titled *Assessment of Climate Change Over the Indian Region*, released last week, says is that events such as cyclones are going to become more frequent and likely more severe in the future. And not just cyclones – floods, cyclones, rising sea-levels, heat stress are all going to become more frequent.

But none of this is new.

International and domestic studies, often focusing on one aspect or the other, have repeatedly warned of each of these impacts. Therefore, the focus has to shift from what the latest report says to what it means — that the country needs policy measures to build resilience against climate change and has to invest way more in it than it now does.

In the wake of the Covid-19 pandemic, migration and migrant workers became, possibly for the first time, a political issue as much as a social concern. The country now knows, for certain, that vast metropolis economies are critically dependent on this population. But with the same certainty, also came the realisation that in times of a crisis the nation is not equipped to take care of them.

Unfortunately, even as millions of migrant workers have been and are still making a beeline for their homes, it becomes critical to understand the reasons that pushed them out in the first place.

Of the several issues of concern – social and political disenfranchisement, poverty, and caste discrimination being some of them – environmental events such as droughts, floods, storms, and heat stress play a role in eroding the economic certainties of their original homes. That is where the message of the climate-change assessment report becomes crucial – India needs to take policy measures to address the gap between climate impact and resilience.

#### **The link between climate and poverty**

Anjal Prakash, who was the coordinating lead author for the IPCC special report titled *The Ocean and Cryosphere in a Changing Climate*, says that environmental stresses and climate impacts, along with social issues, magnify the economic impacts and keep people entrapped in poverty. This results in migration, both seasonal and permanent.



---

## The climate-change report: key points

- Annual mean, maximum, and minimum temperatures averaged over India during 1986–2015 show significant warming trend of 0.15°C, 0.15°C and 0.13°C per decade.
- The frequency of warm extremes over India has increased during 1951–2015, with accelerated warming trends during the recent 30-year period 1986–2015.
- Decreasing trend in the all-India annual as well as summer monsoon mean rainfall during 1951–2015, notably so over areas in the Indo-Gangetic Plains and the Western Ghats, attributed to increase in concentration of anthropogenic aerosols.
- Frequency and spatial extent of droughts over India have increased significantly during 1951–2015.
- Frequency of localised heavy-rain occurrences over India has also increased during 1951–2015, resulting in enhanced flood risk.
- An increase in frequency, extent, and severity of droughts over India in the 21st century is predicted, while floods in the Himalayan river basins are also likely to increase.
- Climate-model simulations project a rise in tropical-cyclone intensity and tropical-cyclone precipitation intensity in the north Indian Ocean basin.
- Sea-level rise in the Indian Ocean is non-uniform and the rate of north Indian Ocean rise is 1.06–1.75 mm/year from 1874 to 2004 and 3.3mm/year in 1993–2015.
- Extreme sea-level events are projected to occur frequently over the tropical regions and along the Indian coast associated with an increase in the mean sea level and climate extremes.
- Annual mean surface-air-temperature in the Hindu Kush Himalayas increased at a rate of about 0.1°C per decade during 1901–2014, with a faster rate of warming of about 0.2°C per decade during 1951–2014. Additionally, high elevations (above 4,000m) of the Tibetan plateau have experienced stronger warmings, as high as 0.5°C per decade.
- Future climate projections suggest warming of the Hindu Kush Himalaya region in the range of 2.6°C–4.6°C by the end of the 21st century and indicate decreased snowfall.

▶ETPrime

---

“This report is important as they are science-led outcomes and science needs to inform policy. What we hope is that this report can guide policy actions. As we recover from Covid-19, our developmental planning has to be adaptive. Each region has its own unique risk that will result in massive loss both in terms of life as well as infrastructure (for example cyclone Amphan or the Uttarakhand floods), which have human and economic costs. Developmental planning has to become climate resilient to reduce it,” says Prakash, who is also the research director and adjunct associate professor at the Indian School of Business.

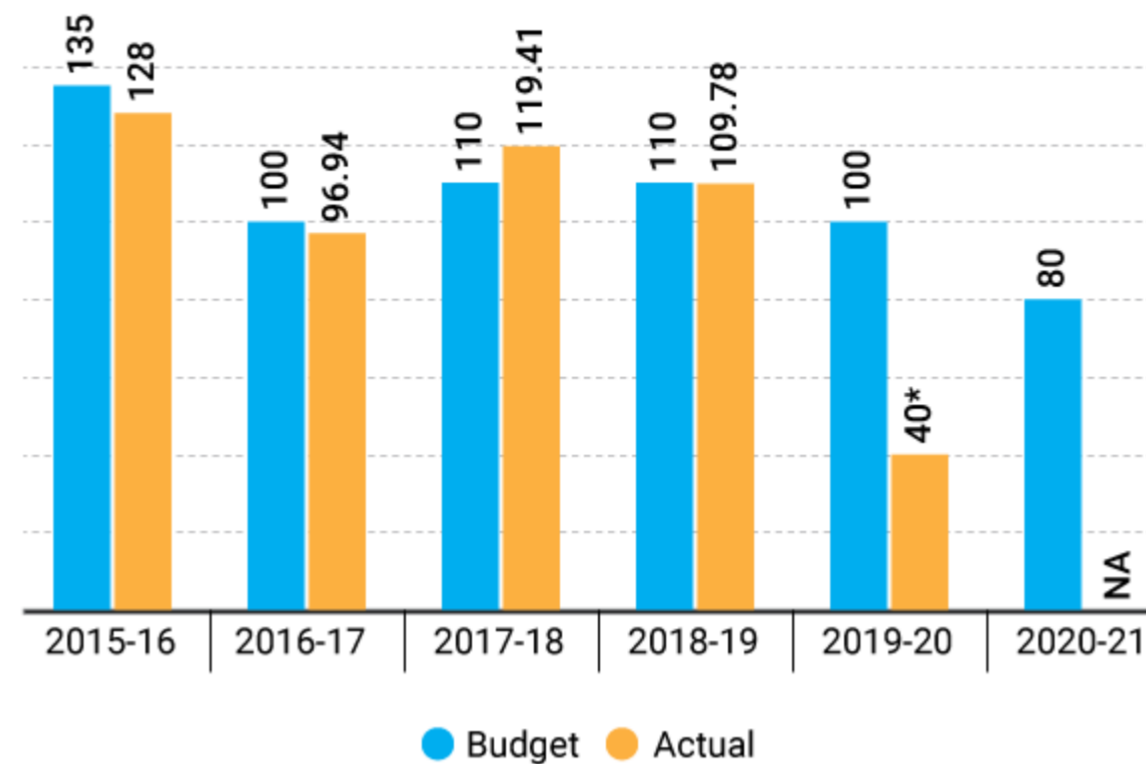
Therein lies the question: How much is India spending on adaptation? Is it serious about the issue? Is the right arm of the government listening to the left, which has shown up in the form of this report?

### Too meagre funds

In 2015, the government created a separate National Adaptation Fund for Climate Change with

a budgetary allocation of INR135 crore, which may have been a small corpus, considering the magnitude of the problem. But it was a start for sure. The concern is that the budget for this fund, which is expected to fund projects intended for adaptation, has steadily declined. This year's budget saw a measly allocation of INR80 crore.

### Allocation for the National Adaptation Fund for Climate Change



\*Revised estimate; funds in INR crore  
Source: Budgets 2015-16 to 2020-21



While spending on climate-change mitigation is certainly worthy, and India's ambitious renewable-energy target is a good example of one such effort, it has become increasingly more certain that the world is going to be **unable to keep warming under 1.5°C** (at which point climate impacts would be the most manageable). The country is likely to miss the 2°C target as well (at which point impacts will be felt in significantly greater magnitude, but adaptation may still be possible).

As the government's report mentions, "at current greenhouse gas emissions trajectories, global average temperature may rise 3°C-5°C, perhaps higher, if tipping points are triggered, above pre-industrial temperatures by the end of the 21st century."

Which means, simply, India needs to start investing significantly more in adapting to climate impacts.

"With each passing year we are compounding the impacts of climate change. And we can observe that in the increased frequency of adverse weather events (excessive floods, cyclones, droughts, heat). To avoid financial and political failure we need to focus on mainstreaming climate change adaptation and mitigation," says Chirag Gajjar, head, subnational climate action at World Resources Institute India.

#### The domino effect of losses

Gajjar reminds us climate change is going to magnify losses in the coming years. "We need more functional communities, which can provide for people in times of crisis (such as adverse

weather events) and for that we need to increase investments in building resilience. Our response to the Covid-19 crisis has made it clear that we need to ensure we build resilience for the future. For example, a coordinated effort can help communities tap into the benefits of renewable energy at local levels.”

The climate-change assessment report, in a long but apt paragraph succinctly draws attention to the multi-sectoral nature of climate impacts and adaptation.

“Just as climate change impacts cascade into complex multi-hazards, several of these policy measures are likely to deliver multiple benefits. For instance, a strategic transition to renewables would reduce both GHG (greenhouse gas) emissions as well as water consumption required to cool thermal power plants,” it states.

The report also points out that low-impact development and green building infrastructure can reduce both urban heating and air pollution. “A reduction in air pollution would greatly benefit human and environmental health, improve the efficiency of solar-energy generation, and even potentially aid in increasing the quantum of monsoon rainfall over India,” it adds. “An increase in rainfall, together with measures for water harvesting, would aid the restoration of groundwater levels.”

This in turn would not only provide relief from water security and build resilience against droughts but also help check land subsidence, consequently reducing the impact of sea-level rise and storm surge.

Clearly, assessing climate-change impact is just a beginning. Acting on its findings is what will make the difference.

*(Graphics by Mohammad Arshad)*

