

Sustainable Agriculture

What is the issue?

\n\n

Climate change challenge and dependence of our population on agriculture necessitates a look at the options of sustainable agriculture.

\n\n

What are the issues?

\n\n

\n

- **Land degradation** - According to ICAR's reports, 37% of India's total geographical area is affected with degradation.

\n

- This is despite the big amount of fiscal budget being spent on defending soil even as we lose it to rain and wind.

\n

- **Water degradation** - Only about 47.6% of the net sown area is irrigated.

\n

- Groundwater, which accounts for almost 60% of the irrigated area, is under severe strain with depletion of the water table and deterioration of water quality.

\n

- Subsidies for electricity consumed in agriculture have led to wasteful use of both energy and groundwater.

\n

- Due to increasing population growth and industrialisation, the availability of water to agriculture is expected to fall in the coming decades.

\n

- **Climate Change Risks** - Adverse climate change could lead to drop in yield and lower quality produce.

\n

- It also poses a risk of increasing incidence of attacks by pests and insects.

\n

\n\n

What are the measures to be taken?

\n\n

Sustainable agriculture initiatives-

\n\n

- \n
- Water conservation and irrigation
- \n
- Watershed development and management
- \n
- Rainwater harvesting
- \n
- Construction of check dams, farm ponds, etc
- \n
- Irrigation-efficient technology such as drip and sprinkler systems
- \n
- Sustainable crop patterns from the water-usage point of view
- \n
- Soil conservation
- \n
- Large-scale afforestation
- \n
- Commercial forestry, Farm forestry, Social forestry
- \n
- Captive plantation
- \n
- Community-based forest management practices
- \n
- Mitigation of the adverse effects of climate change
- \n

\n\n

Climate smart agricultural practices -

\n\n

- \n
- Using renewable sources such as bio fuels and solar
- \n
- Nitrogen-smart nutrient management
- \n
- Organic farming
- \n
- Carbon smart practices (agro-forestry, horticulture, livestock management)
- \n
- Weather smart extension services (ICT-based agro advisories), etc

\n

\n\n

What are the government initiatives?

\n\n

\n

- **Pradhan Mantri Krishi Sichayee Yojana** - for irrigation and water use efficiency.

\n

- **Micro Irrigation Fund** - focuses on “more crop per drop”

\n

- **Long Term Irrigation Fund** - to bring an additional land area under irrigation.

\n

- **Rashtriya Krishi Vikas Yojana** - It incentivises States to draw up plans for their agriculture sector more comprehensively taking agro-climatic conditions, natural resource issues and technology into account.

\n

- **Pradhan Mantri Fasal Bima Yojana** - It is a comprehensive insurance scheme that covers the damage caused by natural calamities.

\n

- **Dairy Processing and Infrastructure Development Fund** - to reduce the dependence of farmers on agriculture and provide other allied options.

\n

- **Rural Infrastructure Development Fund** - to provide for rural India's infrastructure requirement.

\n

\n\n

\n\n

Source: BusinessLine

\n