UPSC

① climate crisis threatens food security. In this context, discuss how challenging it is for agriculture to survive climate change?

Climate crisis shows contrasting ⇒ flooding in IT city of Bengaluru while drought in Eastern parts of India.

Drought in Eastern parts

U.P, bihar, Jharkhand, west bengal has received deficient amount of rainfall ⇒ Top paddy producing areas

Effect

(1) Heat waves have reduced wheat production by 3%.

(2) 45% people's livelihood is threatened

(3) Income generation and satisfying basic necessities

(4) crop loan debt cycle and investment for next cycle

CEEW study

75% of district in India are prone to extreme climate. Experts say - global productivity is about to decrease 17% by 2050.

Thus we can see correlation between climate crisis and food security.

Need

Current need is to improve the Income of farmers and productivity through sustainable climate practices.

Challenges Ahead

Overuse of resources – water, fertilisers, etc, has exhabegated GHG emissions.

eg: punjab use 5400 l of water to produce 1 kg of rice – 5 time higher than china.

Possible measures

CEEW has identified 16 sustainable agricultural forms like organic farming, precision farming, Integrated agri, agro-forestry.

Need for stakeholder approach- include farmers, agri scientist, & etc, for creative solution to tackle climate crisis.

Sustainable approaches

① knowledge sharing - skilled intensive approach

②. Technological innovation - labour intensive approach. Incentivise Innovators

③ Integrated farming → Increases diversity.

④ R&D study - comparison with conventional farming

Repeated comparison with climate change will update the approach towards climate resilient agri for future generations