

G20 Climate Risk Atlas

Why in News

Recently, a report named **G20 Climate Risk Atlas** from the **Euro-Mediterranean Center on Climate Change** (CMCC) has said that **G20 (Group of 20) countries** including the wealthiest like the US, European countries, and Australia will bear extreme impacts of **climate change** over the coming years.

- The **first study of its kind**, it provides climate scenarios, information, data and future changes in climate across the G20 countries.
- The report came two days ahead of the G20 summit in Rome at the end of October 2021.

Key Points

- Impact on G20 Countries:
 - Heatwaves:
 - Heatwaves could last at least ten times longer in all G20 countries, with heatwaves in Argentina, Brazil and Indonesia lasting over 60 times longer by 2050.
 - In Australia, <u>bushfires</u>, <u>coastal floods</u> and <u>hurricanes</u> could raise <u>insurance</u> costs and reduce property values by 611 billion Australian Dollars by 2050.
 - GDP Loss:
 - GDP (Gross Domestic product) losses due to climate damage in G20 countries increase each year, rising to at least 4% annually by 2050. This can reach over 8% by 2100, equivalent to twice the bloc's economic losses from Covid-19.
 - Some countries will be even worse hit, such as Canada, which could see at least a 4% decrease in its GDP by 2050 and over 13% by 2100.
 - Sea Level Rise:
 - The <u>sea level rise</u> could wreck coastal infrastructure within 30 years, with Japan set to lose 404 billion euro and South Africa 815 million euro by 2050, on a high emissions pathway.
 - Flooding
 - Expected annual damages from <u>riverine flooding</u> by 2050 are estimated to be 376.4 billion Euro under a low emissions scenario and rise to 585.6 billion EUR under a high emissions scenario.
- Impact on India:
 - Emission Scenarios:
 - Low Emission (emissions lower than in present):

- Projected temperature variations will remain contained under 1.5 degree celsius, both by 2050 and 2100.
- Medium Emission (same as present):
 - Between 2036 and 2065, the maximum temperature of the warmest month in India could **rise by at least 1.2 degree celsius in a medium emission pathway.**
- **High Emission** (higher than present):
 - By 2050 under a high emission scenario average temperature could rise to 2 degree celsius.

Rainfall:

 Annual rainfall is likely to record a steep increase by 2050 with an 8% to 19.3% increase in all emission scenarios.

Economic Impact:

- In India, declines in <u>rice and wheat</u> yields due to climate change could lead to economic losses between 43 and 81 billion EUR (or 1.8-3.4% of (GDP) by 2050.
- Water demand for agriculture is likely to rise around about 29% by 2050 meaning yield losses are likely to be underestimated.

Heatwaves:

 Heatwaves in India will last 25 times longer by 2036-2065 if emissions are high (4°C), over five times longer if global temperature rise is constrained to about 2°C, and one and a half times longer if emissions are very low and temperature rise only reaches 1.5°C.

Agricultural Drought:

- On a pathway to 4°C global heating, <u>agricultural drought</u> will become 48% more frequent by 2036-2065.
- On a 2°C pathway (the maximum temperature agreed by the <u>Paris Agreement</u>) this drops to 20% more frequent, and constraining temperature rise to 1.5°C (the aspirational goal of the Paris Agreement), agricultural drought will still be 13% more frequent.

• Flooding:

 Under 18 million Indians could be at risk of river flooding by 2050 if emissions are high, compared to 1.3 million today.

Labour:

• Total **labour is expected to decline by 13.4**% under a low emissions scenario by 2050 due to the increase in heat, and by 24% under a medium emissions scenario by 2080.

Food Security:

• In India, declines in rice and wheat production could spark economic losses of up to Euros 81 billion by 2050 and a loss of 15% of farmers' incomes by 2100.

Way Forward

- The window to act is closing fast. As the **G20 countries incentivize economic recovery from**Covid-19 and prepare climate plans ahead of COP26, they face an urgent choice to protect the global economy and make a rapid transition to a low-carbon future; or derail the global economy by pursuing polluting policies.
- It's time for the G20 to make its economic agenda a climate agenda. Rapid action is needed to tackle emissions and adapt to climate change will limit the severe impacts of climate change.
- G20 governments should listen to science and put the world on a path to a better, fairer and

more stable future.

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