

Sustainable Agriculture

What is the issue?

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

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What are the issues?

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- Land degradation According to ICAR's reports, 37% of India's total geographical area is affected with degradation.
- This is despite the big amount of fiscal budget being spent on defending soil even as we lose it to rain and wind.
- Water degradation Only about 47.6% of the net sown area is irrigated.
- 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.
- Subsidies for electricity consumed in agriculture have led to wasteful use of both energy and groundwater.
- Due to increasing population growth and industrialisation, the availability of water to agriculture is expected to fall in the coming decades.
- Climate Change Risks Adverse climate change could lead to drop in yield and lower quality produce.
- It also poses a risk of increasing incidence of attacks by pests and insects.

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What are the measures to be taken?

Sustainable agriculture inititatives-

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• Water conservation and irrigation

• Watershed development and management

• Rainwater harvesting

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- \bullet Construction of check dams, farm ponds, etc $\ensuremath{\backslash n}$
- Irrigation-efficient technology such as drip and sprinkler systems
- \bullet Sustainable crop patterns from the water-usage point of view $\ensuremath{^{\backslash n}}$
- Soil conservation

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• Large-scale afforestation

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- Commercial forestry, Farm forestry, Social forestry
- Captive plantation

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- $\hbox{-} \hbox{Community-based forest management practices} \\ \verb|\n| \\$
- Mitigation of the adverse effects of climate change

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Climate smart agricultural practices -

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

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What are the government initiatives?

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

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- Micro Irrigation Fund focuses on "more crop per drop"
- Long Term Irrigation Fund to bring an additional land area under irrigation.

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- 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.
- Pradhan Mantri Fasal Bima Yojana It is a comprehensive insurance scheme that covers the damage caused by natural calamities.
- Dairy Processing and Infrastructure Development Fund to reduce the dependence of farmers on agriculture and provide other allied options.
- Rural Infrastructure Development Fund to provide for rural India's infrastructure requirement.

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Source: BusinessLine

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