Warning of the IPCC Report

Why in news?

The Intergovernmental Panel on Climate Change (IPCC) analysing and reviewing the evidence on the present and future man-made impacts of climate change has a message that is predictably terrible.

What are the IPCC reports?

- The objective of the IPCC is to provide governments at all levels with scientific information that they can use to develop climate policies.
- It was created in 1988 by the **World Meteorological Organization (WMO)** and the **United Nations Environment Programme (UNEP).**
- The Assessment Reports, the first of which had come out in 1990, are the most comprehensive evaluations of the state of the earth's climate.
- The latest warnings have come in the second part of IPCC's Sixth Assessment Report which talks about climate change impacts, risks and vulnerabilities, and adaptation options.
- The first part report was released in August last year and centred on the scientific basis of climate change.
- The third and final part of the report, which will look into the possibilities of reducing emissions, is expected to come out in April.

What does the IPCC report say?

- The latest report has for the first time, made an assessment of regional and sectoral impacts of climate change.
- It has included risks and vulnerabilities of, mega-cities around the world.
- Also for the first time, the IPCC report has looked at the health impacts of climate change.
- The world faces unavoidable multiple climate hazards over the next two decades with global warming of 1.5°C.
- Even temporarily exceeding this warming level would mean additional severe impacts, some of which will be irreversible.
- The report points out that the rise in weather and climate extremes has led to some irreversible impacts as natural and human systems are pushed beyond their ability to adapt.

- The report notes that most of the targets that countries have set for themselves are too far in the future to have an impact in the short term.

What is the case of India?

- **India's commitments**- At the COP26 summit,India declared that it will achieve net zero emissions latest by 2070.
- By 2030, India would also ensure 50% of its energy will be from renewable energy sources.
- However, none of this can help the 1.5°C mark from being breached.

Report specifications

- **Wet bulb temperature** - A major point of emphasis of the report, particularly for South Asia, is the trend in the wet bulb temperature.

> *Wet bulb temperature is an index of the impact of heat and humidity combined and its effect on health.*

- Lucknow and Patna were among the cities predicted to reach wet-bulb temperatures of 35°C while Bhubaneshwar, Chennai, Mumbai, Indore, and Ahmedabad are at risk of reaching wet-bulb temperatures of 32°C-34°C with continued emissions.
- This will have consequences such as a rise in heat-wave linked deaths or reduced productivity.
- **Sea level rise**- Global sea levels will likely rise 44cm-76cm this century if governments meet their current emission-cutting pledges.
- But with higher emissions, and if ice sheets collapse more quickly than expected, sea levels could rise as much as 2 metres this century and 5 metres by 2150.
- By the middle of the century, around 35 million of its people could face annual coastal flooding, with 45 million-50 million at risk by the end of the century if emissions are high.
- **Crop production**- Extreme weather led to cereal production loss of 9-10 % (1964-2007).
- In India, rice production may decrease 30% and maize production will decrease 70%, if global warming over pre-industrial levels rises to 4°C from 1°C, the IPCC analysis found.
- **Flood and drought**- Evidence of floods on food production was limited, according to the report.
- The report highlighted the impact of drought on food security but also

cautioned that overall irrigation water demand would increase by 2080.

- **Agri and allied sectors-** Fisheries, aquaculture and crop production, particularly in south and southeast Asia, may decline as a result of climate change.
- Current global crop and livestock areas will increasingly become climatically unsuitable under a high emission scenario in major food-producing regions.

What is the significance of this report?

- **Scientific basis**- IPCC reports form the scientific basis on which countries across the world build their policy responses to climate change.
- These reports do not tell countries or governments what to do and are only meant to present factual situations with scientific evidence.
- **Impact assessment-** The detailed nature of this latest report, with respect to regional and sectoral impacts, presents actionable intelligence, particularly for countries that lack the resources or the capacity to make their own impact assessments.
- **Credible**- The fact that these findings are the product of the combined understanding of the largest group of experts on climate science lends it credibility greater than any individual study.
- **Basis of climate change negotiations**- These reports also form the basis for international climate change negotiations that decide on the responses at the global level such as Paris Agreement and Kyoto Protocol.
- The Sixth Assessment Report has presented that pursuing a 2°C target could be disastrous and more ambitious actions need to be taken to keep the temperature rise within 1.5°C.
- India must shore up its adaptation measures and urgently move to secure the futures of its many vulnerable who have the most to lose.

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