



The 1.5°C challenge

This article is related to Paper-III (Environment & Ecology)

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Indian Express

"IPCC report warns that global warming threat is more dire than anticipated. Rule book of Paris Accord must factor this in."

If there is one message from the latest report of the Intergovernmental Panel on Climate Change (IPCC), it's this: Checking global warming will require major changes in the Paris Climate Pact's targets.

The 2015 agreement, which has become the cornerstone of climate change mitigation efforts worldwide, proposed to keep the increase in global average temperature to below 2°C above pre-industrial levels.

But the report that was released on Sunday has found this threshold to be inadequate. A more than 1.5°C warming will be precarious, and a 2°C rise would be catastrophic, the report warns.

The world, already 1°C hotter than what it was 150 years ago, could witness greater frequency of droughts and floods, more intense tropical cyclones and increased ocean acidification and salinity if the planet heats by a further 0.5°C.

That could happen anytime between 2030 and 2050, the report cautions. This means that current mitigation efforts — calibrated to stave off calamitous events by 2075 — will require drastic up-scaling.

What is worrying is that the world is not even on course to meet the comparatively conservative demands of a 2°C-rise-in-temperature scenario.

In fact, one of the criticisms of the Paris Accord-mandated Nationally Determined Contributions (NDCs) is that they are insufficient to meet these demands.

The IPCC, however, reckons that complete decarbonisation is not an impossible goal. In a break from its tradition of not recommending policy prescriptions, the global body has called for up-scaling low-carbon technologies and increased energy efficiency.

But such interventions will not be enough and investments will have to move towards afforestation and technology-centred approaches, including ones that involve sucking the greenhouse gas before it reaches the atmosphere. The report also emphasises adaptation methods.

The imperative of making communities resilient in the face of global warming and the focus on novel technologies require that urgency is accorded to shoring up climate finances. Unfortunately, however, funding has been the Achilles' heel of global climate change negotiations.

As of December 2017, the Green Climate Fund (GCF) — the main instrument of fulfilling the developed countries' collective promise of putting \$100 billion annually into the hat by 2020 — had disbursed less than 10 per cent of its commitment.

And in July, a meeting of the fund's board ended without a decision on how to bolster the agency's pool. The rulebook of the Paris Climate Accord, that is slated to be finalised by the end of the year, is mandated to take care of these concerns. It will now also need to factor in the challenges laid out by the IPCC report.



IPCC report

Why in the discussion?

- Recently, the UN's 'Intergovernmental Panel on Climate Change' (IPCC) has released a report which states that by the year 2030, the average temperature of the earth will have an increase of 1.5 degrees Celsius above the pre-industrial levels.
- This will increase the risk of drought, wild fire, floods and scarcity of food items for millions of people.
- The IPCC said in the report that in order to prevent global warming from reaching a dangerous level, governments around the world will have to make quick, far-reaching and unprecedented changes in all aspects of the society.

Dangers of temperature rise

- An increase of just 0.50 degrees can be a major upheaval in the environment and in the living world, and it can end coral rocks and ocean ice of summer time of the Arctic.
- Millions of people around the world can come under the threat of Loo, water scarcity, coastal floods.
- Excessive heat will increase if carbon emissions continue as usual.
- With this, the fear of a catastrophic floods and diseases can spread across the world.
- There will be problems like high sea waves, salt water etc.
- It will be difficult to find the goals of the Paris Climate Agreement.

Other effects

- Grain production will decrease
- If temperature becomes 2.0 degree compared to 1.5 degree temperature, there may be a significant fall in the production of crops in sub-Saharan Africa, Southeast Asia and Central and South America.

Peak heat

- World population will be exposed to a fierce heat every five years as it happened in South-Eastern Europe in 2007.
- Approximately 14% of the world population will be affected by 1.5 degree temperature.
- At 2.0 degree temperature, 37% of the world population will be affected.
- With an increase of 0.5 degrees, tremendous heat will be relatively common throughout the world, while the tropical region will have the highest increase in unusual warm days.

insufficiency of water

- The increase in urban population highlighted the danger of severe depletion of water.
- More than 350 million people worldwide will be affected at 1.5 degree temperature.
- The number of affected people will be more than 41.1 million at 2.0 degrees.
- Due to the increase in temperature of 0.5 degrees, the problem of drought, especially in the Mediterranean region will increase.

Coral rocks

- Extremely large scale destruction will be there at 1.5 degree temperature.
- Coral reefs will be over at 2.0 degree temperature.

Increase in sea water level

- In 2100, a large population of the world may have to face the danger of flood.
- From 3.1 million to 6.9 million people will be affected at 1.5 degrees.
- At 2.0 degree temperature, 3.2 to 8.0 million people will be affected.
- The 0.5 degree increase will increase the risk of drowning of small island countries.

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Expected Questions (Pre Examination)

1. Which of the following will be the effects of global warming?

1. Rise in drought
2. Rise in flooding
3. Highly intense tropical cyclone
4. Rise in the oceanic acidification
5. Rise in oceanic alkalinity

Choose the correct answer using the code given below-

- (a) 1, 2 and 4
- (b) 1, 2 and 3
- (c) 1, 2, 3 and 4
- (d) All of the above

2. Consider the following statements regarding Intergovernmental Panel on Climate Change (IPCC)-

1. The goal of fully decarbonisation is impossible.
2. According to IPCC, Global warming more than 15°C is destructive.
3. The growth of developing countries will have remarkable decline due to global warming.

Which of the above statements is/are incorrect?

- (a) Only 1
- (b) 1 and 2
- (c) 1 and 3
- (d) All of the above

3. Consider the following statements-

1. Developing countries were to be provided with 200 billion dollar till 2025 by Green Climate Fund.
2. Mandatory Nationally Determined Contribution is not being able to contribute enough.
3. India's Action Plan on climate change will guide in controlling the global warming to 2°C increases.

Which of the above statements is/are correct?

- (a) Only 3
- (b) 1 and 3
- (c) 2 and 3
- (d) All of the above

Note :

The answer of the pre-examination (expected questions) on 8 Oct is 1(b), 2(c) and 3(c).

Expected Questions (Mains Examination)

- Q. "Seeing the apprehensions of climate change Paris agreement is a very limited and delayed inadequate step undertaken." Describe. (250 Words)**