

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

Hot temperatures and erratic rainfall threaten the livelihood of 45% of country's population. It also impacts their income and crop loan cycle - return on time to get fresh lending and to invest back into their farms as well as to fulfil their basic needs.

Due to industrialisation and high level emission of GHG climate changes became more vulnerable. Due to increase in global average temp cause melting of ice which increase sea level rise. This unsustainable climate change cause high drought in some area which cause unable for the crop to grow as well as heavy rainfall cause the crop to drown inside the water which ~~cause~~ threatens food security.

Challenges for agriculture to survive climate change:

A study by Council of Energy Environment and Water (CEEW) has found that over 75% of India's districts are vulnerable to extreme climate. Expert estimates shows that

that climate change might reduce agriculture productivity by 17% by 2050.

Challenges:

① Overuse of resources like water, soil, fertilizers and pesticides to boost yield resulted in GHG emissions which exacerbate climate crisis.

After implementation of food security act country is once again looking towards Punjab, but Punjab farmers need to conserve its soil and water along with adopting diversification in agriculture and venture into agro processing.

Punjab takes about 5400 litres of water to grow 1kg of rice which is as five times as much as in China. About 131 of the 148 blocks in state are overexploited about 15 lakh shallow tube wells dig deeper & deeper every year. Northern and central districts are severely water depleted and SW districts face water logging & salinity.

Punjab has only 1.53% of area which uses 23% of total fertilizers causing serious environmental problems and health concerns.

Way forward:

① Farmers should start promoting Sustainable agriculture & integrated agriculture practices

② policymakers and agronomists and farmers must come together to form a climate risk Management board to create sustainable solution in the form of climate resilient farming.