Moving from Paddy to Maize - Punjab's Groundwater Crisis

Why in news?

The Punjab Agricultural University (PAU), Ludhiana, recently decided to strengthen maize, the most important alternative to rice, to address the water crisis.

What is Punjab's water crisis?

- Over 70% of blocks in Punjab are in the dark zone on underground water stocks.
- At current rates of depletion, Punjab's entire subsurface water resource could be exhausted in a little over two decades.
- To conserve the resource, the Punjab government brought a law in 2009 to mandatorily delay transplantation of paddy beyond June 10.
- This is when the most severe phase of evapo-transpiration gets over.
- This has delayed harvesting to end-October and early November.
- This is when atmospheric and wind conditions cause particulate matter and gases from burning paddy stubble to hang close to the surface.
- So, the law has been blamed for creating the bad air crisis of North India, especially Delhi.
- There is serious discussion on finding a sustainable solution to address Punjab's massive groundwater crisis.

What is the move thus?

- In the above context, there is a strong demand for diversification of crops, and a move away from water-guzzling paddy.
- The PAU has emphasized on moving from paddy to maize.
- It has suggested working towards narrowing the gap in economic returns between the two crops - Paddy and Maize.
- The idea is to persuade farmers towards increasing the area under maize.

How is maize cultivation across the country?

- Of the 42-odd lakh hectares under cultivation in Punjab, maize was grown on just 3.8% in 2019.
- The area under maize in Punjab is only 1.6% of the total area under maize in India (98 lakh hectares).

- Nearly 46% of India's maize area is in the pensinsular states of Karnataka, Telangana, and Andhra Pradesh.
- Madhya Pradesh and Maharashtra too, have large areas under maize.

What is the scope in Punjab?

- In Punjab, maize can be grown in three seasons - spring (March-June), rabi (December-April) and kharif (June-October).
- Kharif is the state's main maize season.
- There is need to increase the area under kharif maize, which is also the paddy season.
- Spring maize is grown on around 25,000 hectares.
- But the crop is not promoted due to its long duration, and because it consumes water during the hot summer days.

What are the limitations?

- Unlike paddy and wheat, which are procured by the government, maize is sold in the open market and is subject to the actions of private players.
- Maize is one of 24 crops for which the government fixes a minimum support price, but procurement is not its responsibility.
- This is because maize is primarily a "feed" crop.
- Notably, of the 28 million tonnes produced in India, only 13% is consumed as food.
- Fluctuating prices of maize has also been a disincentive for farmers.

What is needed for Punjab to effectively diversify from paddy?

- The area under non-basmati paddy must be cut by at least 12 lakh hectares.
- [Non-basmati paddy is currently grown on 23-26 lakh hectares.]
- Instead, maize, basmati, and cotton must be grown on this land.
- Also, areas under agro-forestry and vegetables should be increased.

What should the government do?

- Developing more high-yield and good varieties of maize for which there is a demand in the market should be taken up.
- But alongside this, the government must stop free power for paddy.
- This is necessary to disincentivise its cultivation and check overexploitation of underground aquifers.
- [A very large number of tubewells (more than 14 lakh in 2015-16) running on free power extract virtually endless amounts of water across the state.]
- The government could also earmark a portion of the Minimum Support Price budget for maize.

- By doing so, farmers could be compensated in case the price of maize falls below what has been fixed by the government.
- Besides government measure, conditions should be created for farmers to move voluntarily away from paddy.
- Farmers will themselves go for such crops without the government’s efforts if there is a market for low water-consuming crops, and a good price for such crops.

Source: Indian Express

