Tungabhadra, Cauvery and Pennar including Tunga & Bhadra. The schemes were sanctioned time to time and completed in year 2010. Sewage treatment capacity of 41.64 million litres per day has been created. Major schemes for pollution abatement activities include interception & diversion of sewage, pumping stations, construction of sewage treatment plants (STPs) and other works related to river front development, crematoria, public awareness etc. During last three years, no proposal has been received for river pollution abatement works from State Government.

Air pollution in Delhi

988. DR. L. HANUMANTHAIAH: Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

(a) whether Delhi is one of the most polluted city in the country and whether this is public health-threatening emergency;

(b) if so, the details thereof and the factors causing air pollution besides vehicular traffic, dust and construction activities in the cities; and

(c) the steps proposed by Government to tackle air pollution in such cities on long term planning basis and through policy interventions to protect public health?

THE MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (SHRI BABUL SUPRIYO): (a) The average annual concentrations of $PM_{2.5}$ and PM_{10} in Delhi are above the National Ambient Air Quality Standards. Several measures have been taken/being taken by the Government to check/control air pollution in Delhi. Continuous Ambient Air Quality Monitoring Stations (CAAQMS) data indicated general improvement in air quality of Delhi in 2018. Number of ÂGoodÊ to ÂModerateÊ days has increased to 159 in 2018, as compared to 152 in 2017 and 106 in 2016, and number of ÂPoorÊ to ÂSevereÊ days has reduced to 206, compared to 213 in 2017 and 246 in 2016. In Delhi, there is 7.3% and 14.8% reduction in PM_{25} levels and 8.6% and 16.5% reduction in PM_{10} levels in 2018 over 2017 and 2016 respectively.

(b) The recent study conducted by TERI and ARAI (Statement-I) (See below) for Delhi-NCR reveals Transport (17-28%), Industries (22-30%), Agriculture Burning (4-7%), Residential (8-10), Dust [Soil, Road & Construction] (17-38%) and other sources (8-11%) as the main contributors to $PM_{2.5}$ concentrations in summer and winter seasons in Delhi-NCR.

(c) The Central Government has taken a number of regulatory measures for prevention, control and abatement of air pollution in the country.

Action Plans for Improvement of Air Quality in Delhi NCR:

(i) Graded Response Action Plan (GRAP) was notified on January 12, 2017, for prevention, control and abatement of air pollution in Delhi and NCR. It identifies graded measures and implementing agencies for response to four AQI categories, namely, Moderate to Poor, Very Poor, Severe and Severe + or Emergency.

(ii) The Central Government has notified a Comprehensive Action Plan (CAP) in 2018 identifying timelines and implementing agencies for actions identified for prevention, control and mitigation of air pollution in Delhi and NCR.

Action Plans for Improvement of Air Quality of Other Cities:

(i) Ministry of Environment, Forest and Climate Change has launched National Clean Air Programme (NCAP) in January 2019 to tackle the problem of air pollution in a comprehensive manner with targets to achieve 20 to 30 % reduction in PM_{10} and $PM_{2.5}$ concentrations by 2024. This is keeping 2017 as the base year for the comparison of concentration. The overall objective is to augment and evolve effective ambient air quality monitoring network across the country besides ensuring comprehensive management plan for prevention, control and abatement of air pollution and enhancing public awareness and capacity building measures.

(ii) 102 non-attainment cities have been identified based on ambient air quality data for the period 2011 - 2015 and WHO report 2014/2018. A total of 86 city specific action plans have been approved for ground implementation.

The Central Government has taken several measures for prevention, control and abatement of air pollution across the country. These include-

Monitoring

- Setting up of monitoring network for assessment of ambient air quality. Presently, ambient air quality is being monitored at 779 locations covering 339 cities in 29 states & 6 Union Territories across the country under National Air Quality Monitoring Programme (NAMP). Further, real time monitoring is taking place at 170 locations in 102 cities in 18 States/UTs.
- Notification of National Ambient Air Quality Standards.
- Launch of National Air Quality Index.
- Implementation of Air Quality Early Warning System for Delhi in October, 2018 in association with Ministry of Earth Sciences (MoES).

Transport

- Leapfrogging from BS-IV to BS-VI fuel standards since 1st April, 2018 in NCT of Delhi and from by 1st April, 2020 in the rest of the country.
- Introduction of cleaner / alternate fuels like gaseous fuel (CNG, LPG etc.), ethanol blending.
- Promotion of public transport and improvements in roads and building of more bridges to ease congestion on roads.
- Operationalisation of Eastern Peripheral Expressway & Western Peripheral Expressway to divert non-destined traffic from Delhi.
- Streamlining the issuance of Pollution Under Control Certificate.
- Environment Protection Charges (EPC) have been imposed on diesel vehicles with engine capacity of 2000cc and above in Delhi NCR.

Industry

- Badarpur thermal power plant has been closed from 15th October, 2018.
- Notification of stricter emission norms for power plants.
- All brick kilns have been shifted to zig-zag technology in Delhi and NCR.
- Installation of on-line continuous (24x7) monitoring devices all red category industries in Delhi and NCR.
- Revision of emission standards for industrial sectors from time to time.
- Ban on pet coke and furnace oil - monitoring of use of pet coke in Lime Kilns/ Cement Kilns and Calcium Carbide Industry in Delhi and NCR States.

Biomass and Solid Waste

- A new Central Sector Scheme on ÂPromotion of Agricultural Mechanization for *in-situ* management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of DelhiÊ for the period from 2018-19 and 2019-20 has been launched.
- Banning of burning of biomass/garbage.
- 3 Waste-to-Energy (W-t-E) plants are currently operational in Delhi with a total capacity of 5100 Tonnes Per Day (TPD).

- Notifications of 6 waste management rules covering solid waste, plastic waste, e-waste, bio-medical waste, C&D waste and hazardous wastes issued in 2016.

Dust

- Notifications regarding dust mitigation measures for construction and demolition activities.
- Number of mechanised road sweeping machines has been increased significantly and presently 60 machines are deployed for cleaning of roads in Delhi.

Public Outreach

- Ministry of Environment, Forest & Climate Change and Uttar Pradesh, Punjab, Haryana, Rajasthan and Delhi Governments launched Clean Air for Delhi Campaign from 10th - 23rd February, 2018 and to check air polluting activities pre and post Diwali, a special campaign called „Clean Air Campaign‰ during November 01, 2018 to November 10, 2018.
- Ministry is promoting peoples participation and awareness building among citizens for environmental conservation through Green Goods Deeds that focus on promotion of cycling, saving water and electricity, growing trees, proper maintenance of vehicles, following of lane discipline and reducing congestion on roads by car pooling etc.
- Development of mechanism for redressal of public complaints regarding air pollution issues in Delhi and NCR (through ÂSameer AppÊ, ÂEmailsÊ (aircomplaints.cpcb@gov.in) and ÂSocial Media NetworksÊ (Facebook and Twitter) etc.

Statement

Source Apportionment study of Delhi by TERI ARAI

TERI ARAI Study (Aug 2018)-Delhi

Source	% contribution (PM_{10})		% contribution ($PM_{2.5}$)	
	Winter	Summer	Winter	Summer
1	2	3	4	5
Residential	9%	8%	10%	8%
Agri. Burning	4%	7%	4%	7%

1	2	3	4	5
Industry	27%	22%	30%	22%
Dust (soil, road, and const.)	25%	42%	17%	38%
Transport	24%	15%	28%	17%
Others	10%	7%	11%	8%

Ozone pollution

†989. CH. SUKHRAM SINGH YADAV:
SHRI VISHAMBHAR PRASAD NISHAD:
SHRIMATI CHHAYA VERMA:

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

(a) details of the number of times when Central Pollution Control Board had issued data on increasing levels of ozone pollution in Delhi-NCR which is beyond the set standard;

(b) details of the ill-effects of increased levels of ozone on human health;

(c) details of the steps taken by the Ministry from time to time to reduce ozone levels; and

(d) whether there is a fear of increase in deaths due to ozone pollution exceeding the set limit?

THE MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (SHRI BABUL SUPRIYO): (a) The monitoring data of ozone in Delhi-NCR is regularly displayed on Central Pollution Control Board (CPCB) website on real time basis. The analysis of AQI for Delhi reveals that during last three years (2016-18), ozone was reported as prominent pollutant for 95 days in Delhi and 11, 48, 8 and 49 days in Faridabad, Gurugram, Ghaziabad and Noida respectively. Status of data is attached as Statement (*See* below).

(b) and (d) Rise in ozone levels is considered as one of the triggering factors for respiratory ailments and associated diseases.Irritation can occur in respiratory system causing coughing, and, uncomfortable sensation in chest. It may reduce lung function and

†Original notice of the question was received in Hindi.