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

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