

## Adapting Indian Agriculture to Climate Change

### Why in news?

The Working Group III contribution to the Sixth Assessment Report, Climate Change 2022: Mitigation of Climate Change was released recently.

### 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 first part report centred on the scientific basis of climate change.
- The [second tranche](#) of reports for the first time, made regional and sectoral level assessment of climate change impacts on ecosystems, biodiversity, and human communities.

### What is the WG III report about?

- The WG III report places climate change firmly in the context of sustainable development, assessing wider risks and co-benefits.
- The report documents and explains recent developments in emission and mitigation efforts.
- It considers emission pathways and corresponding mitigation efforts over the 21st century.
- For the first time, the WG III AR6 report includes a chapter on social aspects of mitigation that covers factors shaping consumption patterns and opportunities to reduce emissions on the demand.
- The report also includes for the first time a chapter dedicated to innovation and technology.

### How vulnerable is India's agriculture towards climate change?

- According to the Global Climate Risk Index 2021, India is among the top ten countries most affected by climate change.
- Several studies suggest that climate change already has evident effects on crop production, with associated consequences for local food supply disruptions and negative impacts on rural incomes and poverty.
- A Report by the Parliamentary Standing Committee on Agriculture, 2017 estimated that climate change related losses are about 4-9 % of the agricultural economy each year, which is an overall GDP loss of 1.5%.
- As nearly 86% of Indian agriculture is small-holder agriculture and a significant part of it is subsistence agriculture, adaptation is an issue of survival.

## What activities should be prioritised?

- Agriculture being a State subject, planning and policy implementation falls within the purview of respective States and local institutions, with the Central government providing the broad policy framework and guidelines.
- It would be important to prioritise activities having both adaptation and mitigation benefits.
- As fragmented and small land size reduces farmers' adaptive capacity to climate change, it is essential to design policies and strategies especially focussing on small and marginal landholders.
- The development of State Action Plan on Climate Change (SAPCC) needs to be dynamic by revising it in lines with the post 2020 NDC goals and the SDGs.
- A pro-active adaptation approach in agriculture is needed, streamlining efforts and resources on climate and disaster resilience for preparedness in coping with disasters.

## How should India equip itself to tackle natural disasters?

### ***India is a signatory to the Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework).***

- India has well developed institutional arrangements for disaster management at the national, State and district level.
- Adaptation measures pertaining to impact of natural disasters in agriculture and allied sectors need to be embedded in the disaster management plans prepared at the district level.
- It is important to provide the supporting infrastructure including water supply, power and physical connectivity on which agricultural value chain depends.
- Areas affected by floods, hailstorms and drought need to be rebuilt better based on disaster management assessment.
- Mainstreaming of climate considerations across the development programmes as well as in the process of spatial planning are required.
- Adaptation to climate change in the sector requires not only large and continued financial investment, but also in terms of knowledge and human capacity.

## References

1. <https://www.thehindubusinessline.com/opinion/adapting-indian-agriculture-to-climate-change/article65309517.ece>
2. [https://www.ipcc.ch/site/assets/uploads/2022/04/AR6\\_Factsheet\\_April\\_2022pdf](https://www.ipcc.ch/site/assets/uploads/2022/04/AR6_Factsheet_April_2022pdf)