

ACTION PLAN

FOR

THE CONTROL OF AIR POLLUTION

IN

FIROZABAD



REGIONAL OFFICE
HOUSE NO. 77, GALI NO. 2,
MAHAVIR NAGAR
FIROZABAD

1. INTRODUCTION

Firozabad is a city in India, in the state of Uttar Pradesh also known as the City of Glass Suhag Nagari. From early times, it was famous for glass and bangle works, and its related small scale industry is famous throughout the world. Due to underdeveloped industry, literacy rates are very low. The city suffers from low literacy and pollution. The landowners of Firozabad hail from the Sayed, Manihar, Pathan and the Hindu Rajput castes. Firozabad is located in north central India, in Uttar Pradesh, 40 km from Agra and around 240 km away from Delhi, at the northern edge of the Deccan Plateau, at 27°09'N 78°24'E. It is located 164 meters (540 ft) above sea level. Firozabad City had a population of 603,797. Firozabad with the changing time has entered into new era of Glass Manufacturing, it has become a major hub of manufacturing different Glass based items and has registered its global presence, diversifying its industrial base and encouraging ancillary industries including Chemicals, Packaging and more of service sector based industries have flourished in a short span of time.

2. ACTION TAKEN BY THE BOARD

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 PM₁₀ (µg/m³) OF FIROZABAD CITY (YEAR 2013-2018)

U.P. Pollution Control Board is monitoring ambient air quality of Firozabad city manually at 03 locations viz. for PM₁₀, SO₂ and NO₂ parameters under NAMP programmes. Annual Average data of Ambient Air Quality particularly PM₁₀ (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 | CDGI | Sensitive | 266.4 | 320 | 196.6 | 224.5 | 216.9 | 214.27 |
| 2 | Tilak Nagar | Sensitive | 242.2 | 285.4 | 203.9 | 221.4 | 222.6 | 221.92 |
| 3 | Raja ka Taal | Sensitive | 234.4 | 304 | 192.3 | 223.7 | 219.8 | 232.83 |
| | STANDARD (annual average) | | 60 µg/m ³ | | | | | |

It is clear from the data that the pollution levels are increasing year by year and the air quality index is getting worst. If we do not take steps now, this can lead to severe consequences. Although SO₂ & NO₂ levels are within prescribed standards but the level of other pollutants have increased considerably over the years.

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 of 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.

4. SOURCES OF POLLUTION IN FIROZABAD

The main sources of air pollution in Firozabad city are Vehicular, Road dust, Construction & Demolition activities, Industries (Point source & Areas source), Garbage burning & Agriculture waste burning etc. Data obtained from Manual monitoring under National Ambient Monitoring Programme (NAMP) (2018) at Firozabad showed values of NO₂ 30.17($\mu\text{g}/\text{m}^3$) and SO₂ 7.83($\mu\text{g}/\text{m}^3$) at CDGI; NO₂ 31.50($\mu\text{g}/\text{m}^3$) and SO₂ 8.25($\mu\text{g}/\text{m}^3$) at Tilak Nagar and ; NO₂ 31.00($\mu\text{g}/\text{m}^3$) and SO₂ 8.08 ($\mu\text{g}/\text{m}^3$) at Raja ka Taal.

Degraded Air Quality has adverse effect on buildings, materials, Human health, Plants, historical monuments and material surface get degraded and decolorize due to air pollutants. Hence clean air is a "matter of right" and the steps are urgently required to improve air quality and also the step require a multi prolonged, sustained and integrated approach including close monitoring of implementation. Hence a long term and short term Action plan is an urgent need to control air pollution of Firozabad city which is given below:-

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 |

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| 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

| Sl. No | Action Points | Timeframe for implementation | Action Required to be Taken by Responsible Departments |
|---------------|---|--|---|
| 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 |
| vi | Prepare & implement plan for widening of roads and improvement of infrastructure for decongestion of road | 90 days | Nagar Nigam |
| viii | Construction of peripheral road around the city to avoid decongestion. | 360 days | N.H.A.I./PWD |
| ix | Steps for promoting battery operated vehicles including establishment of charging stations. | 120 days and thereafter continue as regular activity | Transport Department/Nagar Nigam & Development Authorities |
| x | Install weigh in motion bridges at the borders of cities/towns and States to prevent overloading of vehicles | 180 days and thereafter continue as regular activity | Transport Department |

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| xi | Synchronize traffic movements/Introduce intelligent traffic systems for lane-driving | 180 days | Traffic Police |
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(B) Suspension of road dust and other fugitive emissions control

(a) Long Term Action Plan

| Sl. No. | Action Points | Timeframe for implementation | Action Required to be Taken by Responsible Departments |
|---------|---|------------------------------|--|
| i) | Implementation of maintaining at least 33% forest cover area in the city in master plan. | 360 days | Nagar Nigam/ Firozabad Municipal Corporation /Forest Department |
| ii) | 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

| Sl. No. | Action Points | Timeframe for implementation | Action Required to be Taken by Responsible Departments |
|---------|---|---|--|
| i) | 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 |
| ii) | Maintain potholes free roads for free-flow of traffic | 90 days & as regular activity afterwards. | Nagar Nigam/ Development Authorities |
| iii) | Introduce water fountains at major traffic intersection, wherever feasible | 90 days | Nagar Nigam |
| iv) | Greening of open areas, gardens, community places, schools and housing societies | 90 days | Forest Department |
| v) | Blacktopping of metalled road including pavement of road shoulders | 180 days | Nagar Nigam |
| vi) | Use of treated effluent of STPs in Pollution Control Measure such as watering of Plants, | 90 days | Nagar Nigam |

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| | sprinkling for dust suppression purposes. | | |
| vii) | 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

| Sl. No. | Action Points | Timeframe for implementation | Action Required to be Taken by Responsible Departments |
|----------------|--|-------------------------------------|--|
| i) | Launch extensive drive against open burning of bio-mass, crop residue, garbage, leaves, etc. | 90 days | Nagar Nigam/ Firozabad Municipal Corporation |
| ii) | Regular check and control of burning of municipal solid wastes and use of fire extinguisher for control of fire in municipal solid waste and bio mass. | | Firozabad Municipal Corporation /Nagar Nigam |
| iii) | Proper collection of horticulture waste (bio-mass) and its disposal following composting-cum-gardening approach | | Firozabad Municipal Corporation /Nagar Nigam |
| iv) | Ensure ban on burning of agriculture waste and crop residues and its implementation | 180 days | Agriculture Department & U.P. Pollution Control Board, Lucknow |
| v) | Door to Door collection of segregated waste by agency and then its disposal directly in plant without dumping it on land. | 90 days | Firozabad Municipal Corporation /Nagar Nigam |
| vi) | Establishment of composting pits in Parks/ residential societies etc for management of biodegradable waste. | 90 days | Nagar Nigam/Firozabad Municipal Corporation |
| vii) | No plot should be left open more than 02 years and planting of trees must be mandatory on vacant plots. | 90 days | Nagar Nigam/ Firozabad Municipal Corporation |

(D) Control of industrial emissions**(a) Long Term Action Plan**

(E)

| Sl. No. | Action Points | Timeframe for implementation | Action Required to be Taken by Responsible Departments |
|----------------|--|-------------------------------------|---|
| 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

| Sl. No. | Action Points | Timeframe for implementation | Action Required to be Taken by Responsible Departments |
|----------------|---|---|---|
| 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 | 60 days, and thereafter, regular activity | U.P. Pollution Control Board |

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| | etc. | | |
| 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

| Sl. No. | Action Points | Timeframe for implementation | Action Required to be Taken by Responsible Departments |
|---------|--|--|--|
| 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, barriers and dust suppression units; | | Urban Development/Development Authorities |
| 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. | Within a reasonable timeframe | 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 |
| vii) | Street vendors are to be controlled strictly in respect of removing their wastes and debris before leaving the site of operation | 60 days | Nagar Nigam/ Traffic Police |
| viii) | Complete ban on littering of streets with municipal solid wastes (MSW) | 60 days | Nagar Nigam/ Traffic Police |

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| | from source collection of MSW to be implemented. | | |
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(F) Other Steps to control Air Pollution

(a) Long Term Action Plan

| 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 | Firozabad Municipal Corporation /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 Departments |
|----------------|--|--|---|
| i) | 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 |
| ii) | 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 |
| iii) | 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 |
| iv) | 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 |
| v) | Monitoring of DG sets and action against | 30 days | U.P. Pollution |

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|--------------|---|---------|---|
| | violations Fine should be imposed on defaulters. | | Control Board/Nagar Nigam |
| vi) | 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 |
| vii) | 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 |
| viii) | If Air Quality Index found severe or above grade, ensure availability of masks to public for protection. | 90 days | Nagar Nigam |