GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

RAJYA SABHA
UNSTARRED QUESTION NO. 706
TO BE ANSWERED ON 05.02.2026

Stubble burning and methane emissions

706. SHRI SANJAY KUMAR JHA:

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

(a) whether it is a fact that a UN report warns that India has become a global hotspot for methane emissions driven by stubble burning and is now the world's third-largest methane emitter, responsible for nearly 9 per cent of global emissions; and
(b) if so, the remedial intervention Ministry proposes to mitigate the aforementioned concerns?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI KIRTI VARDHAN SINGH)

(a) As a Party to the United Nations Framework Convention on Climate Change (UNFCCC), India submits its National Communications (NCs) and Biennial Update Reports (BURs) to UNFCCC on a periodic basis. As part of these reports, the national Greenhouse Gas (GHG) inventory, which includes emissions of various GHGs, including methane, is prepared in accordance with relevant Intergovernmental Panel on Climate Change (IPCC) guidelines. As per these reports, total methane emissions in the country since 2010 have remained largely unchanged. However, the share of methane emissions in total GHG emissions has consistently decreased from 19.28% in 2010 to 13.32% in 2020. As per India's fourth BUR, India's methane emissions from stubble burning were 0.28 million tonnes, which accounted for only 1.49% of India's total methane emissions in 2020.

(b) India's updated Nationally Determined Contribution (NDC) submitted to UNFCCC in August 2022 specifies the goal to reduce the emission intensity of the economy by 45% by 2030 vis-à-vis 2005 levels, rather than specifying any specific targets for sectors/gases, including methane. Against this goal, the emission intensity reduction of 36% has been achieved by 2020 due to several proactive measures taken by the Government. Notwithstanding, the ongoing measures by the Government to reduce methane gas emissions, inter alia, include:

i. The Indian Council of Agricultural Research (ICAR), under the National Innovations in Climate Resilient Agriculture (NICRA) project, has developed several technologies with mitigation potential for methane from rice, viz. System for Rice Intensification technique and Direct Seeded Rice.

ii. Crop Diversification Programme - Methane emissions are avoided due to diversion of paddy to alternate crops like pulses, oilseeds, maize, cotton and agro-forestry.

iii. The Department of Animal Husbandry and Dairying (DAHD) is implementing the National Livestock Mission, which inter alia, includes Breed Improvement and Balanced Rationing.

iv. Government of India promotes green fodder production, silage making, chaff cutting, and total mixed ration under the National Livestock Mission with a view to reducing methane emission from livestock. ICAR has developed Harit Dhara as a feed supplement to reduce methane emissions from livestock.

v. Through initiatives like 'The Gobar (Galvanising Organic Bio-Agro Resources) – Dhan' scheme and New National Biogas and Organic Manure Programme, cattle waste utilisation is being incentivised, in addition to the production of clean energy in villages. The scheme, inter alia, supports biodegradable waste recovery and conversion of waste into resources, thereby reducing greenhouse gas emissions

vi. The government has taken various measures to eliminate paddy stubble burning. Under the Crop Residue Management (CRM) scheme, more than 3.50 lakh farm machinery units have been distributed to individual farmers in the priority states of Punjab, Haryana, and Uttar Pradesh (UP). Massive information and communication activities are being conducted by the State Governments / Institution of ICAR Institutions to create awareness among farmers about the use of machines for CRM, thereby preventing paddy stubble burning.

vii. A comprehensive framework for the prevention and management of paddy straw has been developed by the Commission for Air Quality Management (CAQM) in the National Capital Region (NCR) and adjoining areas, followed by year-wise, State-specific Action plans for Punjab, Haryana, and UP to address paddy stubble burning.

viii. CAQM has issued directives and advisories to establish an ecosystem and robust supply chain mechanism to boost ex-situ utilisation of straw for tackling the problem of stubble burning and mandated 11 thermal power plants located within 300 km of Delhi for co-firing of biomass pellets (up to 5 to 10%).

ix. The Ministry of Power has issued a Comprehensive Policy for Co-firing of Biomass Pellets in coal based Thermal Power Plants on 07.11.2025, inter alia, specifying that thermal power plants in regions other than NCR shall, on an annual basis, use 5% blend (by weight) either from biomass pellets and/or torrefied charcoal made from municipal solid waste along with coal with effect from FY 2025-26.

x. CAQM has directed the State Governments of Punjab and Haryana to mandate the use of paddy straw-based biomass pellets/ briquettes in all brick kilns located in the districts beyond NCR, as one of the means towards the elimination of the practice of open paddy stubble burning, aiming for 50% co-firing of paddy straw-based pellets/briquettes.

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