

**GOVERNMENT OF INDIA
ENVIRONMENT, FORESTS AND CLIMATE CHANGE
LOK SABHA**

STARRED QUESTION NO:486

ANSWERED ON:28.04.2015

EMISSION OF GREENHOUSE GASES

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

- (a) the present level of Greenhouse Gas emission from various sources in the country;
- (b) whether any standards/norms has been prescribed in this regard and if so, the details thereof;
- (c) whether according to a study conducted by the Centre for Ecological Sciences of the Indian Institute of Science, (IIS) Bengaluru, the emission of greenhouse gas by urban households is more than the emission by industries and the domestic sector in the cities is one of the highest contributors to greenhouse gas responsible for global warming; and
- (d) if so, the details of main observations/recommendations made by the IIS along with the corrective steps taken/proposed to be taken by the Government to bring down the level of emission of Greenhouse gas in the country?

Answer

MINISTER OF STATE (INDEPENDENT CHARGE) FOR ENVIRONMENT, FOREST AND CLIMATE CHANGE (SHRI PRAKASH JAVADEKAR)

(a) to (d): A statement is laid on the Table of the House

Statement referred to in reply to parts (a) to (d) of the Lok Sabha Starred Q. No. 486 scheduled for answer on 28.04.2015 regarding 'Emission of Greenhouse Gases'

(a) As per India's Second National Communication submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in 2012, total Green House Gas (GHG) emissions were 1301.21 million tons of CO₂ equivalent. Out of total emissions; 67% were emitted from energy sector, 23% from agriculture sector, 6% from industrial processes and 4% were from the waste sector.

(b) The Government has notified pollution standards in respect of 61 categories of polluting industries to control pollution at source in the country. However, government has not prescribed any norms/standards for GHGs under the ambit of Kyoto Protocol to the UNFCCC.

(c)and (d) Attention is being drawn to a study entitled 'GHG footprint of major cities in India' conducted by the Centre for Ecological Sciences of the Indian Institute of Science, (IISc) Bangalore published in March 2015 in the international journal titled 'Renewable and Sustainable Energy Reviews'. The study accounted the amount of three important greenhouses gases namely carbon dioxide (CO₂), methane(CH₄) and nitrous oxide (N₂O) for seven major Indian cities namely Delhi, Greater Mumbai, Kolkata, Chennai, Greater Bangalore, Hyderabad and Ahmedabad. The study showed that domestic sector has higher emissions than industries located in these cities. The table below depicts the salient results of the study:

CITIES	Total Domestic emissions (%)		Transport emissions (%)		Industry emissions (%)		
	#GHG	#GHG	#GHG	#GHG	#GHG	#GHG	
Delhi	38.63	11.69	30.26	10.87	28.13	3.05	7.89
Greater Mumbai	22.78	8.47	37.20	3.32	14.58	1.80	7.89
Kolkata	14.81	6.34	42.78	1.89	12.74	2.62	17.66
Chennai	22.09	8.62	39.01	4.18	18.92	4.47	20.25
Greater Bangalore	19.80	4.27	21.59	8.61	43.48	2.44	12.31
Hyderabad	13.73	2.34	17.05	7.79	56.70	1.56	11.38
Ahmedabad	9.12	2.54	27.88	2.27	24.92	2.04	22.41

#figures of GHG emissions in million tons CO₂ equivalent

Use of renewable sources of energy, efficiency improvements in end use devices, appropriate building architecture (glass facade high rise buildings consume ten times more electricity units per person per year), waste treatment and resource recovery, and improvements in public transport including phasing out outdated, inefficient vehicles are some of the recommendations offered by the

study.

India is a party to UNFCCC and its Kyoto Protocol but does not have legally binding GHG emission reduction commitments. However, government has voluntarily announced to reduce emission intensity of Gross Domestic Product by 20-25% by 2020 from the 2005 level without reckoning the emissions from agriculture sector. The Government is implementing the National Solar Mission, National Mission on Enhanced Energy Efficiency, National Mission on Sustainable Habitat and Green India Mission under the National Action Plan on Climate Change, which are aimed at addressing mitigation of GHG emissions.