Need for a Forest led COP27

What is the issue?

A study published in the journal Science said earth may have already passed through five dangerous tipping points due to the 1.1°C of global heating caused by humanity to date.

What has the study pointed out?

- A study published in the Science journal has stated that a rise of 1.5°C from pre-industrial levels can trigger multiple climate tipping points.
- **Climate tipping points**- CTPs are markers of a larger climate system which when triggered beyond a threshold, perpetuate warming on its own.
- Some CTPs triggers include
    - Substantial sea level rise from melting ice sheets
    - Shrinking of Amazon rainforest or corals
    - Warming from carbon release due to melting of permafrost
- Observations have shown that parts of the West Antarctic ice sheet may have already passed the tipping point.
- Though the 6th Assessment Report of the **Intergovernmental Panel on Climate Change (IPCC)** had stated that a rise of 2°C from pre-industrial levels can trigger the tipping points, even 1°C rise has triggered some unavoidable tipping points.
- As a result, the goal of UN's Paris Agreement to limit warming at 1.5-2°C will not be able to avoid the disastrous effects of climate change.

Is technology the only way out for climate related challenges?

> *In 2019, approximately 34% of total net anthropogenic greenhouse gas emissions came from the energy sector, 24% from industry, 22% from agriculture, forestry and other land use, 15% from transport and 6% from buildings.*

- Technology has become a survival strategy for our species, but technology alone is unprepared to deal with the challenge.
- **Effects of technology**- Norman Borlaug ushered in the Green Revolution, which fed billions of people and increased yields but tackling its effects requires much more time.
- **Supply mismatch**- The technological optimism fuelled at COP26 Glasgow depends on 3 resources – nelectricity, carbon capture and storage (CCS) and biomass.

Sector	Current Status	Requirement as per COP26
Nelectricity	4kWh/day per person	32kWh/day per person

Carbon capture and storage	6kg per person per year	3600kg per person per year
Biomass	100kg plant-based food per person per year (to eat)	200kg of additional harvest (for producing enough bio-kerosene)

- **Issues with clean energy**- A study has found that the world would need a nuclear plant's worth of clean-energy capacity every day between 2000 and 2050 to avoid catastrophic climate change.
- **Climate commitments**- Tech-centric mitigation conversations leave out forest subjects such as conservation.
- Even the deforestation-ending climate commitment at COP26 was vague.
- The countries may easily attempt to achieve their 'net zero deforestation goals' through monoculture farming.

Technology, at best, can assist us, not lead us, on the pathway to a sustainable, regenerative and equitable world.

What is the need for a forest led COP 27?

- **Significance of forests** - Forests are home to 80% of terrestrial wildlife.
- Forests absorb a net 7.6 billion metric tonnes of CO2 a year.
- Their biophysical aspects have a tendency to cool the earth by an additional 0.5%.
- The conservation of forests, along with other nature-based solutions, can provide up to 37% of the emissions reductions needed to tackle climate change.
- Studies suggest that green infrastructure (salt marshes and mangroves) are 2-5 times cheaper than grey infrastructure (breakwaters).
- **Need for forest led COP 27**- Since, the climate crisis is intertwined with other complex issues, multi-pronged, interconnected climate solutions need to be assessed.
- As land serves as a large CO2 sink (according to IPCC Land Report), there is a need to conserve natural sinks, improve biodiversity protection and restore the ecosystems.
- For tackling climate crisis in an equitable and cost-effective way, the earth's cyclical processes can be preserved by protecting terrestrial ecosystems and natural sinks under local communities.

References

1. https://www.thehindu.com/sci-tech/energy-and-environment/scientists-worried-as-study-shows-15-c-rise-can-trigger-climate-tipping-points/article65874826.ece
2. https://www.thehindu.com/opinion/op-ed/we-need-a-forest-led-cop27/article66001227.ece
3. https://www.ipcc.ch/about/

Quick facts

- **Nelectricity-** Non-emitting electricity generated by hydropower, renewables or nuclear fission.
- **Intergovernmental Panel on Climate Change (IPCC)** - Created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP).
- **Objective**- To provide governments at all levels with scientific information that they can use to develop climate policies.
- The IPCC is an organization of governments that are members of the United Nations or WMO.
- The IPCC currently has 195 members.
- IPCC reports are a key input into international climate change negotiations.

