

② climate crisis threatens food security - In this context discuss how challenging it is for agriculture to survive climate change?

Introduction - A study by Council for Energy, Environment & water has found that 75% of total India's district are vulnerable to extreme climate change & climate change might decrease the Agricultural productivity by 17% by 2050.

climate crisis

① Large part of country ~~is~~ ^{real} under floods, drought like condition in UP, Bihar, Jharkhand & WB which are among top wheat producing states

② For farmers, hot temp & erratic rainfall threatens livelihood of 45% of India's population thereby impact farmers income & crop loan cycle

③ As per report, wheat crop has been declined by 3% this year. Shows the extent of climate change

Challenges in Agriculture

① overuse of water, soil, fertilizers & pesticides to boost crop yield increased the (GHG) emission.

② states like (PUNJAB) never been able to implement crop diversification as it takes about 5,400 L of water to grow one kg of rice which is 5 times higher than CHN.

③ Ironically 78% of pesticides, fertilizers are lost to environment causing Air, water pollution.

④ By 2030, India may need 70 m tonnes more food grains than expected production due to increase in population & rapid urbanisation affecting its yield.

⑤ India currently losses \$9-10 billion due to extreme weather events merely a consequence of climate change.

Way Forward

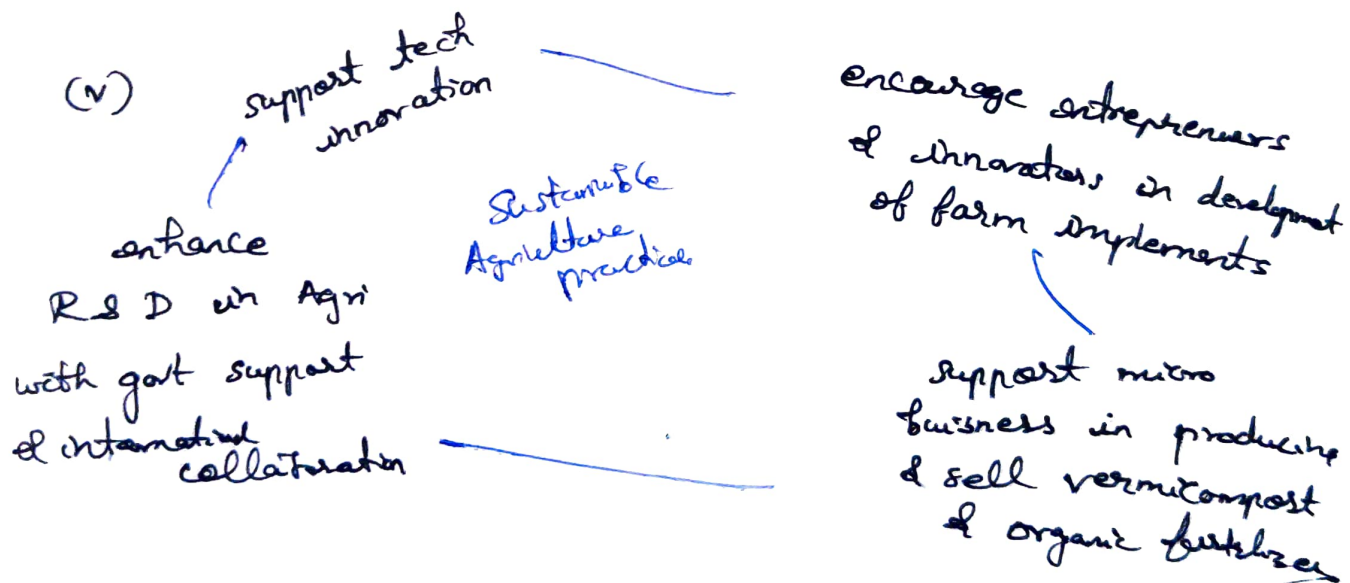
→ Policymakers, Agronomists & farmers need to form a Climate Risk Management Board to bring a sustainable solution.

- (ii) organic farming
agro forestry
precision farming
integrated farming system

adoption could be economically remunerative & environmentally benign.

(iii) Take Brazil as an example which is top producer of sugarcane & soybean without using fertilizers.

(iv) Farmers need hand holding in their early phases to support them for knowledge exchange & skill intensive practices



Conclusion - Govt should act immediately with right approaches by regular comparison of outcomes of climate change which are important for safeguarding farm income & nutrition & food security