Low-Carbon Future

Why in news?

In the recently organised Leaders' Climate Summit, there is a debate whether India should announce net-zero emissions target.

What should be India's approach?

- IPCC 1.5°C report called for global carbon emissions to reach net-zero by 2050.
- India being a climate-vulnerable country, it must contribute to limit the global temperature rise ideally below 1.5°C.
- While doing so, it should not lose sight of the history of global climate negotiations and its own developmental needs.
- By announcing net-zero commitment, India risks taking a heavier burden of decarbonisation than many wealthier countries.
- Hence focused near-term sectoral transformations through aggressive adoption of technologies can be adopted.

How can we de-carbonise the power sector?

- Electricity sector is the single largest source (about 40%) of India's greenhouse gas emissions.
- De-carbonising the electricity sector would require transformational changes in urbanisation and industrial development.
- For example, electricity should be used for transport and integrating electric systems into urban planning.
- Till now electricity sector is focussing on expanding renewable electricity capacity-175GW of renewable capacity by 2022.
- It now needs a comprehensive shift going beyond expanding the renewable energy targets.
- This can be done by limiting the expansion of coal-based electricity capacity.

How can this be done?

- First India can pledge that it will not grow its coal-fired power capacity beyond what is already announced and reach peak coal electricity capacity by 2030.
- It should also strive to make existing coal-based generation cleaner and more

efficient.

- Second, multi-stakeholder Just Transition Commission can be created to represent all levels of government and affected communities to ensure decent livelihood opportunities to people in the India's coal belt.
- This is necessary because the transition costs of a brighter low-carbon future should not fall on the backs of India's poor.
- Third, existing problems of the sector such as the poor finances and management of distribution companies needs to be addressed.
- Finally, India will need to work hard to become a leader in technologies of the future such as electricity storage, smart grids and technologies that enable the electrification of other sectors such as transportation.

How can we improve energy services?

- Growing urbanisation and uptake of electricity services offer a good opportunity to shape energy consumption within buildings through proactive measures.
- Air conditioners, fans and refrigerators together consume about 60% of the electricity in households.
- India could set aggressive targets- 80% of air conditioner sales and 50% of fan and refrigerator sales in 2030- should be most efficient.
- This will reduce green house gas emissions and benefit the consumer by lowering their electricity bills.
- India can leverage this transition too as an opportunity to become a global leader in production of clean appliances.
- Such a sector-by-sector approach can be developed for other sectors which can set a path towards net zero emissions and achieve the Paris Agreement targets.
- India can also come out with timelines for achieving climate targets.

How can timelines be formed?

- India can also consider committing to submit plausible pathways and timelines to achieving net-zero emissions as part of its future pledges.
- It can undertake detailed assessments of its development needs and low-carbon opportunities, the possible pace of technological developments.
- It can also assess the potential geo-political and geo-economic risks of over-dependence on certain countries for technologies or materials.
- It can use interim period to develop a strategic road map to enhance its own technology and manufacturing competence as part of the global clean energy supply chain.

Source: The Hindu

