



World Bank's Plan to Combat Methane Emissions

For Prelims: [Methane](#), [COP-28](#), [Sequoia Climate Foundation](#), [Bezos Earth Fund](#), [Global Warming Potential \(GWP\)](#), [Sulphur Hexafluoride](#), [World Bank](#), [Global Methane Reduction Platform for Development \(CH4D\)](#), [Global Flaring and Methane Reduction Partnership \(GFMR\)](#)

For Mains: The impact of climate change due to methane emissions on environmental degradation and sustainability.

[Source: TH](#)

Why in News?

In an initiative to combat the rising threat of [methane emissions](#), the [World Bank](#) has announced plans to launch a series of country-led programs, **to reduce up to 10 million tons** of methane over the course of their investment lifespans.

What is the Plan Unveiled by World Bank?

- **Need For the Plan:**
 - Methane accounts for approximately **19% of global greenhouse gas emissions (GHGs)**, making it a substantial contributor to climate change.
 - **Rice production accounts for 8%, livestock 32%, and waste 18% of all human-driven methane emissions**, making targeted efforts in these areas crucial.
 - Methane has a much higher global warming potential (GWP) than carbon dioxide.
 - Despite **methane being 80 times more potent than carbon dioxide** in terms of **warming the planet**, it has received less attention and funding.
- **World Bank's Planning:**
 - The World Bank is set to roll out a **minimum of 15 country-led programs** within the next 18 months.
 - According to the World Bank, the move is a **step in addressing the alarming increase in global temperatures** and supporting communities most vulnerable to the impacts of climate change.
 - These programs will specifically target methane emissions, employing strategic interventions to curb environmental degradation and promote sustainable practices.
 - **World Bank's Triple Win Approach:**
 - The ambitious programs will focus on slashing methane emissions from various sources, **including rice production, livestock operations, and waste management**.
 - The comprehensive approach to methane reduction outlined by the World Bank **emphasizes triple wins** - reducing emissions, enhancing resilience, and empowering livelihoods.
- **Funding Mechanism:**
 - Currently, finance for methane abatement constitutes **less than 2%** of global climate

finance.

- The World Bank envisions a substantial increase in financing for methane reduction through public and private sector channels **between 2024 and 2030**.
 - The institution is set to collaborate with Germany, Norway, the United States, the UAE, and the private sector to implement effective solutions and reduce methane emissions across the entire energy value chain.
- **Partnership Platforms:**
 - Complementing its efforts, the World Bank is launching **two partnership platforms**:
 - The **Global Methane Reduction Platform for Development (CH4D)** focusing on methane abatement in agriculture and waste.
 - **Global Flaring and Methane Reduction Partnership (GFMR)** concentrating on reducing methane leaks in the oil and gas sector.

Global Warming Potential (GWP)

- GWP is a measure of how much heat a greenhouse gas traps in the atmosphere over a specific time period, **usually 100 years**, compared to carbon dioxide (CO₂).
- It is used to evaluate the potential impact of different greenhouse gases on global warming. The GWP allows for the comparison of the warming effects of various gases based on their ability to absorb and retain heat in the atmosphere.
- **Carbon dioxide is the reference gas with a GWP of 1. Other greenhouse gases, such as methane (CH₄) and nitrous oxide (N₂O), have higher GWPs because they are more effective at trapping heat.**
- [The Intergovernmental Panel on Climate Change \(IPCC\)](#) provides GWP values for different gases. It's important to note that GWP values can vary depending on the time horizon chosen for the comparison.

What are the Initiatives to Tackle Methane Emissions?

- **Indian:**
 - **'Harit Dhara' (HD):** Indian Council of Agricultural Research (ICAR) has developed an anti-methanogenic feed supplement '[Harit Dhara' \(HD\)](#), which can cut down cattle methane emissions by 17-20% and can also result in higher milk production.
 - **India Greenhouse Gas Program:** The India GHG Program led by WRI India (non-profit organization), Confederation of Indian Industry (CII) and [The Energy and Resources Institute \(TERI\)](#) is an industry-led voluntary framework to measure and manage greenhouse gas emissions.
 - **National Action Plan on Climate Change (NAPCC):** [NAPCC](#) was launched in 2008 which aims at creating awareness among the representatives of the public, different agencies of the government, scientists, industry and the communities on the threat posed by climate change and the steps to counter it.
 - **Bharat Stage-VI Norms:** India shifted from [Bharat Stage-IV \(BS-IV\)](#) to [Bharat Stage-VI \(BS-VI\)](#) emission norms.
- **Global:**
 - **Methane Alert and Response System (MARS):**
 - MARS will integrate data from a large number of existing and future satellites that have the ability to detect methane emission events anywhere in the world, and send out notifications to the relevant stakeholders to act on it.
 - **Global Methane Pledge:**
 - At the [Glasgow climate conference](#) (UNFCCC COP 26) in 2021, nearly 100 countries had come together in a voluntary pledge, referred to as the Global Methane Pledge, to cut methane emissions by at least 30% by 2030 from the 2020 levels.
 - **Global Methane Initiative (GMI):**
 - It is an international public-private partnership focused on reducing barriers to the recovery and use of methane as a clean energy source.

What Measures can be Taken Further to Reduce Methane Emissions?

- **In the Energy Sector:** Methane emissions occur along the entire oil and gas supply chain, but especially from **fugitive emissions from leaking equipment, system upsets, and deliberate flaring and venting.**
 - Existing cost-effective solutions can help reduce emissions, **including initiating leak detection and repair programs, implementing better technologies and operating practices,** and capturing and utilising methane that would otherwise be wasted.
- **In Agriculture:** The farmers can provide animals with more nutritious feed so that they are larger, healthier and more productive, effectively producing more with less.
 - When it comes to staple crops like paddy rice, experts recommend alternate wetting and drying approaches that could halve emissions.
 - Rather than allowing the continuous flooding of fields, **paddies could be irrigated and drained two to three times throughout the growing season,** limiting methane production without impacting yield.
 - That process would also require one-third less water, making it more economical.
- **In the Waste Sector:** The waste sector accounts for **around 20%** of global human-caused methane emissions.
 - The cost-effective mitigation solutions with the greatest potential related to separating organics and recycling also have the potential of creating new jobs.
 - Upstream avoidance of food loss and waste is also key.
 - Additionally, **capturing landfill gas** and generating energy will reduce methane emissions, displace other forms of fuels and create new streams of revenue.
- **Role of Government:** The Government of India should envision a food system transition policy to help its people grow and consume food differently.
 - Instead of working in silos, **the government must develop a comprehensive** policy that moves farmers to sustainable modes of plant-based food production.
 - **Divert subsidies from industrial livestock production and its associated inputs,** and look at job creation, social justice, poverty reduction, animal protection and better public health as multiple aspects of a single solution.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Q1. Which of the following statements is/are correct about the deposits of 'methane hydrate'? (2019)

1. Global warming might trigger the release of methane gas from these deposits.
2. Large deposits of 'methane hydrate' are found in Arctic Tundra and under the sea floor.
3. Methane in atmosphere oxidizes to carbon dioxide after a decade or two.

Select the correct answer using the code given below.

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (d)

Q2. Consider the following: (2019)

1. Carbon monoxide
2. Methane
3. Ozone
4. Sulphur dioxide

Which of the above are released into atmosphere due to the burning of crop/biomass residue?

- (a) 1 and 2 only
- (b) 2, 3 and 4 only
- (c) 1 and 4 only
- (d) 1, 2, 3 and 4

Ans: (d)

PDF Refernece URL: <https://www.drishtias.com/printpdf/world-bank-s-plan-to-combat-methane-emissions>

