

GS SCORE

An Institute for Civil Services

**GIST OF IMPORTANT
REPORT**

**SIXTH
ASSESSMENT
REPORT: PART II**

REPORT BY: IPCC's

For Civil Services Examination

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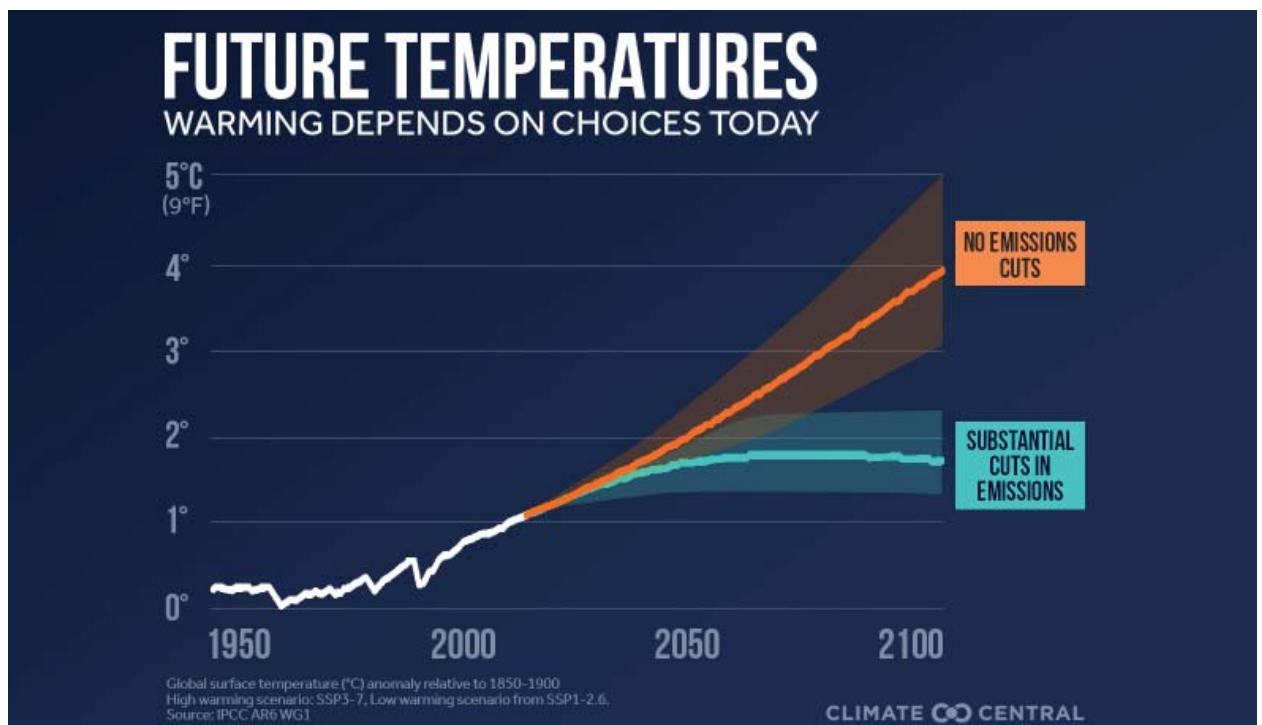
SIXTH ASSESSMENT REPORT PART-II

In News

- The latest report of the Intergovernmental Panel on Climate Change (IPCC) has warned of multiple climates change-induced disasters in the next two decades even if strong action is taken to reduce the emissions of greenhouse gas emissions.

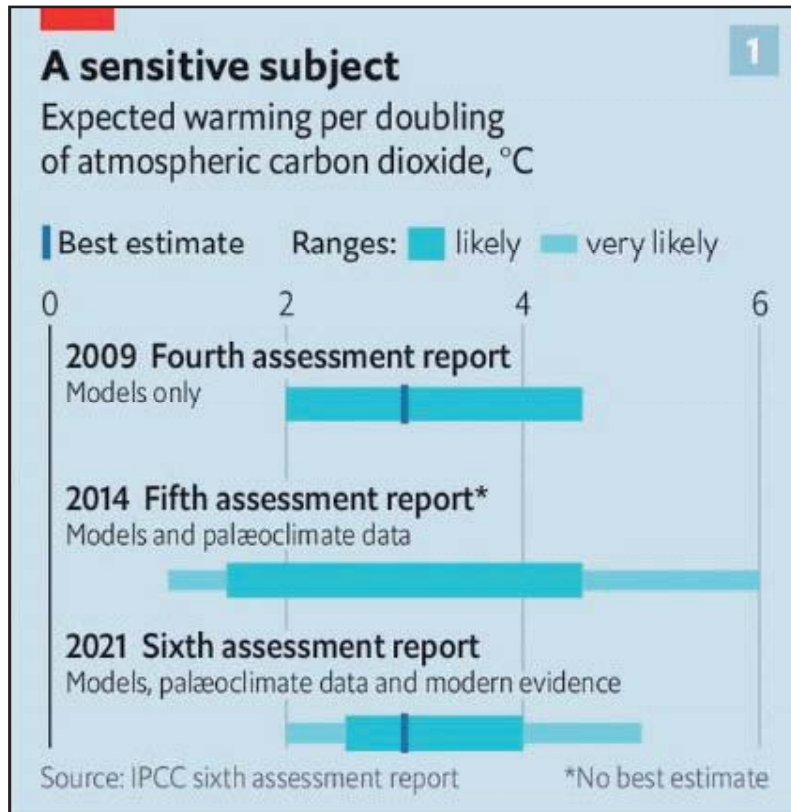
Background

- The first part report was released last year.
 - That one was centred on the scientific basis of climate change.
- **Second part of IPCC's Sixth Assessment Report.**
 - It talks about **climate change impacts, risks and vulnerabilities**, and adaptation options.
- **The third and final part of the report**
 - It will look into the **possibilities of reducing emissions**, is expected to come out soon.



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.
- ▶ **Hundreds of experts go through every available piece of relevant**, published scientific information to prepare a common understanding of the changing climate.
- ▶ **The four subsequent assessment reports came out in 1995, 2001, 2007 and 2015.**
 - These have formed the basis of the global response to climate change.
- ◉ **Each assessment report has built on the work of the previous ones, adding more evidence, information and data**, so that most of the conclusions about climate change and its impacts have far greater clarity, certainty and wealth of new evidence now, than earlier.



- ◉ **These reports, on their own, are not policy prescriptive:** They do not tell countries or governments what to do.
 - They are only meant to present factual situations with as much scientific evidence as is possible.

WET-BULB TEMPERATURES

- ◉ It is a measure that **combines heat and humidity.**
- ◉ **A wet-bulb temperature of 31 degrees Celsius is extremely dangerous for humans**, while a value of 35 degrees is un-survivable for more than about six hours, even for fit and healthy adults.

Major Findings of the Report

- ◉ **First time introductions in the report**
 - This report made an assessment of regional and sectoral impacts of climate change.
 - It has included risks to, 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.
 - It has found that climate change is increasing **vector-borne and water-borne diseases** such as malaria or dengue, particularly in **sub-tropical regions of Asia.**
- ◉ **Health Impacts**
 - **It has also said deaths related to circulatory, respiratory, diabetic and infectious diseases**, as well as infant mortality, are likely to increase with a rise in temperature.
- ◉ **Increasing frequency of extreme weather events**
 - **Like heat waves, flooding and drought**, and even **air pollution** was contributing to under-nutrition, allergic diseases and even mental disorders.

- While strong actions to reduce greenhouse gas emissions in the near term, in the next 20 years, would substantially reduce the threats, and the projected damages, they would not eliminate them all.
 - If the temperature rise crossed the threshold of 1.5°C from pre-industrial times, then many changes could be irreversible.
- **Global sea levels**
 - Will likely rise 44-76 cm this century if governments meet their current emission-cutting pledges.

Issues/ Challenges associated

- **More difficulties in the future**
 - It has said the **ability of human beings, and natural systems, to cope with the changing climate was already being tested**, and further rise in global warming would make it even more difficult to adapt.
- **Population at Risk**
 - **Over 3.5 billion people, over 45% of the global population**, was living in areas highly vulnerable to climate change.
- **Lack of funds and political commitment**
 - **The gap in adaptation was a result of lack of funds and political commitment**, and also the absence of reliable information and a sense of urgency.
- **Reduced effectiveness due to increase in temperature**
 - There are **“feasible and effective”** adaptation options which could reduce the risks to people and nature.
 - But the effectiveness of these options **decreases sharply with further increases in temperature**.

INDIA AT COP26 SUMMIT IN GLASGOW

- India will **achieve net zero emissions latest by 2070**, that is, there will be **no net carbon emissions**.
- **By 2030 India would also ensure 50%** of its energy will be from **renewable energy sources**.
- **India will reduce its carbon emissions until 2030** by a billion tonnes and cut its emissions intensity per unit of GDP by **less than 45%**.
- **India would also install 500 Gigawatt of renewable energy by 2030**, a 50 gigawatt increase from its existing targets.

India specific study

- **The report identifies India as one of the vulnerable hotspots**
 - With several regions and important cities facing very high risk of climate disasters such as flooding, sea-level rise and heat-waves.
- **Area wise assessment**
 - **Mumbai** is at high risk of sea-level rise and flooding.
 - **Ahmedabad** faces serious danger of heat-waves.
 - **Several cities, including Chennai, Bhubaneshwar, Patna and Lucknow**, approaching dangerous levels of heat and humidity.
- **Compromised infrastructure**
 - Infrastructure, including transportation, water, and sanitation and energy systems has been compromised by extreme and slow-onset events, with resulting economic losses, disruptions of services and impacts to well-being.

- **Urban India is at greater risk**
 - Compared to other areas with a projected population of 877 million by 2050, nearly double of 480 million in 2020.
 - **Currently, urbanisation in the country is at 35 per cent**, which is likely to increase to 40 per cent in the next 15 years.
- **Current Wet-bulb temperatures in India**
 - It rarely exceeds 31 degrees C, with most of the country experiencing maximum wet-bulb temperatures of 25-30 degrees C, according to IPCC.
- **Wet-bulb temperatures study of India**
 - It notes that if emissions are cut, but only by the levels currently promised, many parts of **northern and coastal India** would reach **extremely dangerous wet-bulb** temperatures of over 31 degrees C towards the end of the century.
 - If emissions continue to rise, wet-bulb temperatures will approach or exceed the **un-survivable limit of 35 degrees C over much of India**, with the majority of the country reaching wet-bulb temperatures of 31 degrees C or more.

Way forward/ Suggestions

- The need to take adaptation measures is therefore very important.
- It has recognised progress being made to adapt to the new situation, but pointed out that, in most places, it was nowhere close to what is required to be done.
- IPCC reports forms the scientific basis on which countries across the world build their policy responses to climate change.
- These reports also form the basis for international climate change negotiations that decide on the responses at the global level.
 - It is these negotiations that have produced the Paris Agreement, and previously the **Kyoto Protocol**.

INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)

- The Intergovernmental Panel on Climate Change (IPCC) is the **international body** for assessing the science related to climate change.
- The IPCC was set up in **1988** by the **World Meteorological Organization (WMO) and United Nations Environment Programme (UNEP)**.
- **It aims** to provide policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation.
- **IPCC's Sixth Assessment Report:** The meeting to draft the outline of the Sixth Assessment Report (AR6) took place in **Addis Ababa (Ethiopia) in 2017**.

TOP 100
ALL INDIA RANKING
CSE 2020

8	9	12	13	14	16	17	19	20		
24	26	28	30	31	36	38	41	45	50	
51	52	55	56	58	59	67	68	70	71	73
74	76	78	83	84	85	86	89	93	98	100

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TOP 100
ALL INDIA RANKING
CSE 2019

3	6	10	11	16	17	21	22	28			
30	33	38	39	42	44	46	53	54	59	66	69
70	72	77	78	80	82	84	86	87	94	97	98

TOP 100
ALL INDIA RANKING
CSE 2018

2	3	5	7	27	36	37	40	44	49		
51	52	56	58	62	74	81	89	92	94	98	100

TOP 100
ALL INDIA RANKING
CSE 2017

3	10	19	31	33	35	40	41	44	45	48		
54	57	63	64	68	71	75	77	80	83	93	97	100