

## THE LAST WINDOW

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

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The 2018 IPCC Special Report on Global warming of 1.5°C delivered a clear message: Human activities have caused an approximately 0.87°C rise in global average temperature over pre-industrial times. The latest IPCC report on 'Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse gas fluxes in Terrestrial Ecosystems' takes the warning further and states that the land surface air temperature has risen by nearly twice the global average temperature, at about 1.3°C.

Given the direct impact the world's land systems have on human well-being, livelihood, food security and water security, the report cannot be overlooked, and especially not by acutely vulnerable India.

Desertification of land under agricultural use will exacerbate the already worsening dangers of declining crop yields and crop failures. Combating it requires the urgent implementation of measures from the set of several remedial options proposed in the report, including reduced tillage, planting cover crops, improvements in grazing management and greater use of agroforestry.

However, another key component is maintaining and extending forest cover, as forests act as enormous natural carbon sinks. In this context recent news that suggests the dilution of environmental impact assessments (EIAs) in India seems regressive. Industrial development and environmental protection can be planned prudently to be compatible. Land sparing industrialisation, appropriate zoning and environmental safeguards are possible without being in conflict with replacement of the ecological services provided by the natural growth-forest ecosystem.

Every developing nation needs industrial growth, but given the severity of the threat we face in climate change, not factoring in the importance of preserving prudently chosen and managed forest cover would be ill-advised. Global assessment reports have also shown that consulting indigenous people is an important way of integrating local knowledge with scientific knowledge.

Water management is also critical. Agriculture in India accounts for more than an estimated 86 per cent of the country's freshwater use. The water intensity of Indian paddy is also below global best practices. The 2019 HIMAP report by ICIMOD has shown that with receding glaciers, there is need to manage water better both in the short and in the long run — especially in India — to address the challenge of food security.

The Union government has commendably taken up the goal of "irrigation water productivity". Yet, promoting compatible irrigation practices like drip irrigation, sprinkler irrigation, shifting away from water-intensive cash crops, alternate wetting and drying (AWR) practices in paddy cultivation, extension services for providing access and sensitising farmers to the efficient water use technologies and practices and the use of water efficient agricultural practices needs to be taken up on a war footing. The largely forgotten traditional rainwater harvesting practices like building tanks and artificial ponds in low-lying catchment areas need to be scaled up across the

nation.

Consumption and waste management in the food sector is considered to have climate implications as well. A shift towards a more plant-based diet is considered a healthy sustainable dietary option in the IPCC report. The UN estimates that the world's population could breach 9.7 billion by 2050, so the need to augment food supplies per unit availability of land and water is a necessary target. The shift is even more pertinent for India as its yet largely poor population will be one of the first to be affected by constrained food supplies. Diversification of the food system, balanced diets, low meat diets are all identified with health benefits, adaptation, mitigation and sustainable development benefits. Livestock sector management with crop management is necessary for multiple benefits.

Unlike many countries which have crossed the health safety limits of meat consumption with rising incomes, India need not follow the same path. Here, education can play an important role in managing meat consumption. Market incentives too need to be aligned with human health benefits.

Like for many other countries, there is a very small window left for India's policymakers to respond to the severity of the threat. However, there are some cultural advantages for India and multiple options for adopting sustainable practices to avoid a carbon-intensive development path. It is hoped that the well-being of the masses will take precedence over short-term economic gains for a few.

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