



Discuss The Reasons For High GHG Emissions In The Agriculture Sector, As Well As Methods That Can Be Implemented To Reduce Emissions. (250 words) (GS 3; Environment)

Despite the fact that agriculture accounts for 73% of the country's methane emissions, Budget pronouncements have been minimal. Agricultural and related activities including rice farming, domestic animal raising, and biomass burning account for 22 percent to 46 percent of worldwide methane emissions.

Causes of the Agriculture Sector's High GHG Emissions

- The harm is mostly due to several types of subsidies, such as those for urea, canal irrigation, and irrigation electricity.
- Overproduction has resulted from the concentration of Minimum Support Prices (MSP) and procurement policies on a few states and mostly on two crops, rice and wheat.
- Wheat and rice stocks in the country's central pool were four times more than the buffer stocking required as of January 1, 2022.
- Despite record rice distribution in the Public Distribution System (PDS) and exports in 2020-21, the Food Corporation of India's (FCI) rice stocks are seven times the buffer norms.
- This information represents not just inefficient use of scarce capital, but also the enormous amount of greenhouse gases (GHG) that these stocks contain.

Agricultural production also contributes to GHG emissions in the following ways:

- Emissions from rice remnants that have been burned
- Fertilizer applications
- Fertilizer production for rice
- Harvesting and other energy-related activities
- Pumps
- Processing
- Transportation

Steps that can be performed to reduce agricultural GHG emissions-

Rethinking Policies: According to the Economic Survey 2021-22, the country is over-using its ground water resources, particularly in the northwest and some portions of south India, owing to paddy production on 44 million hectares.

Although this has aided India's food security, it is now imperative that groundwater and the environment be preserved.

This necessitates evaluating and reorienting policies to reduce GHG emissions, such as electricity and fertiliser subsidies, MSP, and procurement.



Three-Pronged Approach to GHG Emissions: According to studies, India's agriculture and livestock industry has the potential to slash 18 percent of the country's yearly greenhouse gas emissions.

According to the report, applying these three strategies might result in a 50% reduction in emissions:

- Fertilizer use that is efficient
- Zero-tillage adoption
- Water used to irrigate paddy fields is managed.

Encourage Farmer Groups and the Commercial Sector: Farmer groups and the private sector can be mobilised to build carbon markets in agriculture on a national and worldwide level.

Furthermore, precise water, fertiliser, and soil management practises can result in a triple win, lowering the climatic consequences of rice farming while improving rice productivity and farmer income.

In Amrit Kaal, such a step will provide India with "climate savvy" agriculture.

Also, if we can maintain productivity while reducing our carbon impact, it will aid India's access to global markets.

Carbon Pricing: The International Monetary Fund (IMF) estimates that by 2030, the world will need a \$75 per tonne carbon price to reduce emissions to a level consistent with a 2°C warming target.

Increasing Farmer Awareness: The best method is to provide rice-producing farmers with the proper information and incentives at the right time, so that they only use as much water or fertiliser as the rice plant requires.

Rice growing must be made more sustainable without compromising the livelihood of farmers.