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Sustainable Agriculture

High dependence on agriculture and livestock and presence of small landholders necessitate Government support for sustainable agriculture

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India is among the largest GHG emitters in the agricultural sector, primarily due to crop and livestock activities.

The heavy reliance on agriculture and livestock underscores the need for adopting sustainable practices.

Given the small landholding size of most Indian farmers, robust support from the GoI is essential to implement sustainable agriculture at the grassroots level.

Agriculture is a major source of global greenhouse gas (GHG) emissions, contributing approximately 17% to the total emissions worldwide. There are primarily two sources of GHG emissions in agriculture - crop and livestock, and change in land use. Crop and livestock emissions are slightly higher than that from change in land use.

- **GHG emission from crop and livestock:** GHG emissions from crop and livestock activities such as enteric fermentation (39%), livestock manure (20%), fertilisers (13%), rice cultivation (10%) and crop residue and burning (9%) account for these emissions.
- **GHG emissions from change in land use:** Deforestation owing to agriculture accounts for 75% of the GHG emissions in this category, followed by drained organic soil wherein the emissions occur when natural wetlands, peatlands, or other organic-rich soils are drained or disturbed for agriculture, forestry, or other developments.

- India is one of the largest GHG emitters in the agriculture sector globally, after Brazil and Indonesia, with highest contribution by crop and livestock activities.
- Agriculture contributes 14% to India's total GHG emissions, with livestock accounting for 53% and rice cultivation accounting for 17%. India's emissions from livestock and rice cultivation exceed the global average, given the country's status as the largest livestock holder globally and the second-largest rice producer.

- India has dependency on agriculture as it accounted for approximately 18% to the nominal GVA in FY2024 and employed around 45% of the Indian workforce. Additionally, livestock is a vital component of the Indian economy.
- In view of the same, the Government of India (GoI) has introduced several initiatives, such as the National Mission for Natural Farming, the National Mission for Sustainable Agriculture, the National Livestock Mission, climate resilient crop varieties etc. to promote sustainable agriculture.
- However, these efforts are still in their early stages compared to other major agricultural GHG-emitting nations.

- With most Indian farmers having small holdings with limited resources, the GoI must focus on supporting small and marginal farmers by providing access to knowledge, technical expertise, affordable financing and essential infrastructure to effectively implement sustainable practices at the grassroots level.



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