

SHIFT TO LOW CARBON

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Both rich and poor countries have faced extensive damage from storms and heatwaves this year. As climate representatives meet in Poland for the Conference of the Parties 24, the crucial question is whether carbon emissions will be reined in to avert further damage due to climate change.

In India, rains, floods and landslides in Kerala have killed 373 people since May 30. Uttar Pradesh, Karnataka and Assam were battered by floods this year, as was Chennai in 2015. Meanwhile, Delhi, Rajasthan, Andhra Pradesh, and Telangana, among other States, experienced heatwaves.

Greenhouse gas emissions, of which carbon dioxide is the biggest component, make the earth warmer and lead to more heatwaves. A study in the journal *Scientific Reports* found that the decadal mean of daily maximum temperature for April and May in the 2010s is 40-42°C over large parts of India. Warmer air holds more moisture, which results in more intense rainfall and provides more energy for storms. Climate scientists attribute the rising trends in flooding and heatwaves to human-induced climate change.

In the absence of a shift to a low carbon economy worldwide, the average temperature could rise by more than 2°C by the end of this century. Hotter, longer summers and excessive rainfall in some areas and droughts in others will damage crops. Warm coastal waters will turn unsuitable for certain species of fish.

Adapting to a changing climate is one part of the agenda. Japan has invested a lot of money on coastal defences. It has built the world's largest underground flood water diversion facility. But with a coastline of about 7,500 km, most of which is low-lying, India cannot make such colossal investments. Better early warnings and timely evacuations have had huge pay-offs, the most striking example being the massive relocation of people from the coasts of Andhra Pradesh and Odisha before Cyclone Phailin struck those areas.

But adaptation will not suffice unless mitigation takes central stage among the world's leading emitters, including India. The country has committed to cuts in carbon emissions consistent with a 2C temperature rise. But plans to build new coal-fired power plants need to be abandoned and replaced with a massive ramp-up of wind and solar power. India's stakes in a low carbon world economy are among the highest as it is on the front line of climate disasters and is also a leading contributor to greenhouse gas emissions. Apart from taking steps to adapt to climate change, India's voice in decarbonising the world economy is vital.

The writer is Visiting Professor, Asian Institute of Management, and author of 'Climate Change and Natural Disasters'.

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