Equity Issues in IPCC Reports

Why in news?

Intergovernmental Panel on Climate Change recently released 6th Synthesis report which updated and compiled IPCC's sixth assessment cycle.

Intergovernmental Panel on Climate Change
• It is the United Nations body for assessing the science related to climate change. • **Established by-** The World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) • **Launch year**- 1988. • **Secretariat-** Geneva, Switzerland, hosted by the WMO. • **Member states**- 195 member states, ***India is a member*** of IPCC. • **Assessment reports**- It explains about the state of scientific, technical and socio-economic knowledge on climate change, its impacts and future risks, and options for reducing the rate at which climate change is taking place • **Special reports**- They are assessments of a specific issues. - Special Report on Global Warming of 1.5°C in 2018. - Special Report on Climate Change and Land (SRCCL) in 2019, and - Special Report on the Ocean and Cryosphere in a Changing Climate in 2019.

What are IPCC assessment reports?

- **Working groups-**
  - Physical science
  - Climate adaptation
  - Mitigation action
- **Synthesis report**- It consolidates findings from three working groups.
- **6th synthesis report**- It integrates the main findings of the Sixth Assessment Report (AR6) based on contributions from the three Working Groups, and the three Special Reports.
- **Model pathways**- The IPCC uses this method to estimate what it will take to limit the warming of the earth's surface, they are drawn using Integrated Assessment Models (IAMs) that describe human and earth systems.
- **IAMs**- They are complex models that examine possible futures of the energy and climate system and economies aiming to guide policy on climate action.
- **Model components-** They include macroeconomic models for GDP growth, energy models for consumption projections, vegetation models for land-use changes, and earth-system models based on physics.

What are the key highlights of future emission scenarios presented by IPCC?

- **Per-Capita GDP disparities**- The study predicts that by 2050, per-capita GDP in

regions like Sub-Saharan Africa, South Asia, and West Asia (together constitutes 60% of the world population) will remain below the global average.

- **Inequities in consumption**- There is an expected continued disparity in the consumption of goods, services, and energy between the Global North and South.
- **Mitigation burden**- Developing countries are projected to have a greater burden of carbon sequestration and deployment of Carbon Capture and Storage technologies.
- **Unprecedented global warming**-Human activities have caused global warming, with a significant rise in mean surface temperature and CO2 levels. *Fossil fuel use* remains the primary driver, contributing significantly to GHG emissions.
- **Climate related disasters**- The report underscores the staggering disparity in vulnerability, with individuals in highly vulnerable regions facing a significantly higher risk of mortality from climate-related disasters.
- **Emission reductions**- There is a urgent, deep, and sustained cuts in greenhouse gas emissions are necessary to limit warming to 1.5ºC.

Achieving collective net-zero CO2 emissions by 2050 demands drastic reductions: a 48% cut by 2030, 65% by 2035, and 99% by 2050

- **Utilize technology**- Carbon dioxide removal (CDR) technologies may complement emission reductions but must be deployed judiciously due to sustainability concerns.
- **Fossil fuel phase-out-**The report emphasizes the need for a substantial reduction in fossil fuel use and the *elimination of fossil fuel subsidies*.
- **Protect ecosystems**- The commitment to *halt deforestation by 2030* and implementing biodiversity frameworks are urgent imperatives as safeguarding forest offers significant mitigation potential.
- **Shift demand -** Energy conservation and shifting dietary patterns can yield substantial emission reductions, particularly in high emission sectors like transportation and agriculture.
- **Adaptation efforts**- It must be intensified to address escalating climate risks, especially for vulnerable population, integrated *climate resilient development* pathways are vital for synergistic mitigation and adaptation action.
- **Role of finance**- Increased finance, technology transfer, and international cooperation are crucial for accelerating climate action.

What are the flaws in current modelling approach?

- **Shortcomings-** IAMs focus on least-cost assessments, it fail to adequately account for historical responsibilities and differential capabilities among nations.
- **Least-cost assessments-** IAMs often focus on finding the cheapest ways to reduce emissions, like setting up solar plants or afforestation projects whose costs are usually lower in countries like India compared to the U.S.
- **Inequitable distribution-** The developing countries are envisioned to bear a disproportionate burden of both mitigation efforts and carbon removal technologies which places additional strain on regions grappling with developmental challenges with existing socio-economic disparities.
- **Flawed approach-** The unjust distribution of climate burdens undermine the

principles of equity and common but differentiated responsibilities enshrined in international agreements.

Article 3 of UNFCCC emphasizes that countries should protect the climate system for the benefit of present and future generations, based on equity and considering their respective capabilities.

- **Equity overlooked-** The report fail to account for the historical responsibility of the Global North and the developmental energy needs of the Global South.

What lies ahead?

- The report serves as a critical guide for the upcoming Global Stocktake at COP28 and highlights the urgency of action within this decade.
- IAMs should consider fairness which means wealthier countries should take on more immediate and significant climate action, reflecting their greater financial capacity and historical emissions.
- Developed regions should accelerate toward net negative emissions, allowing less developed regions to access the remaining carbon budget.
- There is a need for equitable and environmentally sound construction of IPCC scenarios, highlighting a significant gap in emissions modelling that needs to address equity and climate justice.

References

1. The Hindu- The problem of equity in IPCC reports
2. IPCC- About IPCC

