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.
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- This is despite the big amount of fiscal budget being spent on defending soil even as we lose it to rain and wind.
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- **Water degradation** - Only about 47.6% of the net sown area is irrigated.
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- 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.
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- Subsidies for electricity consumed in agriculture have led to wasteful use of both energy and groundwater.
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- Due to increasing population growth and industrialisation, the availability of water to agriculture is expected to fall in the coming decades.
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- **Climate Change Risks** - Adverse climate change could lead to drop in yield and lower quality produce.
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- 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?

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Sustainable agriculture inititatives-

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- Water conservation and irrigation
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- Watershed development and management
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- Rainwater harvesting
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- Construction of check dams, farm ponds, etc
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- Irrigation-efficient technology such as drip and sprinkler systems
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- Sustainable crop patterns from the water-usage point of view
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- Soil conservation
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- Large-scale afforestation
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- Commercial forestry, Farm forestry, Social forestry
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- Captive plantation
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- Community-based forest management practices
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- 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
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- Nitrogen-smart nutrient management
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- Organic farming
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- Carbon smart practices (agro-forestry, horticulture, livestock management)
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- 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”
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- **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.
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- **Pradhan Mantri Fasal Bima Yojana** – It is a comprehensive insurance scheme that covers the damage caused by natural calamities.
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- **Dairy Processing and Infrastructure Development Fund** - to reduce the dependence of farmers on agriculture and provide other allied options.
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- **Rural Infrastructure Development Fund** - to provide for rural India’s infrastructure requirement.
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Source: BusinessLine

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