UNHEEDED PRIORITIES OF CLIMATE ACTION

OPINION

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THE rising accumulation of greenhouse gases in the atmosphere is threatening a potentially catastrophic change in the living and working conditions of humanity. The greenhouse gas layer hovers over all countries in the world. Controlling the addition of carbon dioxide, methane and other greenhouse gases into the layer requires cooperation at the global level and a fair distribution of mitigation actions.

At present, what we have is the Paris agreement in the UN Framework Convention on Climate Change, where all countries have accepted an obligation to formulate a voluntary national plan for helping to contain the potential global temperature increase to 1.5-2°C. Hence the need for us to formulate a national climate management strategy.

The Union government has addressed this issue and made promises about energy transition away from fossil fuels, energy efficiency and carbon absorption through forest development. It has also set a target of net-zero carbon emission by 2070. The range of actions required for this is vast. Let me focus on three areas that are crucial for climate mitigation and adaptation—energy, agriculture and human settlements.

The first and most crucial area is climate and energy, which requires a transition away from fossil fuels. The energy transition in electricity production is well underway in India with the growing role of renewable energy. But a supply-side emphasis is not enough, and we need to act to reduce direct fossil fuel use. An important dimension of this is reflected in the promotion and rising popularity of electric vehicles. But more needs to be done—for instance, in designing buildings with insulation to reduce energy-based cooling requirements.

We are going to be heavily dependent on private sector renewable energy-based power supply, often from decentralised sources, distributed unevenly through the country. A crucial challenge for the growth of such an electricity system is not just technologies like low-cost battery storage, but the institutional barriers to an efficient market for electricity. One such barrier is the poor financialh ealth of the distribution companies or DISCOMs. The real need now is for a sharp focus onthe institutional reforms needed for DISCOM recovery, market-based electricity pricing, a hierarchic transmission and distribution system that accommodates supply-demand balancing at multiple levels from the local to the national. This requires an effective dialogue and cooperation between the Union and state governments.

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Energy policy also must recognise the fact that in India a large number of coal mine employees are concentrated in a fewareas where alternative options for employment are not readily available This leads to strong political opposition to too rapid a phasing out of coal. A credible plan for stranded assets and alternatives for lost jobs in coal mining regions is necessary. This must become an important element in the national climate strategy.

An area which needs more vigorous attention is the decarbonisation in industry, particularly steel and cement. This will require substantial technological change which could be acquired from abroad, but which also needs some domestic development. Apart from what needs to be done within the industry, there are some broader areas which are likely to be crucial, particularly for net-zero goals for industry. One example is green hydrogen development, now actively pursued by some corporations and promoted by the Union government. But another area that needs more initiatives than it is receiving at present is carbon capture and storage/use, which has to be used in industries like cement, where zero carbon emission is impossible.

Climate and agriculture is an area that needs more attention than it is receiving at present. The issue here is not just mitigation of carbon emissions. A far more important challenge is the need for adaptation and resilience that will be required because of the impact of unavoidable temperature rise, even if the world community manages to restrict the rise to 1.5-2°C, greater uncertainty about water flows and more extreme climate events.

On agriculture and energy use, a major constraint in moving farmers towards the use of solar electricity for pumping is the fact that in several states, they have access to free grid electricity, and in others, their charges are subsidised. The way ahead is to see farm-level solar electricity in agricultural areas not just as a substitute for grid-based electricity, but as an investment that will give returns from the sale of solar power to the grid and a design of the grid to include the capacity to receive the surplus power produced in rural fields. The otherarea of emission concern is fertiliser use, where less-energy-intensive alternatives—particularly if transport costs are taken into account—like nano fertilisers can contribute to carbon mitigation.

A more important area for climate and agriculture is the fact that agriculture and related activities will be most deeply affected by the rise in temperature, substantial shifts in the timing and availability of water, and the rising threat of adverse climate events like more rain on fewer days. For this reason, the climate programme for food, land and water should combine an emphasis on mitigation with programmes to improve adaptation and improve resilience. An example could be promoting research on crop varieties and cropping methods that reduce carbon emissions by economising on fertilisers and electricity use, but also are adapted to higher temperatures and with productivity that is resilient in the face of adverse weather event.

Climate and human settlements is another are a crucial area, particularly for adapting to climate change is urban development. Designing cities to reduce travel requirements and providing more public transport is important for mitigation. But cities must also be designed to cope with higher temperatures, weather uncertainties and sea level rise. Hence here, too, the need is to promote integrated design standards, particularly for cities in ecologically fragile areas like coasts or mountains. The norms for buildings that will last for decades must be set now to take into account these likely changes in climatic conditions. Another dimension that needs to be addressed is increasing the greenery in towns and cities as that will moderate to some extent the impact of higher temperature.

Effective climate management of agriculture and human settlements is so specific to local conditions that constructive and effective engagement of panchayats and municipal organisations is essential.

The climate challenge will not be met unless the required mitigation, adaptation and resilience actions arenot fully integrated into the design and implementation of development policy at the central, state and local authority levels, and if it is not built into the motivations of corporations and households.

(Views are personal)

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