

**Action Plan**

**For**

**The Control of Air Pollution  
in  
Moradabad City**



**REGIONAL OFFICE  
UTTAR PRADESH POLLUTION CONTROL BOARD  
1-A/I.N.S.-1 AVAS VIKAS COLONY, BUDDHA VIHAR DELHI ROAD,  
MORADABAD**

## 1.INTRODUCTION

Moradabad is a city, commissioner, and a municipal corporation in Moradabad district of Indian state of Uttar Pradesh. Moradabad is situated on the banks of the Ramganga river, at a distance of 167 km (104 mi) from the national capital, New Delhi and 344 km north-west of the state capital Lucknow. The city is known as Pital Nagri ("Brass City") for its famous brass handicrafts industry. It is also the divisional headquarters of Northern Railway (NR). Moradabad was established as an office for the Chaupala pargana during emperor Akbar's regime. In AD 1624 it was captured by Rustam Khan, the then Governor of Sambhal who named it Rustam Nagar.

Moradabad is situated on the banks of the Ramganga river, that originates from the Doodhatoli ranges and is a part of the Namik Glacier, originating from the high altitude zone of 800 m to 900 m. The Ramganga flows to the south west from the Kumaun Himalaya. It is a tributary of the Ganga. It flows by the Corbett National Park near Ramnagar of Nainital district, from where it descends upon the Gangetic plain. The Ramganga Dam has been built on the Ramganga river at Kalagarh for irrigation and electricity generation. According to the 2011 census Moradabad city has a population of 887,871. The population of Moradabad district was 4,772,006, and the second most populated district in the state of Uttar Pradesh. This gives it a ranking of 26th in India (out of a total of 640). The district has a population density of 1,284 inhabitants per square kilometer (3,330/sq mi). Its population growth rate over the decade 2001-2011 was 25.25%.

Moradabad Special Economic Zone (SEZ) the only Uttar Pradesh Government Developed SEZ in northern India, headed by the Development Commissioner, Noida SEZ and locally governed by the Assistant Development Commissioner, was set up in 2003 at Pakbara – Dingarpur Road in Moradabad on a 421.565 acre plot of land. Government of UP through UPSIDC being developers to this SEZ project has so far invested a sum of ₹1100 million on its development. Moradabad SEZ provides excellent infrastructure, supportive services and sector specific facilities for the Handicraft Trade. Proximity to Delhi/ NCR and availability of skilled and dedicated manpower makes it ideal for setting up various industries in Handicrafts & its allied field. Moradabad SEZ was operationalised since April, 2007 when it started with only one unit, however till today in spite of global slowdown in the handicraft trade for past four years; this zone has now 22 operational Units. Moradabad SEZ has 465 developed plots of varying sizes. Future expansion of this has been strategically planned and soon it will be available for few more export sectors.

Presently the city has more than 18 lakhs vehicles which are increasing at an average annual rate of about 9%. Also huge ongoing construction activities, metro rail construction, Roads and fly over construction, Multistory apartment construction have also been contributing to the air pollution in addition to domestic, commercial, industrial & vehicular sources in the city. Considering all the factors Ambient Air Quality of Moradabad city is being monitored by the Board at 02 locations manually and at 01 location by CAAQMS with respect to PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub> and other parameters.

Population growth, Urbanization, needs and rapid increase in energy consumption are major driving force of air pollution in large cities like Moradabad. The consequences of pollution have led to poor urban air quality in Moradabad. The air pollution can be attributed to emissions from transportation, industrial & domestic activities, Re-suspension of road dust, Construction activities, Burning of Biomass/Crop residues/municipal solid waste/garbage & unapproved fuel, operation of Diesel generator sets during power failure.

Air pollution has been viewed seriously by the Hon'ble Supreme Court, Hon'ble High Court & Hon'ble National Green Tribunal and issued specific directions from time to time for the improvement the air quality of the city. Central Pollution Control Board has also issued direction under section 18 (1)(b) of the Air (Prevention & Control of Pollution) Act 1981, regarding prevention, control or abatement of Air pollution in various cities of Uttar Pradesh including Moradabad.

## 2. ACTION TAKEN BY THE BOARD

Board has issued directions to Principal Secretary Urban Development, Principal Secretary Forests, Principal Secretary Transport, Principal Secretary Agriculture, Managing Director Central U.P. Gas Ltd., Managing Director Indraprastha Gas Ltd, and Managing Director Green Gas Ltd. under section 31 (A) of the Air (Prevention and Control of Pollution) Act, 1981 regarding prevention and control of air pollution in Moradabad city on dated 05.09.2016 in compliance of directions issued by Central Pollution Control Board, Delhi under section 18(1) (b) of the Air (Prevention and Control of Pollution) Act, 1981. Board has also issued directions under section 31(A) of the Air (Prevention and Control of Pollution) Act, 1981 as amended regarding prevention and control of air pollution in Moradabad city on dated 14.11.2017.

Ambient Air is being monitored regularly by the Board. At source emission monitoring i.e. stack monitoring of industries is also being done regularly and action is being taken accordingly on the basis of analysis report. If any industry is found violating the standards firstly show-cause notice is issued to the industry followed by closure under Air (Prevention and Control of Pollution) Act, 1981.

## 3. ANNUAL AVERAGE DATA OF AMBIENT AIR QUALITY PM<sub>10</sub> (µg/m<sup>3</sup>) OF MORADABAD CITY (YEAR 2013-2018)

U.P. Pollution Control Board is monitoring ambient air quality of Moradabad city manually at 02 locations viz. Police Training Centre and Buddha bazaar for PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>2</sub> parameters. Annual Average data of Ambient Air Quality particularly PM<sub>10</sub> (Particulate Matter size less than 10 microns) were observed during the year 2013-18 are as given below.

S.No.	Name of Location	Category	2013	2014	2015	2016	2017	2018
1	Police Training Centre	Residential	128.8	158	146.8	171.6	179.2	202.58
2	Buddha bazaar	Commercial	202.1	240.9	198.9	219.3	246.9	252.25
	STANDARD (annual average)		60 µg/m <sup>3</sup>					

#### 4. SOURCES OF POLLUTION IN MORADABAD

Data obtained from Continuous Ambient Air Quality Monitoring System (2018) at Moradabad showed values of CO 1.49 (mg/m<sup>3</sup>); O<sub>3</sub> 40.4 (µg/m<sup>3</sup>); NO<sub>2</sub> 51.1(µg/m<sup>3</sup>); SO<sub>2</sub> 19.5 (µg/m<sup>3</sup>); PM<sub>2.5</sub> 196.0 (µg/m<sup>3</sup>); NH<sub>3</sub> 44.2 (µg/m<sup>3</sup>); and Benzene 1.28(µg/m<sup>3</sup>), Toluene 10.67(µg/m<sup>3</sup>), Xylene 4.03(µg/m<sup>3</sup>).

#### 5.SHORT TERM & LONG TERM ACTION PLAN

##### (A) Vehicle emission control

##### (a) Long Term Action Plan: Reduce congestion

Sl. No	Action Points	Timeframe for implementation	Action Required to be Taken by Responsible Departments
i	Plying of electric buses for public transport including establishment of sufficient charging stations.	360 days	Transport Department
ii	Prepare plan for construction of expressways/bypasses to avoid congestion due to non-destined vehicles.	360 days	N.H.A.I. /PWD
iii	Construction of peripheral road around the city to avoid congestion.	360 days	N.H.A.I./PWD
iv	Arrangement of Multilevel Parking Facilities	360 days	Nagar Nigam/Development Authorities
vi	Development/Strengthening of Bike zone/Cycle zone at metro/railways/bus stations from where travelers hire bi- cycle to reach the destination.	360 days	Nagar Nigam/Development Authorities
vii	Initiate steps for retrofitting of particulate filters in diesel vehicles, when BS-VI fuels are available	360 days	Vehicle Manufacturing Companies/Ministry of Road Transport & Highways (MoRTH)
viii	Use of Bio-Ethanol in the city/urban transport system/waste to energy.	360 days	Transport Department

**(b) Short Term Action Plan**

<b>Sl. No</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
i	Launch extensive drive against polluting vehicles for ensuring strict compliance	As regular activity	R.T.O/Traffic Police
ii	Launch public awareness campaign for air pollution control, vehicle maintenance, minimizing use of personal vehicles, lane discipline, etc.	As regular activity	R.T.O/ Traffic Police
iii	Prevent parking of vehicles in the non-designated areas	As regular activity	Traffic Police/ Nagar Nigam
iv	Prepare & implement action plan to check fuel adulteration and random monitoring of fuel quality data	30 days	District Supply Officer/Oil companies
v	Prepare & implement plan for widening of roads and improvement of infrastructure for decongestion of road	90 days	Nagar Nigam
vi	Steps for promoting battery operated vehicles including establishment of charging stations.	120 days	Transport Department/Nagar Nigam & Development Authorities
vii	Install weigh in motion bridges at the borders of cities/towns and States to prevent overloading of vehicles	180 days	Transport Department
viii	Synchronize traffic movements/Introduce intelligent traffic systems for lane-driving	180 days	Traffic Police
ix	Installation of remote sensor based PUC system	180 days	Traffic Police

**(B) Suspension of road dust and other fugitive emissions control****(a) Long Term Action Plan**

<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
<b>i)</b>	Implementation of maintaining at least 33% forest cover area in the city in master plan.	360 days	Nagar Nigam/MDA/Forest Department
<b>ii)</b>	All the canals/nullah's side roads should be brick lined. Proper plantation also carried out.	360 days	Irrigation Department/ Forest department

**(b) Short Term Action Plan**

<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
<b>i)</b>	Prepare plan for creation of green buffers along the traffic corridors. Plantation of specific types of species of plants which are helpful in pollution control.	90 days	Forest Department/ Nagar Nigam & Development Authorities
<b>ii)</b>	Maintain potholes free roads for free-flow of traffic	90 days & as regular activity afterwards.	Nagar Nigam/ Development Authorities
<b>iii)</b>	Introduce water fountains at major traffic intersection, wherever feasible	90 days	Nagar Nigam
<b>iv)</b>	Greening of open areas, gardens, community places, schools and housing societies	90 days	Forest Department
<b>v)</b>	Blacktopping of metalled road including pavement of road shoulders	180 days	Nagar Nigam
<b>vi)</b>	Use of treated effluent of STPs in Pollution Control Measure such as watering of Plants, sprinkling for dust suppression purposes.	90 days	Nagar Nigam
<b>vii)</b>	Wall to Wall pavement for control of dust from road. Design the footpath pavement/tiles having capacity to grow grass in between.	180 days	Nagar Nigam

**(c) Control of emissions from biomass/crop residue/garbage/municipal solid waste burning**

<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
<b>i)</b>	Launch extensive drive against open burning of bio-mass, crop residue, garbage, leaves, etc.	90 days	Nagar Nigam
<b>ii)</b>	Regular check and control of burning of municipal solid wastes and use of fire extinguisher for control of fire in municipal		Nagar Nigam

	solid waste and bio mass.		
<b>iii)</b>	Proper collection of horticulture waste (bio-mass) and its disposal following composting-cum-gardening approach		Nagar Nigam
<b>iv)</b>	Ensure ban on burning of agriculture waste and crop residues and its implementation	180 days	Agriculture Department & U.P. Pollution Control Board
<b>v)</b>	Door to Door collection of segregated waste by agency and then its disposal directly in plant without dumping it on land.	90 days	Nagar Nigam
<b>vi)</b>	Establishment of composting pits in Parks/ residential societies etc for management of biodegradable waste.	90 days	Nagar Nigam/MDA
<b>vii)</b>	No plot should be left open more than 02 years and planting of trees must be mandatory on vacant plots.	90 days	Nagar Nigam/MDA

**(D) Control of industrial emissions**

**(a) Long Term Action Plan**

<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
i)	Conversion of natural draft brick kilns to induced draft using zigzag technique in a phased manner.	360 days	U.P. Pollution Control Board
ii)	Installation of Electrostatic precipitators and appropriate air pollution control devices in factory units/industries.	180 days	U.P. Pollution Control Board
iii)	Development of mobile facility/van for continuous ambient air quality monitoring for different localities.	360 days	Nagar Nigam

**(b) Short Term Action Plan**

<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
i)	Identification of brick kilns and their regular monitoring including use of designated fuel, and closure of unauthorized units	60 days	U.P. Pollution Control Board
ii)	Conversion of natural draft brick kilns to induced draft	120 days	U.P. Pollution Control Board
iii)	Monitoring of industrial emission including real time online monitoring through OCEMS (Online Continuous Emission Monitoring System) and live camera feed and to take action against non-complying industrial units	60 days, and thereafter, regular activity	U.P. Pollution Control Board
iv)	Bank guarantee should be taken for the compliance of conditions imposed in CTO/CTE for control of Environmental Pollution from industries. The bank guarantee shall be forfeited in case of any violation. Verification of these conditions to be carried out by UPPCB/selected Third Party Institutions/Quality control agencies etc.	60 days, and thereafter, regular activity	U.P. Pollution Control Board
v)	Installation of web cams and OCEMS in Grossly Polluting Industries.	60 days	U.P. Pollution Control Board

**(E) Control of air pollution from constructions and demolition activities**

<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
i)	Enforcement of Construction & Demolition Rules 2016. Fine should be imposed on defaulting units.	15 days , and thereafter, continue as regular activity	Urban Development/Development Authorities
ii)	Control measures for fugitive emissions from material handling, conveying and screening operations through water sprinkling, curtains,		Urban Development/Development Authorities



	barriers and dust suppression units;		
iii)	Ensure carriage of construction material in closed/covered vessels		Development authorities/ Regional Transport Department
iv)	Environmental aspects should be included during preparation of master plan for development of city.	Proposed Master Plan for Moradabad City 2021	Urban Development/Development Authorities
v)	Builders should leave 33% area for green belt in residential colonies. Plantation should be done as per Office order No. H16405/220/2018/02 dated 16.02.2018 available on website of the Board .i.e.,www.uppcb.com	Within a reasonable timeframe	Urban Development/Development Authorities/ housing companies
vi)	All construction areas must be covered to avoid dispersion of particulate matter	30 days	Nagar Nigam /Development Authorities

**(F) Other Steps to Control Air Pollution**

**(a) Long Term Action Plan**

(E)

Sl. No.	Action Points	Timeframe for implementation	Action Required to be Taken by Responsible Departments
i)	Dead Bodies of Animals should be disposed through proper treatment facility like rendering plant etc.	360 days	Nagar Nigam
ii)	Installation of CAAQMS by polluting units/institutions etc. under "Polluters Pay Principles".	360 days	U.P. Pollution Control Board

**(b) Short Term Action Plan**

Sl. No.	Action Points	Timeframe for implementation	Action Required to be Taken by Responsible
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			<b>Departments</b>
<b>i)</b>	Air Quality Index to be calculated and disseminated to the people through website and other media (on maximum fortnightly basis for manually operated monitoring stations and real time basis for continuous monitoring stations).	15days, and thereafter, continue as regular activity	U.P. Pollution Control Board
<b>ii)</b>	Establish an Air Quality Management Division at SPCB/PCC Head Quarters to oversee air quality management activities in the State and interact with CPCB	30 days	U.P. Pollution Control Board
<b>iii)</b>	Set-up and publicize helpline in the city/town as well as SPCB/PCC HQ for complaints against reported non-compliance	30 days	U.P. Pollution Control Board
<b>iv)</b>	Engage with concerned authorities on continual basis for maximizing coverage of LPG/PNG for domestic and commercial cooking with target of 100% coverage	30 days	District Supply Officer
<b>v)</b>	Monitoring of DG sets and action against violations Fine should be imposed on defaulters.	30 days	U.P. Pollution Control Board/Nagar Nigam
<b>vi)</b>	Street vendors are to be controlled strictly in respect of removing their wastes and debris before leaving the site of operation	30 days	Nagar Nigam /Development Authorities
<b>vii)</b>	Complete ban on littering of streets with municipal solid wastes (MSW). Segregation & source collection at source of MSW to be implemented.	30 days	Nagar Nigam /Development Authorities
<b>viii)</b>	If Air Quality Index found severe or above grade, ensure availability of masks to public for protection.	90 days	Nagar Nigam