IPCC Report on the Ocean and Cryosphere - UNFCCC Meet

What is the issue?

- The annual conference of United Nations Framework Convention on Climate Change (UNFCCC) took place in Madrid, Spain. Click here to know more.
- In this backdrop, one of the Intergovernmental Panel on Climate Change's (IPCC's) recent reports gains significance.

What is the report on?

- The report is entitled the 'Special Report on the Ocean and Cryosphere in a Changing Climate'.
- It highlights the changes taking place in oceans, glaciers and ice-deposits on land and sea.
- It was prepared following an IPCC Panel decision in 2016 to prepare three Special Reports.
- The above report follows the Special Reports on Global Warming of 1.5°C (SR1.5), and on Climate Change and Land (SRCCL).
- The 1.5°C report was a key input used in negotiations at Katowice, Poland in 2018.
- Countries relied on it to commit themselves to capping global temperature rise to 1.5°C by the end of the century.
- The recent report updates scientific literature available since 2015.
- 2015 was when the IPCC released its comprehensive 5th Assessment Report.
- The report summarises the disastrous impacts of global warming based on current projections of global greenhouse gas emissions.

What are the key highlights?

- Over the 21st century, the ocean is projected to make transition to unprecedented conditions.
- Increased temperatures, further ocean acidification, marine heatwaves and more frequent extreme El Nino and La Nina events are the key threats.
- It is virtually certain that the global ocean has warmed unabated since 1970.
- It has taken up more than 90% of the excess heat in the climate system.
- Since 1993, the rate of ocean warming has more than doubled.
- Marine heatwaves have very likely doubled in frequency since 1982 and are further increasing in intensity.

- The Southern Ocean accounted for 35%–43% of the total heat gain in the upper 2,000 m global ocean between 1970 and 2017.
- Its share increased to 45%–62% between 2005 and 2017.
- **Threats** - Even under the most optimistic scenarios, human health, livelihoods, biodiversity and food systems face a serious threat from climate change.
- Accelerated rates of loss of ice, particularly in Greenland, the Arctic and the Antarctic, will produce a destructive rise in sea levels.
- Increases in tropical cyclone winds, rainfall and extreme waves, combined with relative sea level rise, will exacerbate catastrophic sea level events.
- All this will deal a blow also to the health of fish stocks.
- What is particularly significant for countries with a long coastline, including India, is the local sea level anomalies.
- Such events that occurred once in a century may become annual events, due to the projected global mean sea level rise over the 21st century.
- This is an alarming scenario for the 680 million residents of low-lying coastal areas and for those living in small islands.
- Notably, population of low-lying coastal areas may go up to one billion by 2050.
- A major impact is in the Hindu Kush Himalayan Regions.
- Floods will become more frequent and severe in the mountainous and downstream areas of the Indus, Ganges and Brahmaputra river basins.
- This would be because of an increase in extreme precipitation events.
- The severity of flood events is expected to more than double towards the end of the century.

What does the report call for?

- There is a yawning gap between planned emissions cuts, and what needs to be done by 2030 to contain global temperature rise at 1.5°C.
- The IPCC report thus lends further urgency to the task before countries at the UN conference.
- The member-nations of the UNFCCC are tasked to finalise measures under Article 6 of the Paris Agreement.
- The objective is to commodify carbon emissions cuts, and to make it financially attractive to reduce emissions.
- The IPCC assessment underscores the need for unprecedented and urgent action in all countries that have significant greenhouse gas emissions.
- It strengthens the case for industrialised nations to provide liberal, transparent funding to developing countries under the Paris Agreement.
- This would reinforce the principle of Common But Differentiated Responsibilities and Respective Capabilities.

- It would also recognise that rich countries reduced the carbon space available to the poor.

Source: The Hindu

Quick Fact

Intergovernmental Panel on Climate Change

- IPCC was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988.
- It is the leading international body for the assessment of climate change.
- It is the apex referee for scientific evidence on the impact of global warming.
- It provides a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts.

SHANKAR IAS PARLIAMENT
Information is Empowering