GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 2478
TO BE ANSWERED ON 13.12.2021

Emission on Methane

2478. SHRIMATI MANEKA SANJAY GANDHI:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

(a) whether the Government is aware of the fact that India is the third largest emitter of methane globally;
(b) the reasons for not signing up for the Global Methane Pledge at COP26 in Glasgow;
(c) the sector-wise breakdown of methane emissions in the country;
(d) whether the Government plans to reduce positive methane emissions and if so, the details thereof; and
(e) if not, the reasons therefor?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI ASHWINI KUMAR CHOUBEY)

(a) Different databases rank countries differently in respect of their methane emissions. As per the Global Methane Initiative (GMI) website, China, Russia and USA are the top three methane emitters. India ranks fourth, and its methane emissions are nearly one-third that of China. As per India's third Biennial Update Report to the United Nations Framework Convention on Climate Change (UNFCCC), methane emissions accounted for 409 million tons CO_2e i.e. 14.43% of India's total Greenhouse Gas (GHG) emissions in 2016. The agriculture sector in the year 2016 registered a decrease of 2.25 % in GHG emissions since 2014.

(b) India has not signed up for the Global Methane Pledge. The Pledge was proposed by the European Union and the United States of America at the Major Economies Forum (MEF) on Energy and Climate on September 17, 2021 targeting at 30% reduction in global methane emissions from 2020 levels by 2030. India is a Party to the UNFCCC and its Paris Agreement and remains steadfast in its commitment in framing and implementing its actions to combat climate change. The Pledge is outside the ambit of the UNFCCC and its Paris Agreement. Under the Paris Agreement, India has submitted its Nationally Determined Contributions (NDCs) in 2015, which do not include sector or gas specific emissions reduction targets. In exercise of its right of sovereign, national determination of its climate actions, and as per the assessments by the Ministry of Agriculture and Farmers' Welfare, the Ministry of Petroleum

and Natural Gas, and the Ministry of Environment, Forest and Climate Change, the Government decided not to sign the "Global Methane Pledge". The salient reasons and related information are as below:

- The two predominant sources of methane emissions in India are enteric fermentation and paddy cultivation. These emissions result from the agricultural activities of small, marginal, and medium farmers across India, whose livelihood stands threatened by the aforesaid Pledge. In contrast, agriculture in developed countries is dominated by industrial agriculture.
- In the context of food security, the methane emissions are 'survival' emissions and not luxury emissions. In addition to impacting farmers' income, this can impact agricultural production, especially that of paddy. India is one of the largest producers and exporters of rice. Therefore, this Pledge also has the potential to affect India's trade and economic prospects.
- Agriculture was not included in the emission intensity target as per India's pre-2020 voluntary commitments.
- As per the 6th Assessment Report of the Intergovernmental Panel on Climate Change, the predominant gas responsible for climate change is CO_2 which has a lifetime of 100-1000 years. This Pledge shifts the CO_2 reduction burden to methane reduction, which has a lifetime of just 12 years.
- Also, India has the largest cattle population in the world, which is a source of livelihood to a large section of population. The contribution of Indian livestock to global pool of enteric methane is very low, as Indian livestock utilizes large volumes of agricultural by-products and unconventional feed material.

(c) India's methane emissions in 2016 (excluding LULUCF) were 409 million tonne CO_2e of which, 73.96% was from Agriculture sector, 14.46% from Waste sector, 10.62% from Energy sector and 0.96% was from Industrial Processes and Product Use sector.

(d) and (e) The Government is taking a number of initiatives to reduce methane emissions such as:

(i) Through initiatives like '**The Gobar (Galvanizing Organic Bio-Agro Resources) – Dhan' scheme** and **New National Biogas and Organic Manure Programme**, cattle waste utilisation is being incentivised, in addition to production of clean energy in villages. The Gobardhan scheme,*inter alia*, supports biodegradable waste recovery and conversion of waste into resources and reduction of GHG emissions.

(ii) The Department of Animal Husbandry and Dairying is implementing **National Livestock Mission**, which *inter alia*, includes Breed Improvement and Balanced Rationing. Feeding livestock with superior quality balanced ration is helping to reduce methane emissions from the livestock.

(iii) **System for Rice Intensification** – The technique has potential to enhance rice yield from 36-49% with about 22-35% less water than conventional transplanted rice.

(iv) **Direct Seeded Rice** – The system reduces methane emissions as it does not involve raising nurseries, puddling and transplanting. Unlike transplanted paddy cultivation, standing water is not maintained in this system.

(v) **Crop Diversification Programme** – Methane emissions is avoided due to diversion of paddy to alternate crops like pulses, oilseeds, maize, cotton and agroforestry.

(vi) A total of 216 WtE plants with aggregate capacity of 370.45 MWeq have been set up in the country to generate power or biogas/biomethane or Bio-CNG from agricultural, urban, industrial and municipal solid wastes.

(vii) Ministry of Housing and Urban Affairs is implementing **Swachh Bharat Mission – Urban**. The Mission along with promulgation of Solid Waste Management Rules, 2016, Construction & Demolition (C&D) Waste Rules, 2016, Plastic Waste Management Rules, 2016 and various policy interventions by MoHUA encourages conversion of waste to value added products viz. waste to energy, electricity etc. In 2021, the Mission has resulted in methane reduction of 231 Gigagram per year.

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