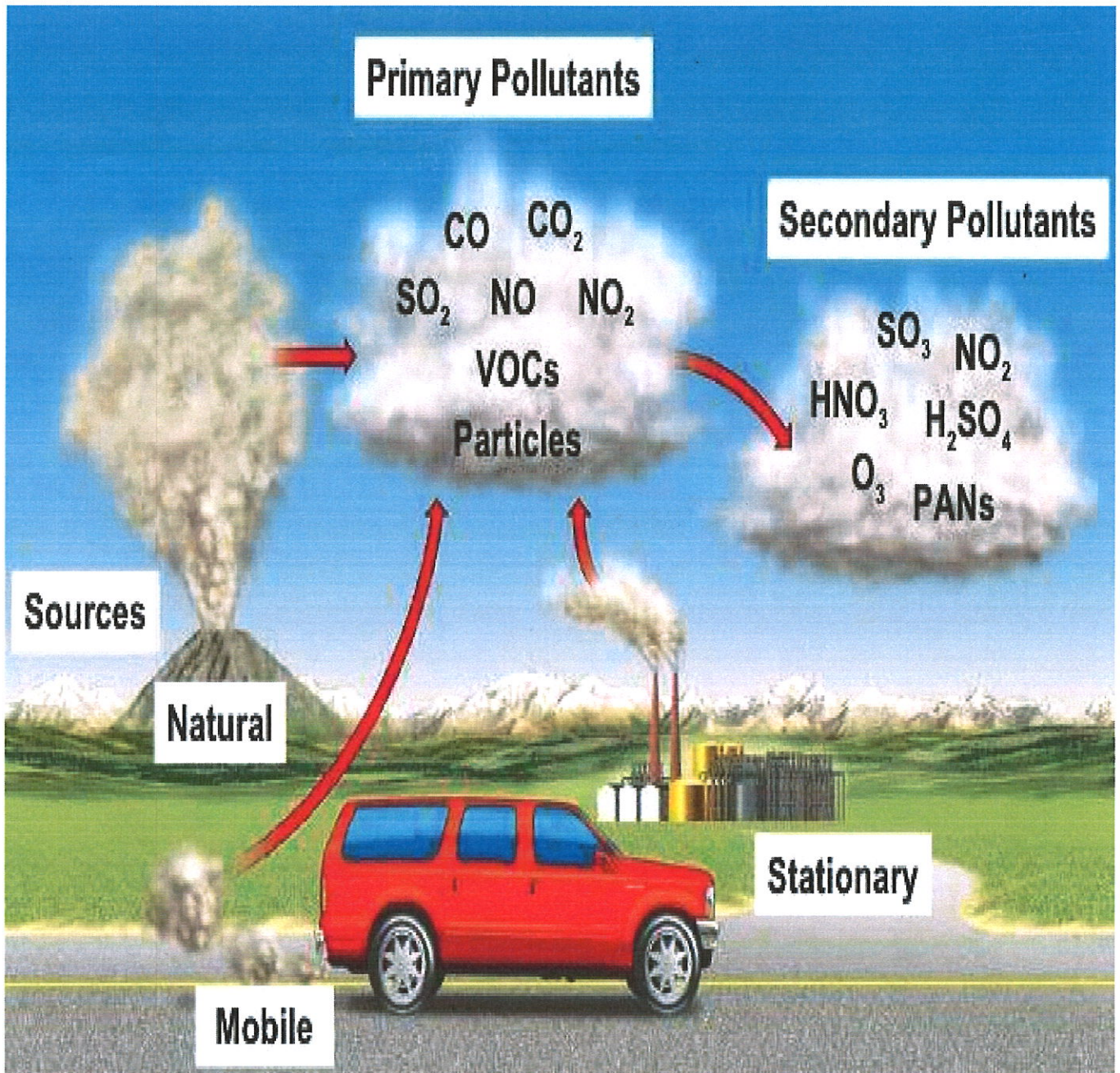
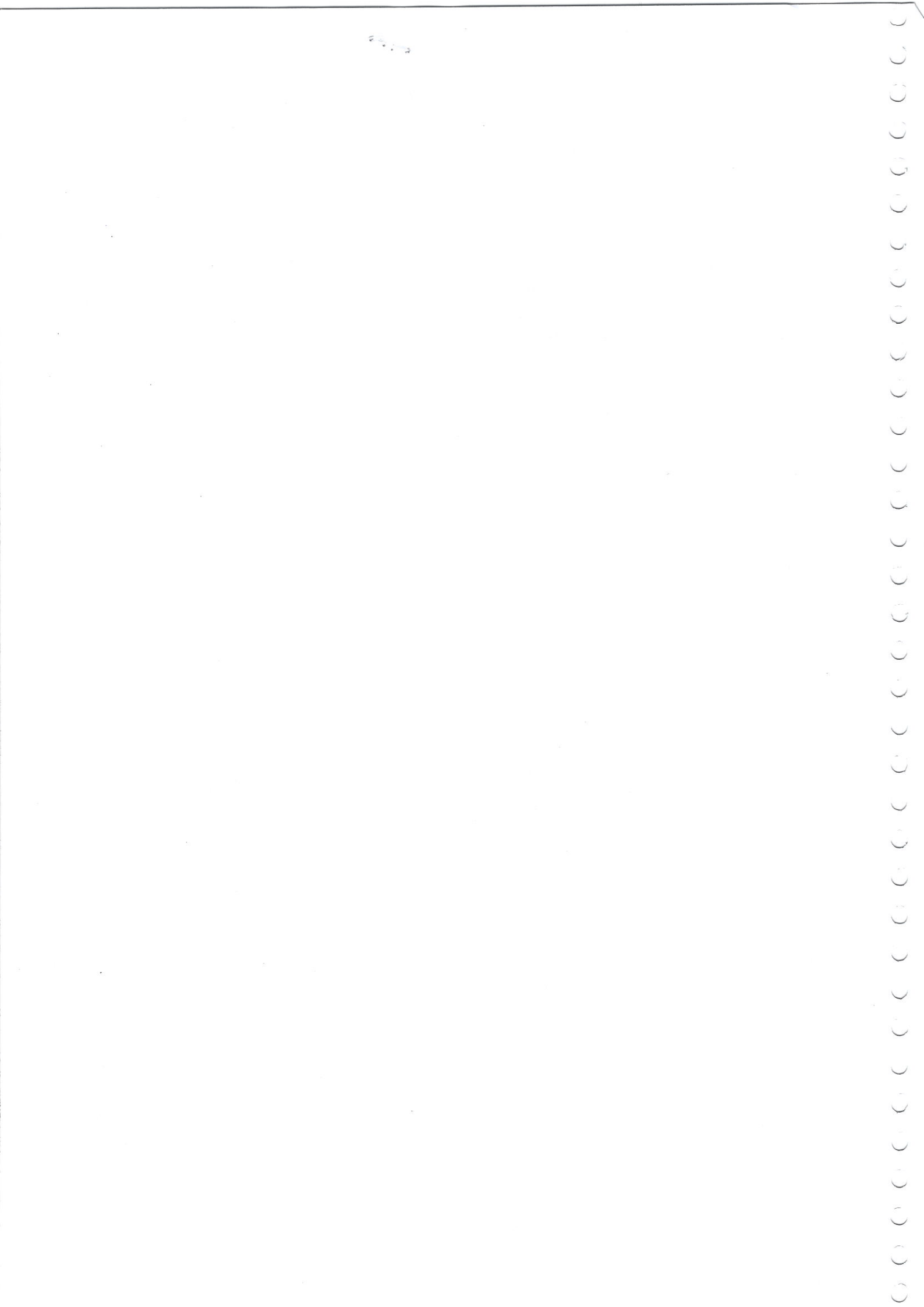


Action Plan for Non Attainment cities/ area (Air Pollution) of Telangana state



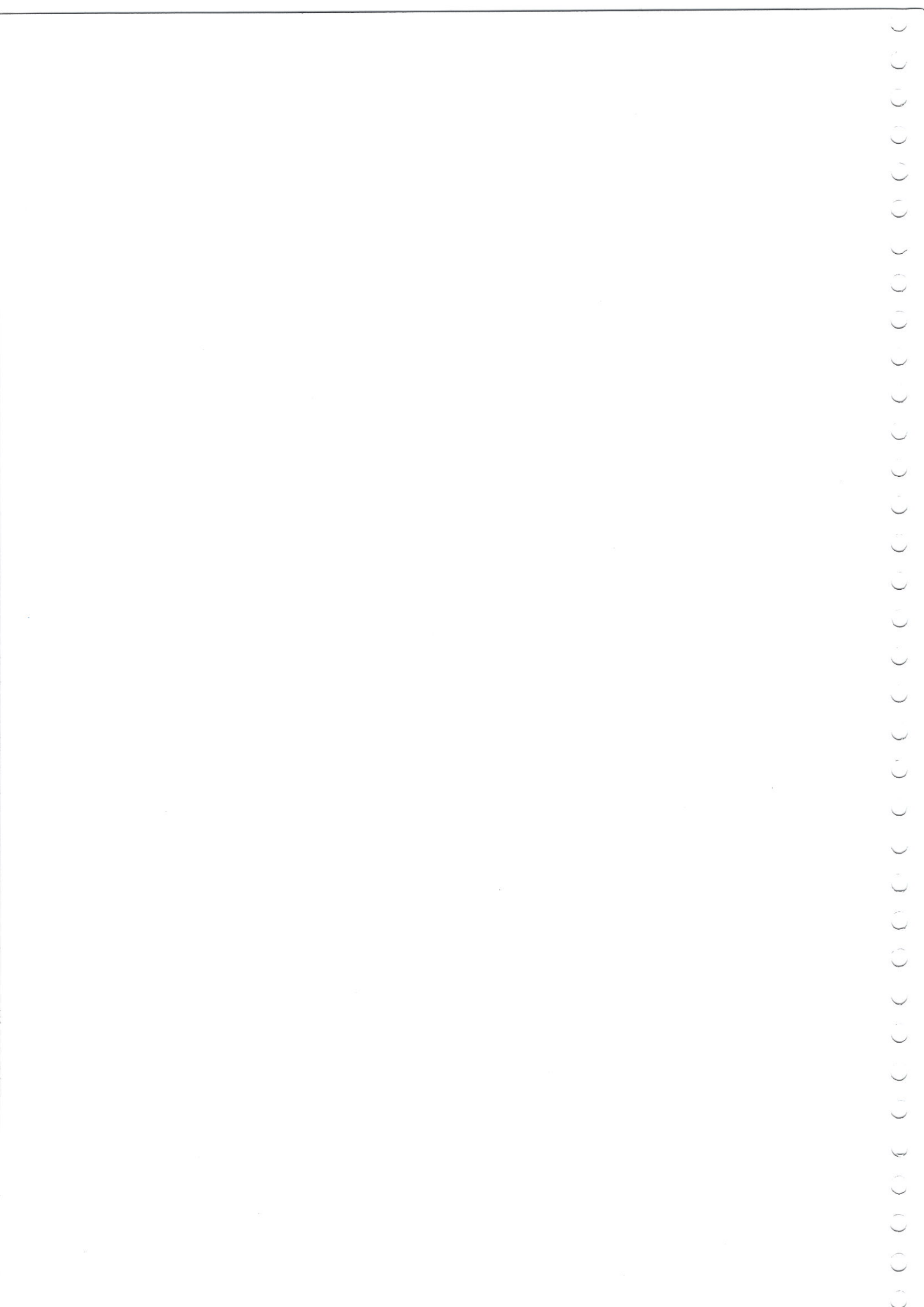
TELANGANA STATE POLLUTION CONTROL BOARD

Paryavarana Bhavan, A-3, Industrial Estate, Sanath nagar,
Hyderabad – 500018, Phone: 040 – 23887500



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ABBREVIATIONS

AAQ - Ambient Air Quality

AAQMS - Ambient Air Quality Monitoring systems

AQMC - Air Quality Monitoring Committee

CAAQMS - Continuous Ambient Air Quality Monitoring Station

CPCB - Central Pollution Control Board

DRI - Desert Research Institute

EPTRI - Environment, Protection Training Research Institute

GHMC - Greater Hyderabad Municipal Corporation

MA&UD - Municipal Administration and Urban Development

NGT - National Green Tribunal

NAMP - National Air Quality Monitoring Programme

NREL - National Renewable Energy Laboratory

NAAQS - National Ambient Air Quality Standards

PM - particulate Matter

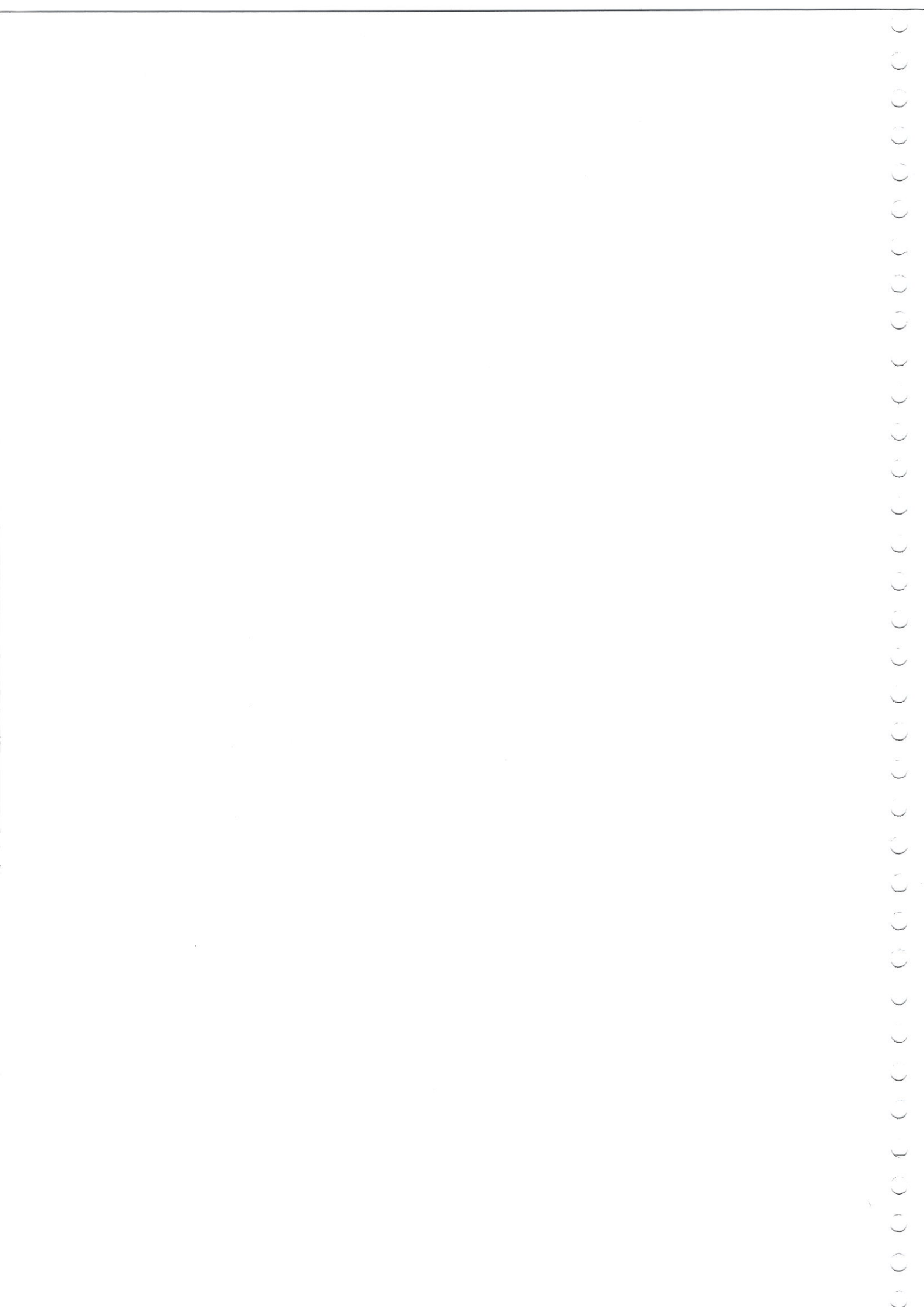
SAAQM - State Ambient Air Quality Monitoring Programme

SPCBs - State Pollution Control Boards

SPCC - State Pollution Control Committees

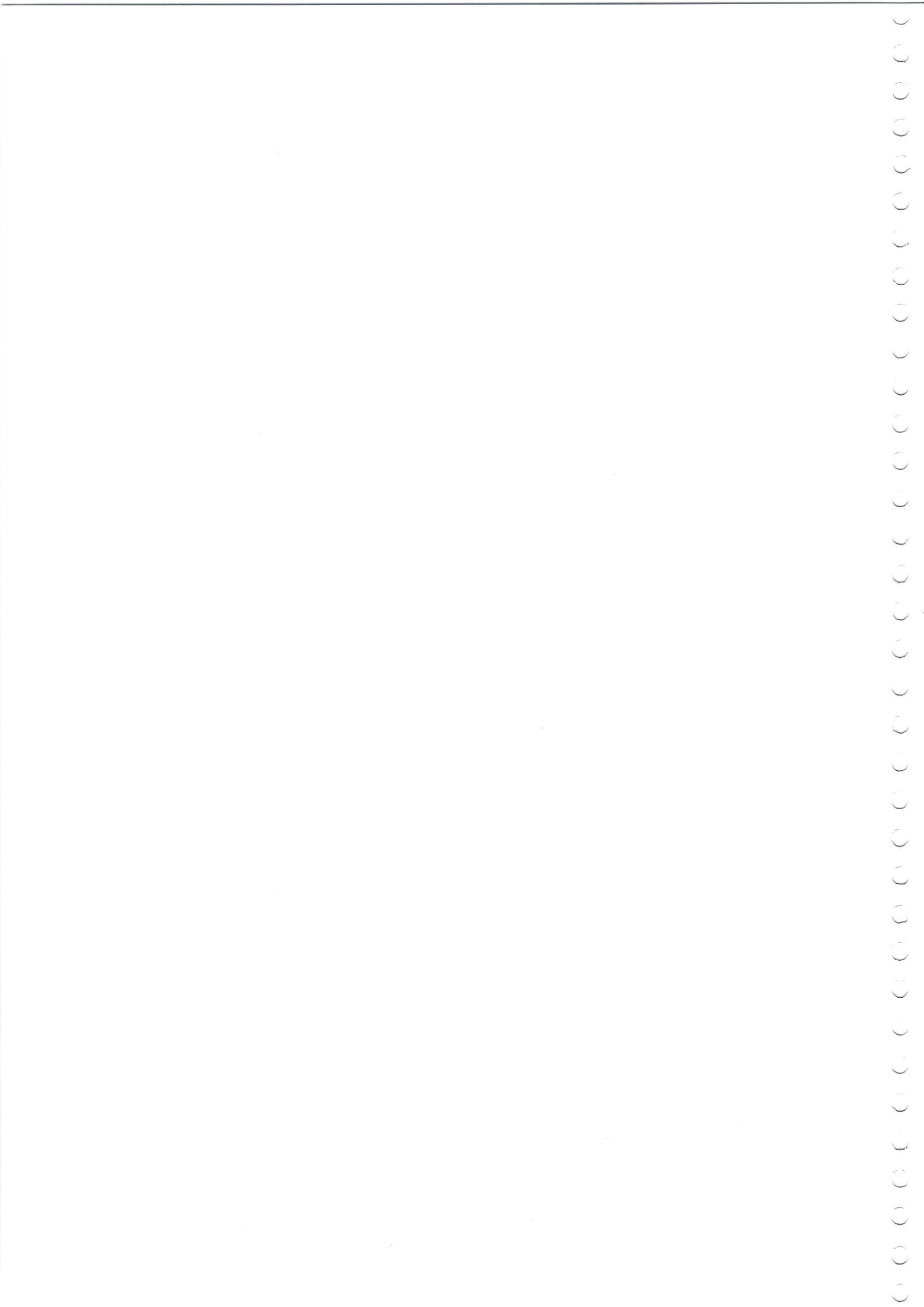
TSPCB - Telangana State Pollution Control Board

USEPA - United States Environmental Protection Agency



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1. Back ground:

Central Pollution Control Board (CPCB) prepared a list of non-attainment cities/towns based on the Ambient Air Quality (AAQ) data with respect to Particulate Matter Concentration for the years 2011-2015. According to which Telangana state is having three non-attainment cities/towns (Hyderabad, Nalgonda and Patancheruvu). The CPCB issued directions under section 18(I)(b) of Air (prevention and control) Act to the Chairman, TSPCB dated:01.07.2016 with various action points and time frame for implementation to lower the air pollution in the non attainment cities in the country. Also, a 42 point action plan was attached for preparation of the action plan.

Accordingly, TSPCB issued directions to the stakeholder departments i.e. MA&UD, Transport, Police, Civil supplies, Revenue Department, GHMC, etc, for submitting time bound action plan for the action points with respect to their departments. The concerned departments submitted action plan, which are consolidated by TSPCB.

The action points and time frame for implementation for various activities was reviewed by the Chairman, TSPCB with all the stake holder departments on 11.01.2017. In Telangana state 3 non attainment cities / town are listed by CPCB Hyderabad, Patancheruvu and Nalgonda. A common action plan was prepared for the Hyderabad and Patancheruvu as the later falls under GHMC area. The action plan was forwarded to the CPCB on 10.03.2017.

The Hon'ble NGT issued order in OA No.681/2018, dt.8-10-2018 about time bound preparation and implementation of the Action Plan for lowering the ambient air pollution in the non-attainment cities.

The Hon'ble NGT issued the following directions in the above order:

- i. All the states and union territories with nonattainment cities must prepare appropriate action plans within two months aimed at bringing the standards of air quality within the prescribed norms within 6 months from date of finalisation of the action plans.

-
- ii. The action plan may be prepared by 6 member committee comprising of Directors of Environment, Transport, Industries, Urban Development Agriculture and Member Secretary, State Pollution Control Board or committee of the concerned state/Union Territory. The committee may be called Air Quality Monitoring Committee (AQMC). The AQMC will function under the overall supervision and coordination of Principal Secretary, Environment of the concerned State/Union Territory. This may be further supervised by the Chief Secretaries concerned or their counterparts in Union Territories by ensuring inter-sectoral coordination.
 - iii. The action plans may take into account the GRAP, the CAP and the Action Plan prepared by CPCB as well as all other relevant factors. The action plans may be forwarded to the CPCB by 31.12.2018. The same may be placed before the committee as directed in Direction number vi. The Action Plan will include components like identification of source and its apportionment considering sectors like vehicular pollution, industrial pollution shall also consider measures for strengthening of ambient air quality monitoring and steps for public awareness including issuing of advisory to public for prevention and control of air pollution and involvement of schools colleges and other academic Institutions and awareness programs.
 - iv. The Action Plan will indicate steps to be taken to check different sources of pollution having speedy, definite and specific timelines for execution.
 - v. The Action plan should be consistent with the carrying capacity assessment of the non-attainment cities in terms of vehicular pollution, Industrial emissions and population density, extent of construction and construction activities etc., The carrying capacity assessment shall also lay emphasis on agricultural and indoor pollution in rural areas. Depending upon assessed carrying capacity and source apportionment, the authorities may consider the need for regulating number of vehicles and their parking and plying, population density, extent of construction and construction activities etc., Guidelines may accordingly be

- framed to regulate vehicles and industries in non-attainment cities in terms of carrying capacity assessment and source apportionment.
- vi. The committee shall examine the action plans and on the recommendation of the committee the Chairman, CPCB shall approve the same by 31-01-2019.
 - vii. The Chief Secretaries of the State and Administrators/Advisors to Administrators of the union territories will be personally accountable for failure to formulate action plans, as directed
 - viii. The CPCBs, SPCBs and State Pollution Control Committees shall develop a public grievance redressal portal for redressal of public complaints on air pollution along with a supervisory mechanism for its disposal in a time bound manner. Any visible air pollution can be reported at such portal by email/SMS.
 - ix. The CPCB and all the State Pollution Control Boards and Pollution Control Committees shall collectively workout and design a robust Nationwide ambient air quality monitoring programme in a revised format by strengthening the existing monitoring network with respect to coverage of more cities/towns. The scope of monitoring should be expanded to include all 12 notified parameters as per Notification No. B-29016/20/90 /PCI-L dated 18th November 2009 of CPCB. The Continuous Ambient Air Quality Monitoring stations should be preferred in comparison to manual monitoring stations. The CPCB and States shall file a composite Action Plan with timelines for its execution which shall not be more than 3 months. It is expected that all such AAQMS shall be connected to Central server of CPCB for reporting analysis of results in a form of Air Quality Bulletin for general public at regular intervals at least on weekly basis and ambient air quality on continuous basis on e-portal. MOEF&CC will provide the requisite funds for the purpose. MoEF&CC in consultation with Ministry of Housing and Urban Affairs, MoRTH, Ministry of Petroleum and Natural Gas, Ministry of Agriculture Cooperation and Farmers Welfare or any other Ministry to lay down such guidelines as may be considered necessary for improvement of air quality in the country.

-
- x. A copy of this be sent by e-mail to all the concerned i.e., Ministries of Environment Forest & Climate Change, Housing and Urban Affairs.
 - xi. We understand that some of the Zonal Benches of the National Green Tribunal have also pass directions on the subject of Ambient Air Quality and the states in those Zones are in the process of implementation of search directions. Specific reference may be made in this regard to judgement dated: 11.8.2016 in O.A.No.333/2018/EZ in the matter of Subhas Dutta vs State of West Bengal & Ors. We make it clear that this order shall not be considered as an impediment to those actions but as an addition or supplement thereto for achieving the object of this order at the macro level and of the said order at the micro level in the concerned cities.
 - xii. Needless to say, that order of National Green Tribunal is binding as a decree of court and non-compliance is actionable by way of punitive action including prosecution, in terms of National Green Tribunal Act, 2010
 - xiii. The CPCB may compile the data and furnish the same to this tribunal by email at filling.ngt@ gmail.com on or before 15.2.2019.

2. Telangana State and Non Attainment cities/areas:

Central Pollution Control Board (CPCB) prepared a list of non-attainment cities/towns based on the Ambient Air Quality (AAQ) data with respect to Particulate Matter Concentration for the years 2011-2015. According to which Telangana state is having three non-attainment cities/towns (Hyderabad, Patancheruvu and Nalgonda).

Telangana is the 29th state of India formed on the 2nd of June 2014, the Telangana state map along with the districts are given in the Figure-1 below. The state has an area of 1,12,077 Sq. Km. and has a population of 3,50,03,674. Hyderabad is the capital city of Telangana.



Figure.1 Map of Telangana State

3. Constitution of the Air Quality Management Committee(AQMC):

The Government of Telangana through EFS&T G.O.Rt.No.182, dated: 20.11.2018 (Annexure-I) constituted the Air Quality Monitoring Committee (AQMC) with the following members.

1. Director General, Environment, Protection Training Research Institute, Hyd. - Member
2. Commissioner / Director of Transport, Hyderabad -Member
3. Commissioner/Director of Industries, Hyd. –Member
4. Commissioner/Director of Municipal Administration and Urban Development, Hyd - Member
5. Commissioner / Director of Agriculture, Hyderabad. -Member
6. Member Secretary, Telangana State Pollution Control Board, Hyd. – Member Convener

The committee is constituted for reviewing and fine tuning of the existing action plan for Air Quality in Hyderabad, Patancheru with latest developments and preparation of action plan for Nalgonda city. The committee has to work under the supervision of the Secretary, Environment.

4. Hyderabad and Patancheru:

a. Demographic Details:

Hyderabad city is on Deccan plateau at an average altitude of 542 metres (1,778 ft), much of Hyderabad is situated on hilly terrain around artificial lakes, including Hussain Sagar and along the River Musi. Hyderabad City covers an area of 650 square kilometres (250 sq mi), has a population of 68,09,970 making it the fourth most populous city in India. There are 35,00,802 male and 33,09,168 female citizens as per the 2011 census. It is anticipated that, the present population may be around 10 million in Hyderabad. The area under the municipality increased from 170 square kilometres (66 sq mi) to 650 square kilometres (250 sq mi) in 2007 when the Greater Hyderabad Municipal Corporation was created. The population density is 18,480 persons per square kilometre. The map of Greater Hyderabad Municipal Corporation (GHMC) area is placed as Figure-2.

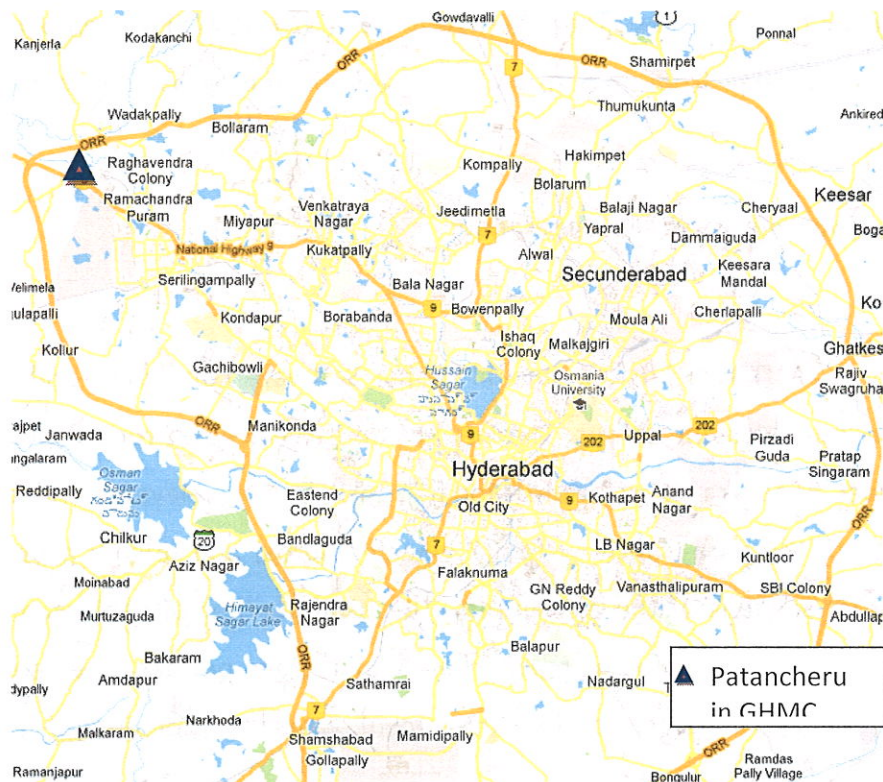


Figure.2 Map showing the Hyderabad area (GHMC) with Patancheruvu

The Greater Hyderabad Municipal Corporation (GHMC) comprises the erstwhile Hyderabad Municipal Corporation, plus 10 municipalities & 8 panchayats in erstwhile Ranga Reddy district, 2 municipalities in erstwhile Medak district.

The 10 municipalities in erstwhile Ranga Reddy district are: L. B. Nagar, Gaddi annaram, Uppal Kalan, Malkajgiri, Kapra, Alwal, Qutubullapur, Kukatpally, Serilingampalle and Rajendranagar.

The 8 panchayats in erstwhile Ranga Reddy district are: Shamshabad, Satamarai, Jallapalli, Mamdipalli, Mankhal, Sardanagar and Ravirala.

The 2 municipalities in erstwhile Medak district are: Ramachandrapuram and Patancheru

b. Meteorological Data:

Hyderabad has a tropical wet and dry climate bordering on a hot semi-arid climate. The annual mean temperature is 26.6 °C (79.9 °F); monthly mean temperatures are 21–33 °C (70–91 °F). Summers (March–June) are hot and humid, maximum temperatures often exceed 40 °C (104 °F) between April and June. The coolest temperatures occur in December and January, when the lowest temperature occasionally dips to 10 °C (50 °F). May is the hottest month, when daily temperatures range from 26 to 39 °C (79–102 °F); December, the coldest, has temperatures varying from 14.5 to 28 °C (57–82 °F). Annual average rainfall is around 700mm.

c. Economic activity in Hyderabad:

Hyderabad city is an IT hub hosting several Global Software companies and is known for Pharmaceutical Industries and others. The city has an extensive network of public transport with state owner Road Transport, Multi Modal Transit system, elevated Mono Rail transit system apart from the para-transit system(3 wheeler Autos) and private cabs to cater the needs of different sections of the commuters. The total number of vehicles are around 50 lakhs with about 1000 vehicles being registered on an average per day. The vehicular fleet is dominated by the two wheelers and in the recent years the percentage growth in the passenger car segments is increasing.

The increased economic activity coupled with migration of the population has resulted in an outward expansion of the city making the erstwhile industrial estates an integral part of the city. The details of the Industrial Estates are given in the Figure-3 below:

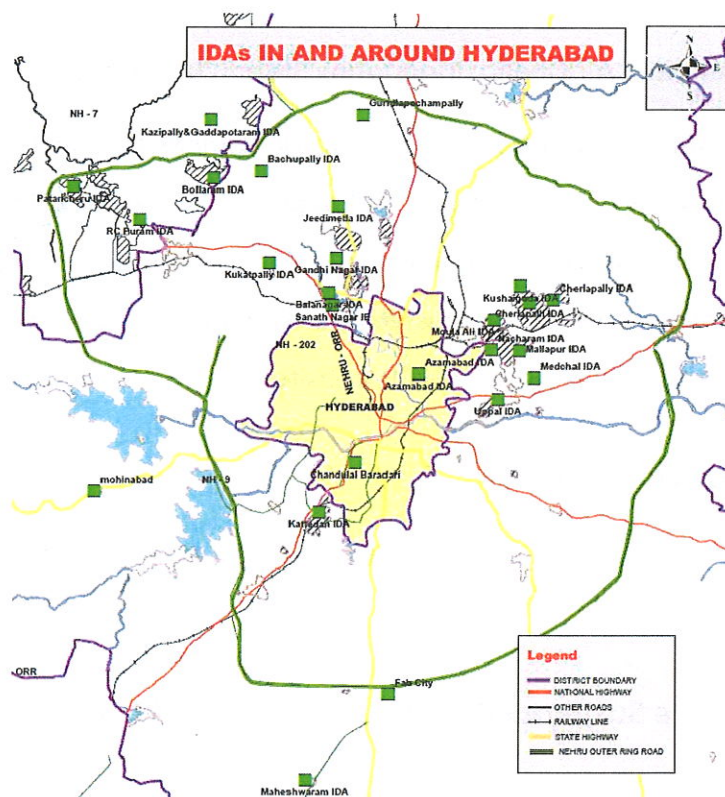


Figure 3: Map showing the details of Hyderabad with Industrial Estates

e. Ambient Air Quality Monitoring Program

The TSPCB has been monitoring ambient Air quality under National Air Quality Monitoring Programme (NAMP), State Ambient Air Quality Monitoring Programme (SAAQM) and Continuous Ambient Air Quality Monitoring Station (CAAQMS)

i) National Air Quality Monitoring Programme (NAMP):

The State Board is monitoring ambient air quality at 22 stations situated across the Telangana State under NAMP Programme. The parameters monitored are: PM₁₀, SO₂, NO_x, CO, Ammonia, Heavy metals, etc. Eight out of 22 stations are in the GHMC area

ii) State Ambient Air Quality Monitoring Programme (SAAQM):

The Telangana Board is also monitoring ambient air quality at 16 stations in addition to NAMP stations. 12 out of the 16 stations are operated in GHMC area.

iii) Continuous Ambient Air Quality Monitoring Station (CAAQMS):

TSPCB is monitoring Ambient Air Quality at 6 CAAQMS stations (1) Sanathnagar, Head Office (2) HCU (3) Zoo Park (4) Pashamylaram IDA (5) Bollaram IDA and (6) ICRISAT. The CAAQMS has been equipped with analyzers to monitor NO_2 , SO_2 , NH_3 , PM_{10} , $\text{PM}_{2.5}$, O_3 , BTX, CO and meteorological parameters. Instant data is generated with these CAAQMS stations and the same is disseminated through CPCB and TSPCB websites.

iv) Ambient Air Quality Trends

I.a) PM_{10} : The trends in Ambient Air Quality with respect to particulate Matter of Size less than $10\mu\text{m}$ is given in the Figure-4 below:

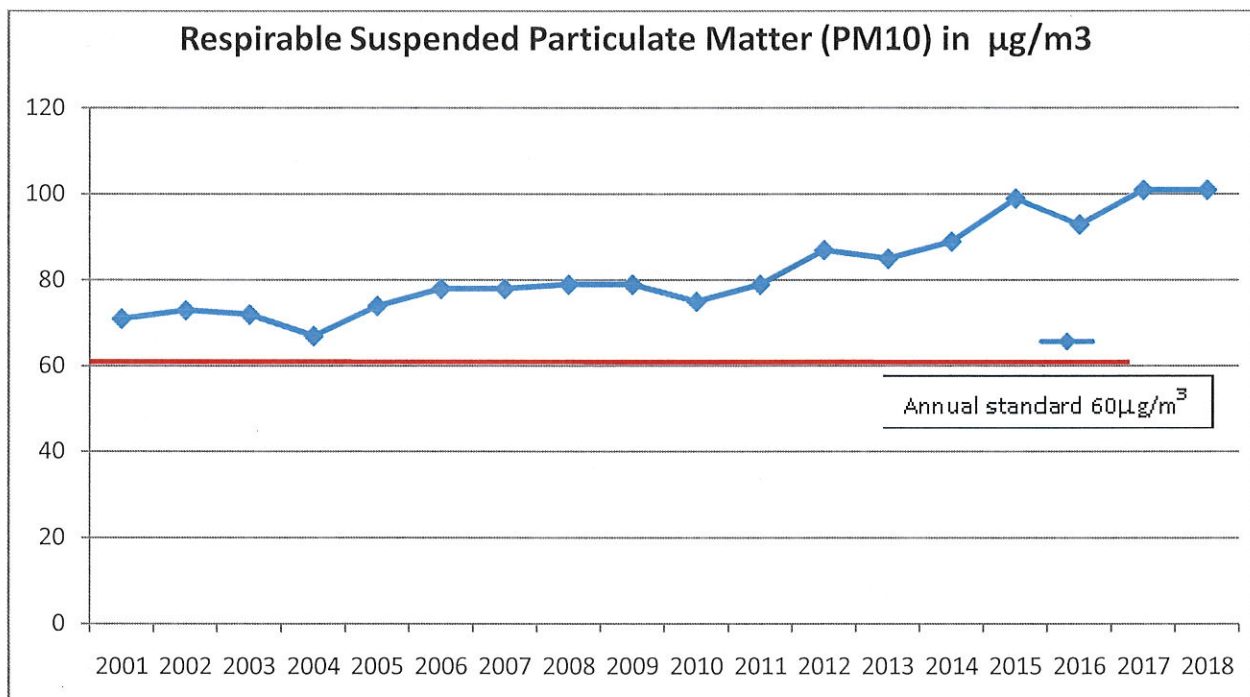


Figure 4- Ambient Air Quality Trends in Hyderabad from 2001 to 2018 for RSPM

I.b) PM2.5: CPCB has notified the New National Ambient Air Quality Standards (NAAQS) in the year 2009 and the standards for the Particulate Matter of Size PM2.5 was introduced. Accordingly, TSPCB commenced the monitoring of the PM2.5. The trends in Ambient Air Quality with respect to particulate Matter of Size less than 2.5 μ m is as follows

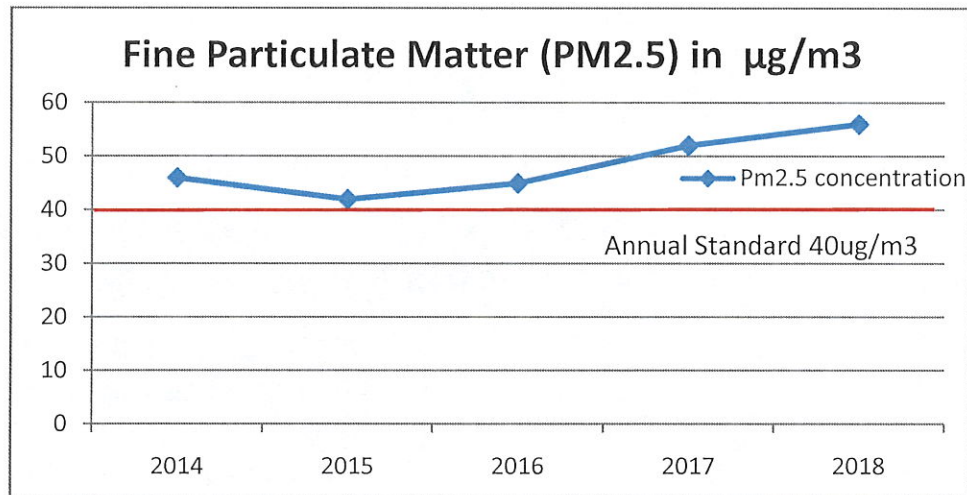


Figure 5- Ambient Air Quality Trends in Hyderabad from 2014 to 2018 for FPM

- The Particulate matter concentration of PM10 & PM2.5 is exceeding the annual National Ambient Air Quality Standards.
- As per the trend the concentrations of particulate matter is increasing every year.
- The growth in vehicular population and the number of Vehicle Kilometers Travelled per day is increasing at a higher pace every year.
- The action plan that was implemented could sustain the concentration of particulate matter from 2004 to 2010 inspite of increase in economic activity, Number of Vehicles, Vehicle Kilometers travelled per day and increased fuel combustion. Subsequently from 2011 onwards there is a marginal increase in concentration of particulate matter every year.

I.c) Air Quality Index: TSPCB is preparing the air quality index for the Ambient Air Quality. The AQI of CAAQMS is available on the TSPCB website on daily basis and that of the Manual Stations data is available on weekly basis in the website. The AQI of Hyderabad was prepared from the year 2011 onwards to understand the trends of the quality of the air at each of the monitoring location. The details of the AQI is given below in Table-1 and the monthly AQI for the year 2018 is placed in Table -2 understand the seasonal variations in the AQI:

The details of the Air Quality index during the years 2010-2018

A.	NAMP stations	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	Balanagar	100	100	118	129	123	103	125	141	123
2	Uppal	89	97	106	90	99	88	96	112	110
3	Jubilee Hills	52	78	83	72	80	85	103	122	115
4	Paradise	82	99	93	84	113	109	119	115	107
5	Charminar	78	103	107	95	108	109	109	130	113
6	Jeedimetla	97	105	97	92	105	115	113	133	124
B.	SAMP stations	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	Abids	97	98	99	81	103	92	100	99	102
2	KBRN Park	51	57	60	44	58	54	58	69	76
3	Langar House	102	99	103	103	91	151	84	96	100
4	Madhapur	74	47	82	88	66	50	74	83	92
5	MGBS	72	66	66	79	69	67	75	95	94
6	Chikkadapally	68	87	87	79	84	81	80	82	92
7	Kukatpally	90	100	111	125	109	115	86	102	114
8	Nacharam	85	86	85	74	94	*	87	97	102
9	Rajendranagar	38	35	43	42	33	41	67	64	65
10	Sainikpuri	59	72	85	108	92	108	80	87	77
11	BPPA	66	61	72	54	68	64	63	68	74
12	Shameerpet	51	59	68	74	79	70	73	73	68
C.	CAAQMS Stations	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	Panjugutta	106	99	115	113	111	*	*	*	*
2	University of Hyd	*	*	*	*	71	76	87	95	92
3	Zoopark	61	60	68	73	73	105	131	130	118
4	Sanathnagar	98	115	124	73	*	90	97	111	104
5	Pashamylaram	*	*	*	*				105	113
6	Bollaram	*	*	*	*	*	*	*	122	109
7	ICRISAT	*	*	*	*	*	*	*	101	98

AQI Colour Index & Health**Effects:**

GOOD (0 – 50)	Minimal Impact
SATISFACTORY (51– 100)	Minor Breathing Discomfort to Sensitive People
MODERATE (101 – 200)	Breathing discomfort to with Lung & Heart Disease, children and Old adults
POOR (201 – 300)	Breathing discomfort to People on Prolonged Exposure
VERY POOR (301 – 400)	Respiratory illness to People on Prolonged Exposure
SEVERE > 400	Respiratory Effects on Healthy people

Monthly Air Quality Index Values of Hyderabad city from Jan to Dec – 2018

Monthly Air Quality Index Values of Hyderabad city from Jan to Dec - 2018												
Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hyderabad Zone - NAMP Stations												
Balanagar	141	129	127	127	121	107	90	97	123	132	136	148
Uppal	141	126	126	112	107	87	85	82	91	107	122	134
Jubilee Hills	129	124	124	104	116	109	100	101	106	106	135	123
Paradise	130	125	117	106	118	104	83	93	102	96	102	106
Charminar	145	128	117	102	101	106	91	97	111	123	111	129
Jeedimetla	135	141	128	126	126	97	83	105	125	129	154	136
SAAQM stations:												
Abids	126	122	112	99	105	98	90	91	85	100	94	106
KBRN Park	100	90	87	77	79	53	53	51	62	78	86	93
Langahouse	116	128	113	90	97	89	75	84	103	103	100	98
Madhapur	112	100	105	104	97	72	71	68	84	99	91	105
MGBS	102	107	110	89	83	73	75	86	98	100	100	105
Chikkadapally	99	99	96	99	90	81	76	82	94	95	88	108
Kukatpally	144	131	127	120	111	100	83	78	97	125	123	126
Nacharam	115	106	123	113	114	107	88	84	90	101	91	98
Rajedranagar	61	56	60	55	60	48	46	64	72	86	73	93
Sainikpuri	90	85	68	69	74	74	67	71	78	54	99	90
BPPA	88	78	86	62	74	67	53	60	75	77	74	90
Shameerpet	63	75	66	65	57	55	69	68	70	71	83	73
CAAQMS stations:												
HCU	146	106	107	93	93	56	42	41	73	111	112	129
Sanathnagar	229	125	122	83	69	45	33	33	60	86	163	202
Zoopark	217	123	115	97	89	50	44	48	94	157	165	216
Pashamylaram	171	105	105	85	86	68	80	100	100	131	156	173
Bollaram	156	118	129	109	107	80	66	75	93	127	111	136
ICRISAT	152	110	109	89	91	54	43	45	75	121	138	151

Ambient Air quality with respect to SO₂ and NO_x reveals that the air quality of Hyderabad is within the prescribed standards (NAAQS) of 50µg/m³ (annual standard for SO₂) & 40µg/m³ (annual standard for NO_x). With respect to PM₁₀ & PM_{2.5}, Hyderabad is not meeting the national standard (NAAQS) of 60 µg/m³ & 40 µg/m³ (annual Standard).

Source Apportionment studies indicates that the main contributor of PM₁₀ and PM_{2.5} is the vehicular pollution. The Govt. of Telangana has taken measures for traffic management, improved infrastructure like elevated expressway, Outer Ring Road, fly-overs, road widening etc, promoting the use of alternate fuels and implementation of Bharat Stage-IV norms. The metro project is expected to carry 15 lakh passengers easing pressure on road traffic.

f. **Source Apportionment of Air Pollutants:**

TSPCB with the support of USEPA and Technical assistance of National Renewable Energy Lab(NREL) and the Desert Research Institute (DRI) carried out the Source Apportionment study for Hyderabad city in the year 2005-06. As per the study, the major source contributors are given in the Figure-6 below:

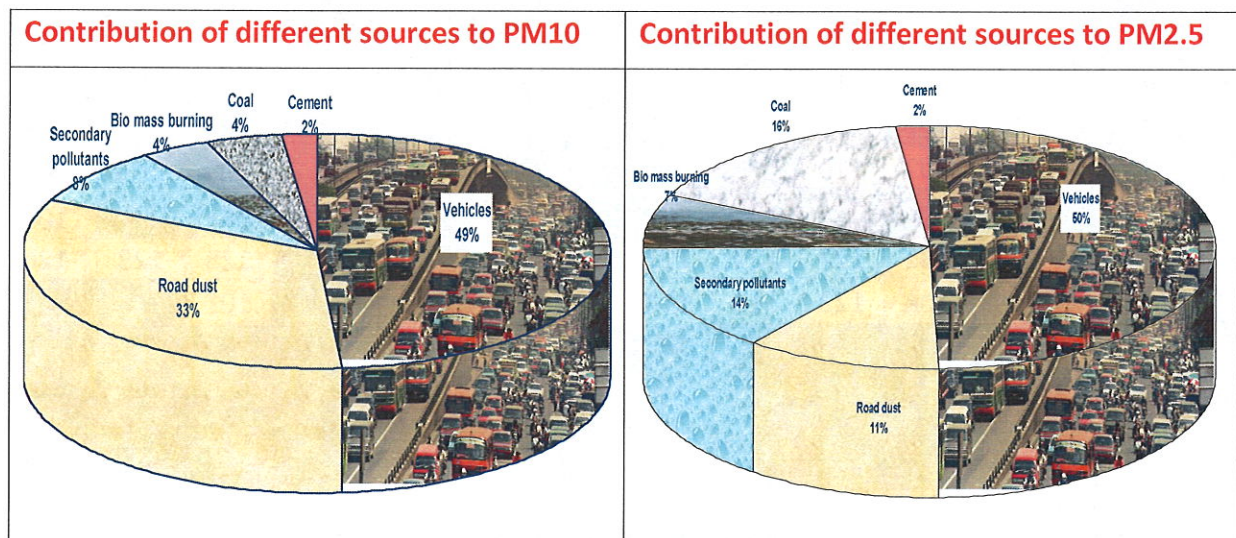


Figure-6 Source Apportionment study results for the Hyderabad area

Major Sources of Air Pollution:

Vehicles: The major source contributing to Particulate Matter air pollution is Vehicles for both the PM₁₀ & PM_{2.5}. On an average about 50% of the air pollution is caused by the Vehicular emissions.

Road Dust: The second major contributor for the particulate matter pollution is Road dust in case of the PM₁₀. About 33% of the particulate matter contribution is due to the lofted dust on account of the vehicular movement.

This may be attributed not only to poor maintenance of the road, but also due to the movement of the vehicles on the unpaved shoulders leaving the carriage way where the roads are not paved.

The re-entrained particles entering into the air is also due to the construction and demolition activity and related material handling .

The Road dust contribution to the PM2.5 is about 11%.

Coal: The contribution of the coal due to combustion of the coal for industrial usage is one of the source of air pollution for the particulate matter. The contribution of which is higher in case of PM2.5 when compared to PM10. Most of the industries have turned to cleaner fuels.

Bio Mass Burning: Open burning of the biomass and also in Industrial boilers is one of the source of the particulate matter.

Secondary Pollutants: The secondary pollutants due to various chemical reactions in the atmosphere lead to formation of the particulate matter.

Cement: The construction activity to cater the housing, infrastructure requirements are contributing to the particulate matter contribution.

Patancheru: It is a part of the GHMC administration. The AAQ data of patancheru is presented below in the Figure-7 from the period 2011-2018. The graph indicate a peak period followed by decreasing trend in the concentration of the particulate matter with the improvement of the road conditions.

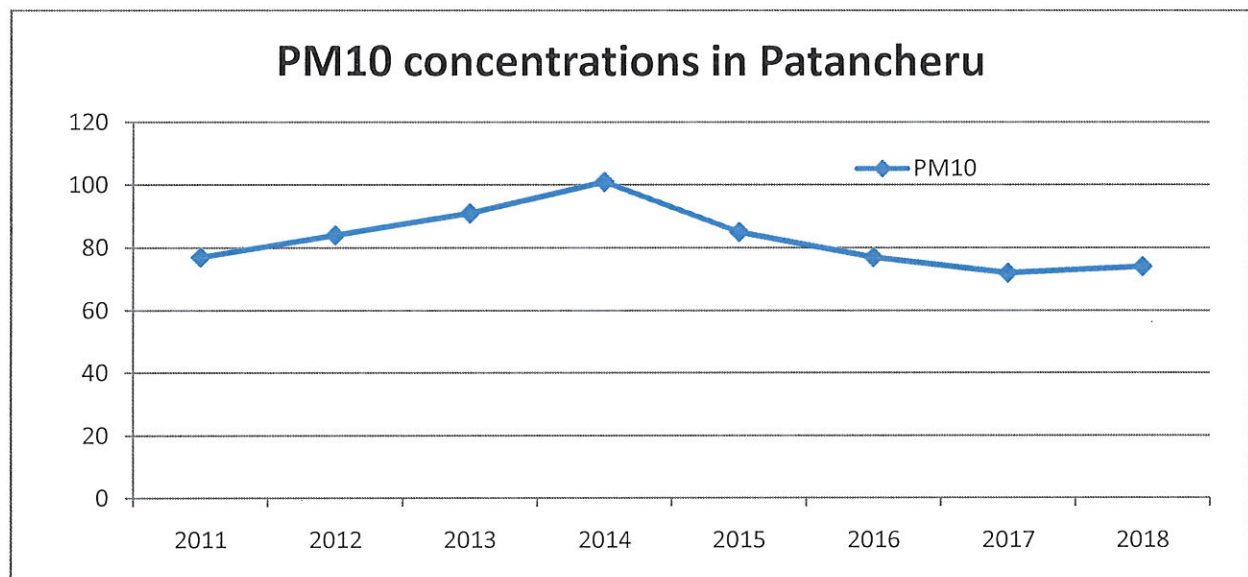


Figure-7: RSPM concentrations of Patancheru(part of GHMC) from 2011 to 2018

The PM_{2.5} is being monitored in Patancheru area from 2016 onwards the annual average concentrations are given in the Figure-8 below

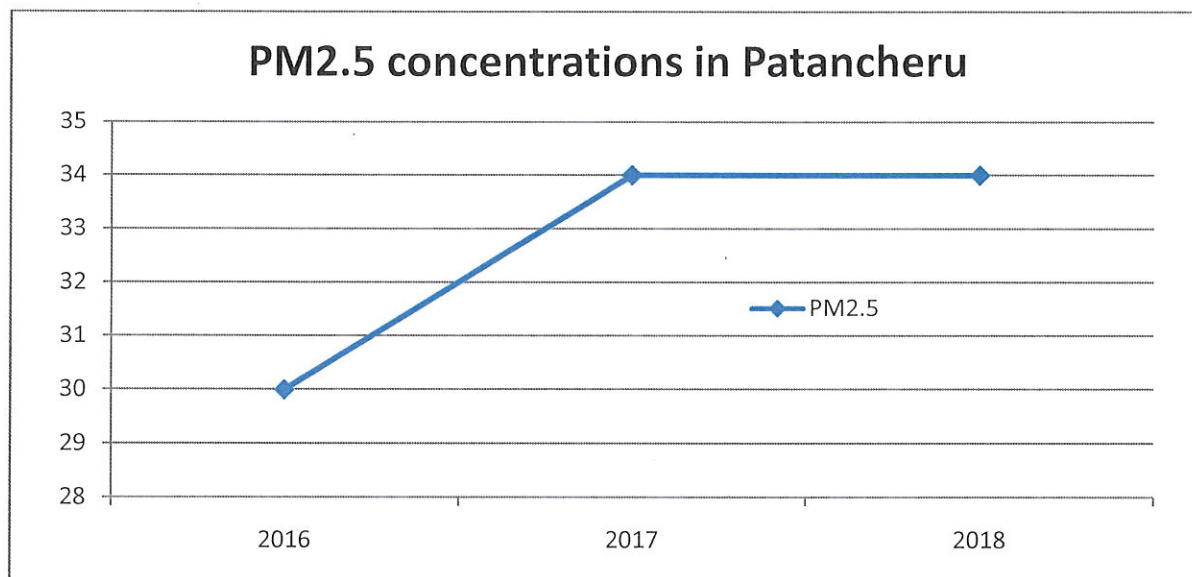


Figure-8: FPM concentrations of Patancheru(part of GHMC) from 2016 to 2018

The PM_{2.5} concentrations are within the limits and PM₁₀ concentrations are marginally higher than the standards.

5. Action Plan for reducing the air pollution:

The AQMC during the meeting held on 5th March, 2019 has revised the action plan duly considering the key components given in the comments of CPCB. The Committee on perusal of the National Clean Air Program has recommended to adopt the tentative National level target of 20%–30% reduction of PM_{2.5} and PM₁₀ concentration by 2024 keeping 2017 as base year for Hyderabad and Patancheru.

The approved revised action plan for Hyderabad and Patancheru (Patancheru is a part of the Greater Hyderabad Municipal Corporation) is as follows.

**REVISED ACTION PLAN FOR CONTROL OF AIR POLLUTION BY ALL THE STAKE HOLDER DEPARTMENTS IN HYDERABAD, TELANGANA STATE
(PATANCHERUVU IS PART OF GHMC)**

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A. Vehicle Emission Control	i)	Launch extensive drive against polluting vehicles for ensuring strict compliance	Short	continue as regular activity.	Transport & Traffic	<ul style="list-style-type: none"> Special drives are being conducted at regular intervals and in the year 2018 7225 cases against polluting vehicles under relevant sections of MV Act were booked. Vigorous enforcement measures are taken on prevention of overloading in goods carriages. During the period April, 2018 to 18th February, 2019- 4400 numbers of cases are booked against overloading in goods carriages. The transport department authorised pollution testing centres are computerised for scientific testing of vehicular emission and issue of PUC certificates. Valid PUC certificates are made mandatory at the time of every vehicle transaction at RTA offices. 	As a part of the department activity

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	ii)	Launch public awareness campaign for air pollution control, vehicle maintenance, minimizing use of personal vehicles, lane discipline, etc.	Short	Continuous activity at regular intervals	Transport Traffic TSPCB, GHMC & HMRL	<ul style="list-style-type: none"> Awareness Programmes is a continuous process in different departments. The details of the awareness programs taken and ongoing are: Awareness programmes are conducted at 572 locations in entire Cyberabad Commissionerate from January to December, 2018. TSPCB is also promoting public awareness by conducting workshops, awareness campaigns at regular intervals on all important environmental related occasions through print, electronic media and through Short messages to the mobile users TSPCB procured vehicles with electronic media in order to promote awareness among educational institutions by displaying short video clips and models. Telangana National Green Corps (NGC) is actively involved in promoting environmental awareness among the students by conducting various year long programs in educational institutions 	As a part of the department activity from the budget of the respective departments

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						<ul style="list-style-type: none"> Greater Hyderabad Corporation (GHMC) & Hyderabad Metro Rail Limited (HMRL) are promoting the usage of public transport instead of personal vehicles. Strict enforcement and awareness programmes on vehicle pollution control are being taken by Transport and traffic police. 	
	iii)	Prevent parking of vehicles in the non-designated areas	Short	continue as regular activity.	Traffic police	<p>9032 cases on petrol, 1063 cases on diesel and 55 cases against CNG vehicles were booked up to Jun., 2018.</p> <p>The commuters are educated not to put their vehicles haphazardly on the roads and also not to disturb free flow of traffic.</p> <p>Developing of parking facilities: In order to augment parking facilities Multi Level Parking facilities are proposed.</p> <p>The process of inviting Request for Proposal (RfP) for Multi Level Parking (MLP) Complexes is initiated by HMRL.</p>	Parking facilities On DBFOT basis in PPP mode

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						<p>About 20 sites belonging to HMRL, TSILC, GHMC & HMDA are identified for Integrated Parking Plan and Development of Automated Multi Level Parking (MLP) Complexes at various locations in Hyderabad on DBFOT basis in PPP mode with usage of latest MLP technology in order to ease the congestion on the roads and facilitate personal feeder services for the last mile connectivity.</p> <p>The draft RFP document will be submitted to the Government in the next couple of weeks.</p> <p>Further, Govt. has issued order for providing free parking at all commercial establishments</p> <p>As Gol has taken a decision to implement BS-VI. The actions and adoption will be initiated with the introduction of the BS-VI fuels in Hyderabad.</p>	
	iv)	Initiate steps for retrofitting of particulate filters in diesel vehicles, when BS-VI fuels are available	Long	Action plan as per the availability of BS-VI fuels	Transport and TSRTC		Nil

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	v)	Prepare action plan to check fuel adulteration and random monitoring of fuel quality data.	Short	30 days and continue as regular activity	Civil Supplies department	<p>(a) Constituted Task Force to check adulteration of petrol, diesel, oils and lubricants.</p> <p>(b) Joint teams comprising officials of civil supplies, Revenue, Legal Metrology and officers of oil companies have inspected 25 petrol bunks to check fuel adulteration.</p> <p>(c) Detailed inspections conducted by special teams at 5 petrol bunks</p> <p>(d) One case is booked in fuel adulteration</p> <p>(e) Mobile testing labs have been introduced.</p> <p>(f) Prepared an action plan for public transport on CNG mode by installing 21 nos. of CNG stations and additional 12nos. are under proposal.</p> <p>(g) Implementation of vapour recovery system in fuel refilling stations at retail outlets are under progress and will be completed in 3 years.</p>	Nil

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	vi)	Prepare plan for widening of road and improvement of infrastructure for decongestion of road.	Long	Tentatively two years at some of the places where the works are yet to be grounded the land acquisition is under process	GHMC & HMDA	<p>It was planned to widen 117 identified roads (150.39KM) & junctions in the GHMC limits and another 54 roads (under different authorities) are also in the process of widening. The acquisition of the properties for the same is under process.</p> <p>GHMC for improvement of Arterial Routes for decongestion has evolved a Strategic Road Development Plan (SRDP) with an outlay of Rs.27,000 Cr. in different Phases.</p> <p>SRDP comprises of</p> <ol style="list-style-type: none"> 1. Skyways – 7no. 135 km. 2. Major Corridors – 11 no. 166 km 3. Major Roads – 68 no. 348 km. 4. Others Roads 1,400 km. 5. Grade Separators 54 no. <p>On implementation it results in perceivable relief to the present traffic problems there by reduce the air pollution and cater to the future traffic needs in Hyderabad and also provides</p> <ul style="list-style-type: none"> • Conflict free Road Network 	Budget approved and the GHMC/HMDA is already implementing the works as detailed Strategic Road Development

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						<ul style="list-style-type: none"> Minimizes the travel time Increases the average journey speeds from 15 kmph to 35 kmph Reduces the air pollution levels by minimizing the fuel consumption and decrease the stopped delay. <p>Works Completed:</p> <ol style="list-style-type: none"> Chintalakunta Check post junction Kamineni Hospital junction :LHS Flyover Ayyappa Society Junction Mind space: Underpass & Flyover <p>Works in Progress:</p> <ol style="list-style-type: none"> Elevated Corridor along Road No.45 , Jubilee hills to Durgam Cheruvu -- Rs.150.00 Cr LB Nagar Junction Bairamalguda Junction Kamineni Hospital junction(RHS Flyover) & Nagole Junction Biodiversity park Junction Rajiv Gandhi Statue Junction Bahadurpura -- Rs.69.00 Cr 	<p>Plan (SRDP) with an outlay of Rs.27,000 Cr. in different Phases as detailed.</p>

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						<p>12. Owaisi Hospital -- Rs.63.00 Cr</p> <p>13.Cable Stayed Bridge across Durgam Cheruvu -- Rs.184.00 Cr</p> <p>14. Narsapur X Roads : Taken up by HMDA -- Rs.387.00 Cr</p> <p>15. Amberpet 6 No. X roads flyover ()-- Under progress by R&B (NH) -- Rs.270.00 Cr.</p> <p>16. Construction of 6 lane two way flyover crossing 7 Tombs (Shaikpet), Film Nagar road Jn., O.U Colony Jn, and Whisper Valley Jn -- Rs.333.55 Cr</p> <p>17.Construction of Multi Level flyovers / Grade Separators at Botanical Garden, Kothaguda and Kondapur Junctions -- Rs.263.09 Cr</p> <p>Note:</p> <p>1) Cost of works at SINO.1,2,6,7,8 Rs.448.00 Cr in one Package.</p> <p>2) Cost of works at SINO.3,4,9 & 10- Rs.379.00 Cr. in one Package.</p> <p>Works to be Grounded:</p> <p>1.Rethibowli and Nanalnagar Jn.- Rs.175.00 Cr.</p> <p>2. Shilpa layout, Gachibowli via gas</p>	

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						<p>Company to Gachibowli junction -- Rs.330.00 Cr.</p> <p>3. Aramgarh – Bahadurpura – Muslim jung Bridge--Rs.636.60Cr</p> <p>4. Extension of Chandrayangutta Flyover--Rs.37.00 Cr</p> <p>5.Rehabilitation and upgradation of Hyderabad outer ring road to Medak Section of NH-765D from km.15/970 to km.78/700 to two lane with paved shoulder/four lane – Rs 426.52 Cr</p> <p>6. Six laning from km.9/900 to 19/948 (Aramgarh-shamshabad section) of Hyderabad-Bengaluru Section of NH-44 -- Rs 283.15 Cr</p> <p>7. Construction of six lane Elevated Corridor from (Uppal) to (CPR) of NH-163 to Decongest the Urban Limits of Hyderabad-Bhopalpatnam Section -- Rs 626.76 Cr</p>	

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						Infrastructure facilities by developing Two logistic parks as regional hubs as an integrated one stop facility, freight operators, third party logistic operators, cargo handling companies on PPP mode at two locations (batingaram-40acres and mangalpally-22acres) to reduce the congestion in the city are under development and about to commission in two months.	on PPP mode at two locations
	vii)	Prepare plan for construction of express ways/ by-passes to avoid congestion due to non – destined vehicles.	Long	2 Years, , some works are completed, some are in progress and others yet to be grounded the land acquisition is	GHMC & HMDA	Six bus terminals (Inter City Bus Terminals) are also proposed under PPP mode at Miyapur, pedda amberpet, shamshabad, patancheruvu and Manoharabad to ease the traffic congestion. Government to ease the traffic load has developed an Outer Ring Road from the existing outer ring road with 8 lanes of 158 KM with 19 access points. To improve the connectivity between inner ring road and outer ring road 33 radial roads development was taken up 5 radial roads with 83.35KM is already widened connecting the North & west part	Budget approved and the GHMC/HMDA is already implementing

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				under process		<p>of IRR with ORR</p> <p>7 radial roads of 53.72km have been completed to connect west and south sectors of IRR with ORR.</p> <p>5 Radial roads of 54.43 KM connecting North and West sectors of ORR with IRR with the loan assistance of the Japanese International Co-operation agency have been taken up.</p> <p>Remaining 16 radial roads development is transferred to R&B department for a length of 185km.</p>	<p>nting the works as detailed</p>
	viii)	Steps for promoting battery operated / electric vehicles	Long	180 days	Transport	<p>The State Government have issued notification for exemption from payment of tax in respect of motor vehicles operated with battery / compressed natural gas / solar energy for a period of five years from the date of registration of such vehicles.</p> <p>GoT is developing the E-vehicle policy to promote the same. The draft policy is released for comments. The road map is also proposed.</p> <p>Under Faster adoption of electric mobility vehicle by the Central Government,</p>	<p>E-Buses O&M part to be borne by</p>

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	ix)	Synchronizing traffic movements / introduce intelligent traffic systems for lane driving.	Short	Already installed and continue the activity	Traffic police	<p>Telangana is allotted with 100 E-vehicles in two phases. 40 vehicles are received under first phase and commenced. Another 60 E-buses will be procured under phase-II later in this year.</p> <p>Hyderabad traffic integrated management system (HTRIMS) is installed with 66.5 Crs. for centralised monitoring system. Some features are:</p> <ol style="list-style-type: none"> 1. Automated and centrally controlled, for 330 signal junctions up to June 2018. 2. Vehicle Actuated Technology (VAC). 3. ATC (Area Traffic Control) with Synchronized signal and corridor management. 4. Cameras to monitor the traffic congestions, density on each road. 5. Fall back Connectivity, Full backup power management, Green energy initiative (Solar power backup). 6. Variable Message Sign boards (VMS) across the city for traffic alerts @ 20 places. 7. Synchronization of corridors. 	TSRTC
							Already established no additional requirement only implementation

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						8. Signalling services around the clock, traffic command centres, traffic information online in the portal are special features. It is working from Aug., 2012.	
	x)	Installation of remote sensor based PUC system, regular calibration of the checking instruments and online integration of the vehicle details with PUC	Long	180 days	Transport	All the PUC testing centres are computerized. Tenders have been finalised for identification of the service provider for online PUC integration of the certificates across the state. It is mandatory that the Pollution testing stations have to get their instrument calibrated at regular intervals	Nil
	xi)	Promotion of Alternate Fuels – Conversion of the Public Transport buses and educational institute buses and commercial taxis	Long	Under implementation and to continue	Transport	Bio-Diesel with 10% (B10) is being used in 35 depot and it is planned to extend to another 47 depots. CNG buses in Hyderabad: TSRTC is operating 130 nos., Stage carriages-129, goods carriage -88, educational institute buses- 74, contract carriage-11. All the 3 wheeler Autos-83,585 operate on LPG/CNG/Bifuel. Motor cars that run on LPG/CNG/Bifuel are	TSRTC has got funds under JNNURM for procurement of the buses

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						48, 867 Motor cabs that run on LPG/CNG/Bifuel are -1285	
	xii)	Disincentivising the growth of Vehicles	Short	Under implementation and to continue	Transport	Government issued G.O disincentivising the purchase of second vehicle by way of 2% additional tax	Nil
	xiii)	Restriction on plying of 15 years old vehicles	Short	Under implementation and to continue	Transport and Traffic	The Govt. issued G.O. Ms.No.124, dated: 07.10.1999 no four wheel and above vehicles more than 15 years old, unless scientifically tested and certified by competent authority shall be renewed of fitness certificate in the HUDA 3 wheeler vehicles which have covered 15 years shall not ply within the HUDA	Nil
	xvi)	Strengthening of the public transport -Increasing awareness on usage of public transport available -MRTS, MMTS, City buses	Long	Under implementation and to continue	GHMC HMRL & TSRTC	Multi Modal Transport System (MMTS) , jointly developed by State Government and Ministry of Railways, has been implemented, by making use of the augmented capacity of existing railway lines covering 43 Kms. The no. of services have been increased from 87 to 92 and some of the peak time service capacity is augmented by converting 6 car rake in to 9	MMTS- Nil

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						<p>car rakes.</p> <p>(ii) Hyderabad Metro Rail Project: As part of the strengthening of the public transport system, the state government has taken up the Hyderabad Metro Rail Project to provide an efficient, safe, reliable and affordable public transportation system in Hyderabad, The Government has undertaken development of Metro Rail (MRTS) projects in 3 high density traffic corridors (71.16 kms) on BOT basis in PPP (Public Private Partnership) mode are being taken up in phase-I i.e.,</p> <ul style="list-style-type: none"> • Miyapur – L.B.Nagar: (28.87 kms - 27 Stns) • Jubilee Bus Station – Falaknuma : (14.78 kms - 16 Stns) • Nagole – Shilparamam: (27.51kms - 23 Stns) <p>The First line from Nagole to Ameerpet to Miyapur commenced from November, 2017 and that of the Miyapur to LB Nagar</p>	<p>MRTS-PPP mode BOT</p>

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						<p>in September, 2018. The Nagole to Shilparamam is due for commencement and expected to operationalise within one months. The traffic congestion on these roads is decreased and thereby anticipated reduced pollution levels</p> <p>(iii) Telangana State Road Transport Corporation(TSRTC) is operating 3800 city buses in the city covering 2.89 crore KMs per month.</p> <p>Greater Hyderabad Municipal Corporation (GHMC) & Hyderabad Metro Rail Limited (HMRL) are promoting the usage of public transport instead of personal vehicles.</p>	
B).Re-suspension of road dust and other	i)	Prepare plan for creation of green buffers along the traffic corridors	Mid	Continue as regular activity	GHMC & HMDA	<ul style="list-style-type: none"> During 2016-17, GHMC had successfully taken up 84.91 Lakhs plantations including free distribution of plants to public under homestead plantation in Governments flagship program Haritha Haram. Out of which 2.11 Lakhs planting are done in Open spaces, Institutions, Grave Yards, Avenue Plantation, Lakes 	Part of Government's flagship program Haritha Haram (green)

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						<p>etc., and protecting them through contract system and their survival is 91%.</p> <ul style="list-style-type: none"> During 2017-18 a target of 76 Lakhs has been achieved, including planting and homestead plants distribution to the households, as per their preferred species under TKHH. Out of which GHMC has planted 3.53 Lakhs in Institutions Open Spaces, Lakes, Green Ways, Green Curtains and protecting them through contract system and the Survival having 93%. During the year 2018-19 a target of 43.13 Lakhs has been achieved including planting and homestead plants distribution to the households, as per their preferred species under TKHH. Out of which GHMC has planted 4.58 Lakhs (in Avenue Plantations, Central Medians, Institutions, Open Spaces, Lakes, Green Ways, Green Curtains) and protecting them through contract system and the 	garland)

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	ii)	Maintain pot holes free roads for free-flow of traffic	Short	Continue as regular activity	GHMC & HMDA	<p>Survival having 95.87%.</p> <ul style="list-style-type: none"> GHMC have proposed 40 lakhs plants to take-up Avenue Plantation through the Government and non-government organizations including homestead plantations. All are to be completed within 9 months. <p><u>Pot holes are being filled on machine mode</u></p> <ul style="list-style-type: none"> 2016-17: 90,466 pot holes are repaired. 2017-18: 58,222 potholes are repaired <ul style="list-style-type: none"> 120 nos. instant repair teams were involved in filling the potholes. 140 no. of Monsoon Emergency Teams and 55 no. of Static labour teams also taken up pothole filling on non-rainy days. 2018-19: from 01.07.2018 to till date 36530 No. of pot holes have been filled up. <ul style="list-style-type: none"> 79 nos Instant repair teams are involved in filling the potholes. 173 no. of Monsoon Emergency Teams have also take up pothole 	As a part of the departmental activity from the Budget of GHMC & HMDA

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						filling on non-rainy days. The same is being continued as regular activity and is monitored by Commissioner, GHMC.	
	iii)	Introduce water fountains at major traffic intersection, wherever feasible	Mid	Continuing activity	GHMC & HMDA	<ul style="list-style-type: none"> There are 48 fountains existing. In addition to the above during the year 18-19, two fountains are developed at lakdikapool junction and Nalgonda X road. 	Nil
	iv)	Greening of open areas, gardens, community places, schools and housing societies.	Mid term	Continuing activity	GHMC & HMDA	<p>The greenery work in the open spaces, grave yards, gardens and also plants have been distributed among Government and NGOs under Haritha Haram programme.</p> <ul style="list-style-type: none"> Greenery of open areas / parks are existing 1195 nos. Traffic islands and central medians, greenways and green curtains existing 179 no's are maintaining and 41 Vertical gardens are developed and maintaining. 56 no's colony parks, Central medians and green curtains 5 nos are proposed to be completed within 9 months. 	As a part of the departmental activity from the Budget of GHMC & HMDA
	v)	Blacktopping of metallised roads, including pavement	Long	Continuing activity	GHMC & HMDA	<ul style="list-style-type: none"> During the year 2016-17, there were 418 No. of BT roads works taken up 	Budget approved

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		of road shoulders.				amounting to Rs. 65.95 Crs. • During the year 2017-18 GHMC has taken up 1364 no of roads works amounting to Rs. 220.17 Crs. • In the year 2018-19 GHMC has taken up 52 No. of packages of BT roads amounting to 381.36 Crs which are in progress. In addition to this 1015 no of road works are taken up with an estimated cost of Rs. 142.24 Cr. • GHMC has developed 24.7KMs length of Foot paths from the year April, 2018 onwards.	and the GHMC/HMDA is already implementing the works as detailed
	vi)	Regular cleaning of the roads with mechanised sweepers and removing the silt from the roads	Short	Regular Activity	GHMC & HMDA	GHMC is implementing mechanised and Manual sweeping of the road on daily basis	Departmental activity
(C). Control of emissions from	i)	Launch extensive drive against open burning of bio-mass, crop residue, garbage, leaves etc.,	Short	Within 90 days as continue regular activity.	GHMC	The EFS&T Department vide G.O.Ms.No. 27 dt. 10.07.2017 issued Notification prohibiting open burning of waste and utilization of RDF as fuel in power generation and cement plants. GHMC in 2017-18 booked 341 cases and Rs	Nil

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						2.08 lakhs penalties were levied and in the year 2018-19 up to September 190 cases with about 0.92 lakhs of penalties were levied.	
	ii)	Regular check and control of burning of municipal solid wastes.	Short	Within 90 days as continue regular activity.	GHMC	Special drives conducted regularly and daily monitoring by the field staff in Sanitary section i.e Sanitary Supervisors, Sanitary Jawans and Sanitary field Assistants.	Nil
	iii)	Proper collection of horticulture waste (bio-mass) and its disposal following composting – cum-gardening approach.	Mid	Within 90 days as continue regular activity.	GHMC & Agriculture	In all parks composting pits were provided for collecting the horticulture waste. The compost generated from such pits utilized within the parks itself. It is proposed to produce 10 tons of compost per day at Chandulal Bowli Park by utilising available Horticulture waste.	Nil
	iv)	Ensure ban on burning of agriculture waste and crop residues and its implementation.	Long	180 days as continue regular activity.	Agriculture	Burning of the agriculture waste is not a common practice in the state. The Agriculture department will issue a notification for Ban on burning of agriculture waste and crop residues with implementation mechanism.	Nil
	i)	Identification of brick kilns	Mid	60 days	TSPCB &	The Govt. of Andhra Pradesh has issued	Nil

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		and their regular monitoring, including use of designated fuel, and closure of un-authorised unit			Revenue	guidelines vide GO Ms.No.80, dt:22.04.2010 and the Revenue authorities i.e., Collector, District Magistrate / RDO – Tahsildar are taking action against defaulting units under provisions of Cr.P.C. The District Collectors are monitoring the implementation of guidelines.	
	ii)	Conversion of natural draft brick kilns to induced draft	Long	120 days	TSPCB	TSPCB based on the guidelines issued by CPCB has directed the field Officers to conduct an inventory of Brick kilns, as most of them are in unorganized sector. Based on the inventory of the Brick kilns an action plan will be prepared duly considering the size of the Brick kilns, the economic feasibility of placing induced draft and alternate fuels	Nil
	iii)	Action against non-complying industrial units	Short	continue as regular activity.	TSPCB	TSPCB is taking regular action on all non-complying industries. Online monitoring systems are installed by the air polluting industries and are connected to the server of CPCB. TSPCB is carrying out regular monitoring of	Nil

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						the industries, also night patrolling of the Industrial Estates, computerised inspection are being carried out. The non-complying units are reviewed and directions are being issued for compliance which range from imposing the Bank Guarantee for implementing the actions recommended by the Task force committee, stop production and closure.	
	iv)	Shifting of polluting industries	Long		Industry department, TSIC & TSPCB	<p>G.O.MS.No.20 dated:01-03-2013: Government has taken a decision to shift the polluting industries (compulsory) and non-polluting industries (optional) from within the outer ring road(ORR) to outside ORR.</p> <p><u>1. AN INDUSTRIAL PARK (TEXTILE PARK) AT INDRAKARAN,</u> Sangareddy District, in an extent of 163.90 Acres has been developed for Shifting & Relocation of Textile Industries.</p> <ul style="list-style-type: none"> Laying of Roads Completed in all respects. 	Nil

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						<ul style="list-style-type: none"> • Water supply and power supply is available. • Environmental Clearance (EC) and Consent for Establishment (CfE) obtained. • Out of the 16 allotments 9 allotments are under Shifting & Relocation category. These relocation category industries are yet to be shifted and relocated to the new location. Presently 5 units are working at IP Indrakaran. <p>2. <u>AN INDUSTRIAL PARK (EDIBLE OIL PARK) AT BUCHINELLY,</u> Sangareddy District, in an extent of 314.40 Acres has been developed out of which an extent of 214.40 Acres is earmarked for Shifting & Relocation of Edible Oil Industries.</p> <ul style="list-style-type: none"> • Laying of Roads are completed in all respects. • Water supply and Power is available. • Environmental Clearance is obtained. 	

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						<p>Consent for Establishment is being obtained.</p> <ul style="list-style-type: none"> 64 plots are reserved for Shifting & Relocation category of industries, out of which 20 plots are allotted to the Shifting & Relocation category of Industries <p>3. AN INDUSTRIAL PARK (STEEL RE-ROLLING PARK) AT RAKAMCHERLA (V), PUDUR (M) RANGA REDDY (District), in an extent of Acres 112.48 is proposed for Shifting & Relocating Steel Re-Rolling industries.</p> <ul style="list-style-type: none"> Laying of roads are completed in all respects. Water supply and Power Supply is available. 11 No Plots were allotted for Shifting & Relocation category of industries 	

source	S. No.	Action points	Implementation period (short/mid/long) term	time frame for implementation from the date of approval	Responsible Departments / agency	Any other information (Status on implementation of the action plan in Hyderabad)	Financial Implications (If any)
	v)	Ban on polluting industries	Short	Already under implementation and continuing	TSPCB & Industry Department	G.O.MS.No.111 dated 8 th March, 1996 prohibits polluting industries, major hotels, residential colonies or other establishments that generate pollution, in the catchment of the lakes upto 10 kms from full tank level of the lakes G.O.MS.No.95 dated:21-09-2007 imposing ban on establishment and expansion of certain polluting industries in Medak, Mahboobnagar, Rangareddy and Nalgonda District	Nil
(E). Control of air pollution from construction and demolition activities	i)	Enforcement of Construction & Demolition Rules	Short	continue as regular activity.	GHMC & TSPCB	The penalties proposed for offences under C&D waste management in GHMC are proposed and sent to Government for approval for the following activities. a) For illegal transportation and dumping of C&D waste at unauthorized/ objectionable places/ points like nalas, lakes, public utility open places etc. For illegal disposing of C&D waste generated through any activity at place (like roadside, open plots, streets, dumper bins) other than notified by GHMC.	Nil

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	ii)	Control measures for fugitive emissions from material handling, conveying and screening operations through water sprinkling, curtains, barriers and dust suppression units.	Short	continue as regular activity	GHMC	<p>The GHMC has been stipulating following conditions for controlling and preventing the Air Pollution while granting the building construction permission:</p> <p>As per Clause 3(e) of G.O.Ms.No.168 MA, dated: 07.04.2012, it is mandatory to obtain the Environmental Clearance from State Environmental Impact Assessment Authority (SEIAA), MoEF&CC, Govt. of India for the building with 20,000 sq. mts. and above built-up area.</p> <p>A condition is stipulated in the building sanction plan that, the applicant should erect temporary screen (blue tin sheet) around the construction are to avoid spilling of the building material outside the plot / site during the construction to stop environmental pollution and to ensure safety and security to the neighbouring / surrounding areas.</p> <p>A condition also insisted that the building owner shall not dump the building material on foot-path / road side and the same shall</p>	Nil

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						<p>be dumped inside the compound premises without creating nuisance and air pollution and to this effect an undertaking is being obtained before release of permission.</p> <p>The C&D waste management plants were planned at (4) locations in the GHMC area through a private operator on PPP mode. For (2) locations at Jeedimetla & Fattullaguda were finalized. Agreement was concluded on 22.02.2018 for the plant at Jeedimetla and Collection and transportation of C&D waste was commenced since April 2018 and about 2.5lakh MT of waste was lifted from the city roads.</p> <p>Following conditions were made in the Concessionaire agreement for the purpose.</p> <ul style="list-style-type: none"> • Deployment of covered vehicles for transportation of the C&D waste to the plant site. • Water cleaning of truck after completion of unloading of C&D waste at site • The plant shall be established with wet-process 	C&D management on PPPmode

source	S. No.	Action points	Implementation period (short/mid/long) term	time frame for implementation from the date of approval	Responsible Departments / agency	Any other information (Status on implementation of the action plan in Hyderabad)	Financial Implications (If any)
	iii)	Ensure carriage of construction material in closed / covered vessels.	Short	Being implemented and to continue as regular activity	GHMC	<ul style="list-style-type: none"> Buffer zone shall be created with plants all-round the plant site. C&D waste is being transported with covered vehicles to arrest fugitive emissions. 	Nil
	i)	Air quality index to be calculated and disseminated to the people through website and other media (maximum weekly basis for manually operated monitoring stations and real time basis for continuous monitoring stations)	Short	Being implemented and to Continue the activity	TSPCB	<ul style="list-style-type: none"> Air quality index booklet is initiated from Jan., 2016 onwards. The AQI data is appearing in CPCB / SPCB website on realtime basis. The AQI of all the manual monitoring stations are kept in TSPCB website. 	Nil
(F). Other steps to control Air Pollution:	ii)	Establish an air quality management division at SPCB Head quarters to oversee air quality management activities in the state and interact with	Short	Already established and to Continue the activity	TSPCB	<ul style="list-style-type: none"> AQM division is established under SES, CL supervision with 2 dedicated scientific officers to look into all air quality issues. Through e-samiksha platform of CPCB regular interactions will be carriedout. 	Nil

source	S. No.	Action points	Implementation period (short/mid/long) term	time frame for implementation from the date of approval	Responsible Departments / agency	Any other information (Status on implementation of the action plan in Hyderabad)	Financial Implications (If any)
		CPCB				All the monitoring data is entered through online portal of CPCB i.e. Environmental Air Quality Data Entry System (EAQDES).	
	iii)	Set-up and publicize helpline in Hyderabad City for complaints against reported non-compliance.	Short	Already established and Continue the activity	TSPCB & GHMC	TSPCB established online public grievance redressal system in its website to receive online complaints. In addition, a 24x7 toll free number 10741 and 040-23887500.	Nil
	iv)	Engage with concerned authorities for continual basis for maximising coverage of LPG / PNG for domestic and commercial cooking with target of 100% coverage	Long	180 days from approval of action plan	State oil coordinator & Bhagyanagar Gas Ltd.	'My GHMC' mobile application and helpline number 040-2111111 was set-up for the purpose of reporting grievances. <ul style="list-style-type: none"> • PNG availability is through Bhagyanagar Gas Ltd., and supplying to 8294 residents in Medchal, Alwal and Quthbullapur. Still plenty of gas is available up to one Lakh connections in the area. • 130 TSRTC buses are also using the CNG as fuel 	Nil
	v)	Monitoring of DG sets and action against violations	Short	Continue as regular activity	TSPCB	TSPCB is monitoring the industrial DG sets for compliance of the standards.	Nil
	vi)	Strengthening of Ambient Air Quality Management	Short	Proposal submitted to	TSPCB	TSPCB has established 5 CAAQMS and 6 Manual AAQMS under NAMP in the	7 crores as per

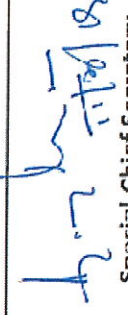
source	S. No.	Action points	Implementation period (short/mid/long) term	time frame for implementation from the date of approval	Responsible Departments / agency	Any other information (Status on implementation plan in Hyderabad)	Financial Implications (If any)
		Additional stations proposed to CPCB		CPCB and the proposed timeline is two years		Hyderabad and Patancheru area(GHMC) area. Apart from the above Manual AAQ Monitoring is being carried out at 12 locations under state program. As per the recent criteria communicated by the CPCB which is based on the population criteria, the number of CAAQM stations required for Hyderabad & Patancheru as per the 2011 census are 12. Hence, additional 7 CAAQMS are to be installed. The Manual AAQM stations are adequate. The requirement is communicated to CPCB through letter dated:08.02.2019 for providing the funds as per the Hon'ble NGT order that MoEF&CC will provide requisite funds for the purpose.	NGT order to be provided by MoEF&CC, GoI
	vii)	Source Apportionment Study	Long	Two years after the approval of the action plan as it involves seasonal monitoring	TSPCB	TSPCB has carried out Source Apportionment Study in the year 2005-06 with the assistance of the USEPA and others for Hyderabad city. As per the study, about 50% of the Particulate matter of size less than 10 and 2.5 microns are contributed by vehicles and another 30% by road dust.	Rs.50.00 Lakhs by TSPCB

source	S. No.	Action points	Implementation period (short/mid/long) term	time frame for implementation from the date of approval	Responsible Departments / agency	Any other information (Status on implementation of the action plan in Hyderabad)	Financial Implications (If any)
						Source Apportionment study will be taken up by TSPCB as per the guidelines issued by the CPCB duly encompassing the seasonal variations.	
	viii)	Emission Inventory	Long	One year after the approval of the action plan	TSPCB	An Emission inventory is carried out for Hyderabad city for both ambient air pollutants and greenhouse gases for year 2001. The results of the emission inventory and subsequent air quality modeling indicated that the primary source of PM10 emissions in Hyderabad is the transportation sector (~62percent) with the industrial sector being the second largest source of PM10. The Emission inventory will be taken up as per the CPCB guidelines for the Hyderabad	Rs.50 lakhs by TSPCB
	ix)	Hotels, restaurants and dhabas to use cleaner fuels	Long	180 days from approval of action plan	GHMC, BGNL and SLOC	Almost all the Hotels and Restaurants are using Cleaner fuels like Commercial LPG and actions to promote the usage of cleaner fuels in Dhabas located in the outskirts will be taken up.	Nil

Graded Response Action Plan (GRAP): The AQI of Hyderabad is mostly from satisfactory to moderate with few occasions under poor category in winter due to inversion in atmosphere. The GRAP is prepared in lines with that of CPCB action plan for Delhi.

Moderate to poor (ambient PM _{2.5} or PM ₁₀ concentration value is between 61-120 µg/m ³ respectively)	Agency responsible/Implementing Agency
Stringently enforce / stop garbage burning in landfills and other places and impose heavy fines on person responsible	GHMC and surrounding municipalities
Close/stringently enforce all pollution control regulation in brick kilns and industries	TSPCB
Do periodic mechanized sweeping on roads with heavy traffic and water sprinkling also on unpaved roads every two days	GHMC and Surrounding municipalities
Strict vigilance and no tolerance for visible emissions – stop plying of visibly polluting vehicles by impounding or heavy fine	Commissioner, Traffic Police of Hyderabad to identify roads with heavy traffic and provide information to respective Municipal Commissioners
Strict vigilance and enforcement of PUC norms	Chief Engineers of officers in charge of CPWB, PWB of Hyderabad to identify unpaved roads with heavy traffic and provide information to Municipal Commissioners
Stringently enforce rules for dust control in construction activities and close non-compliant sites	Commissioner or Officer in charge, Transport Department and Traffic Police
Deploy traffic police for smooth traffic flow at identified vulnerable areas	GHMC and Traffic Police
	Commissioner, Traffic Police


 Member Secretary
 TSPCB


 Special Chief Secretary
 EFS&T