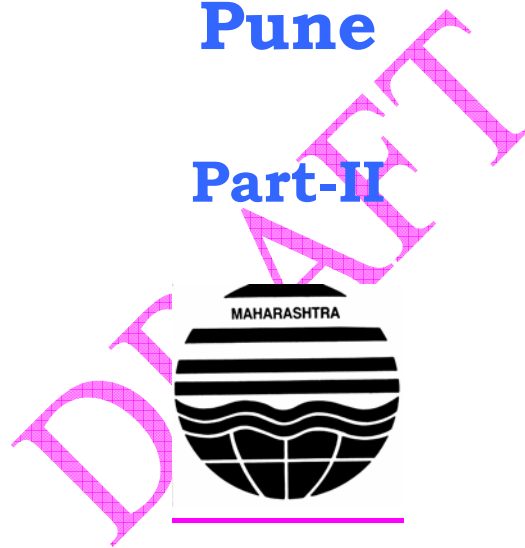


REVISED ACTION PLAN
FOR
CONTROL OF AIR POLLUTION
IN
Pune
Part-II



Maharashtra Pollution Control Board
Kalpataru Point, 3rd Floor
Sion (East), Mumbai 400 022

PART B

New Action Plan for Future Action

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Action Plan

The air pollution is viewed as the most serious problem in many cities in India and accordingly Hon'ble Supreme Court of India has selected the cities depending upon the pollution load due to various activities. The transport sector is held largely responsible for the air pollution in the cities and the particulate matter is the most pollution causing agent in the cities. However, there are many other sources of the particulate emissions which include large industrial plants, medium and small scale industries, refuse burning, household burning biomass for cooking and heating, vehicular exhausts, re-suspended road dust, construction, particles migrating from other regions and naturally occurring dust. These sources emit the particles of different sizes of which the small particles are a cause of serious concern since they affect the public health more than the large particles. Therefore, it is necessary to have a better understanding of the emissions from these sources so as to build a proper plan of action and a strategy to reduce the pollution due to particulate matters. This is the aim of this report and it highlights the steps that are required to be taken by the agencies who are participating in the implementation of this action plan. The actions anticipated from them are given below.

1. PMT operates 800 buses in Pune Municipal Corporation area. Their year of manufacturing is shown in **Annexure-I**. They have phased out 100 buses in 2002-2003 out of the 114. The Pune Municipal Corporation is planning to replace 100 buses during 2003-2004 which are fifteen years old, 83 buses during 2004-2005 and 111 buses during 2005-2006.

PMT is in the process of hiring 135 buses & purchasing 200 buses. Out of 135 private buses, 85 medium buses & 50 mini buses of Euro II

norms are being made available by the selected bidders. Accordingly, supply order has been given to them. These were expected to be made available by March 2004. However, due to some administrative difficulties, it was not possible and the proposal had to be sent to Government of Maharashtra for approval & necessary orders. It is learnt that from PMT, that Government has sanctioned PMT's proposal and final orders in this matter are awaited.

The suggestion of Ministry of Environment & Forests and Ministry of Petroleum, Government of India on the replacement of the buses and purchase of new buses which are of Bharat II norms is accepted by the Pune Municipal Corporation. Accordingly all the new buses shall conform to Bharat Stage-II norms. The oil companies in Pune region have agreed to supply the fuel of the required quality for Bharat II Buses.

In PCMC area, there are 187 No. of buses owned and operated by PCMC transport authority. Their year of manufacturing and planning for replacement of these buses is shown in **Annexure-I**.

2. Many trucks and other large and heavy vehicles coming from outside destinations currently pass through the Pune city, as there are no bypass roads except the newly constructed Mumbai Pune Expressway which can take the vehicles to and from Mumbai without these having to go to Pune city unless they have to unload the goods cargo in the city. Therefore, the Municipal Corporation has plans to construct the bypass and divert the traffic. One such bypass road has already been commissioned and the other one is expected to be completed by Maharashtra State Road Development Corporation during the current financial year.

3. To reduce the congestion, in Pune city RTA, Pune has totally banned the operation of six seater from 01.01.2004.
4. RTO Pune has banned new 3 wheelers and fresh registrations are not being given. Besides, a policy decision has been taken by RTA that the existing 3 wheelers shall have to switch over to LPG in due course of time, since LPG is being made available by the oil companies as the auto fuel in Pune.
5. The emission from the two wheelers is a very serious problem. However, reduction in number of two wheelers depend on the switching over to the use of public vehicles by the people. The Transport Department has agreed to allow the registration of the new two-wheelers/three wheelers with 4 stroke engines, which will reduce the existing emission of CO.
The Transport Department feels that the amendments in the Motor Vehicle Act, are necessary to facilitate the registration of only 4 stroke 2 wheelers, auto rickshaws and also converting 2 stroke 2 wheelers and auto rickshaws to 4 strokes. A proposal is being prepared by RTO Pune in this regard making suggestions on the required amendments in the M.V. Act.
6. Steps are being taken to shift the industries located in the non conforming zones to the designated industrial areas. Besides, the Regional Planning Authority is in the process of preparing a Development plan identifying a proper industrial area where the unauthorized industries can be shifted.
7. The public sector oil companies have already started supply of diesel containing 0.05% sulfur and petrol with Benzene content of 1% in Pune and PCMC areas. The supply of loose 2T oil at petrol pump has also been stopped. The oil companies are keeping a vigilance to check the

supply of loose 2T at the retail fuel outlets, so that this can be curbed and action taken against the defaulters.

In Pune city, there are 5 LPG Outlets. Out of which HPCL has provided 2 LPG Outlets, BPCL has provided 2 LPG Outlets & IOCL has provided 1 LPG Outlet. The no. of vehicles converted to LPG fuel are 3,576. The information on the proposed auto LPG dispensing station has been given in the Institutional Planning section of this report.

At present there is no CNG outlet in Pune. Expected CNG will be available up to 2005.

The Transport Department has started necessary action on the implementation of the up gradation of PUC norms as notified by the Ministry of Road Transport and Highways vide their notification dated 17.6.2004 which has come in to force from 1.10.2004.

The MoRTH has prepared a Road map for reducing the pollution from the in use vehicles which is to be implemented by the Transport Department of the state. Accordingly, in Pune and PCMC area the target dates set up for the emission norms for different category of vehicles are being implemented by the RTA Pune in accordance with the policy of GOI communicated vide the letter dated 14.5.2004 from MoRTH.

Actions Initiated & road map to achieve the aims to air pollution control is designed and is as reflected in the action plan (Annexure-II & Annexure III & Annexure IV).

ABBREVIATIONS:-

- a) PMC - Pune Municipal Corporation
- b) PCMC - Pimpri-Chinchwad Municipal Corporation
- c) CPCB - Central Pollution Control Board
- d) MPCB - Maharashtra Pollution Control Board
- e) MoEF - Ministry of Environment & Forests,
- f) CIRT - Central Institute of Road Transport
- g) PMT - Pune Municipal Transport
- h) PCMT - Pimpri-Chinchwad Municipal Transport
- i) ESR - Environmental Status Report
- j) RTA - Regional Transport Authority
- k) RTO - Regional Transport Officer
- l) ECE - Emissions Control Equipments
- m) D.G.set - Diesel Generating Set
- n) D.P.Road - Development Project Road
- o) I & M Practice- Inspection and Maintenance Practice
- p) PUC - Pollution Under Control
- q) MoRTH - Ministry of Road Transport & Highways.
- r) MoP - Ministry of Petroleum

ANNEXURE - I**PHASING OUT AND REPLACEMENT OF PMT & PCMT BUSES****Total PMT BUSES: 800 Nos.**

Sr.No.	Year of Manufacture	No. of Buses	Ages as on December 2002	Time frame action	
				Phase Out	Replacement
1	1984	2	18	-	100 buses have been replaced in 2002-2003 out of 114 Nos.
2	1986	41	16	-	
3	1987	71	15	-	
	Total	114			
4	1988	29	14	2003	100 buses will be replaced in 2003-2004.
5	1989	44	13	2004	
	Total	73			
6	1990	53	12	2005	83 Buses in 2004-2005
7	1991	30	11	2006	111 buses in 2005-2006
	Total	83			
8	1992	111	10	2007	After 2006, remaining buses shall be replaced every year.
9	1993	54	9	2008	
10	1994	78	8	2009	
11	1995	101	7	2010	
12	1997	50	5	2012	
13	2000	136	2	2013	

(Source: PMC)

Total PCMT BUSES: 187 Nos.

Sr. No.	Year of Manufacture	No. of Buses	Ages as on December 2002	Time frame action	
				Phase Out	Replacement
1	1994	187	8.5	2009	16 Nos. of buses will be phased out in March 2004. 25 Nos. buses purchased. Action is in progress.

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ANNEXURE - II

ACTION PLAN INITIATED

<u>Sr.No.</u>	Particulars	Action
1.	Phasing out of PMT Buses	Please see Annexure-I.
2.	Six Seaters	To reduce the congestion in Pune city RTA Pune has banned the operation of six seaters totally from 1/1/2004.
3.	Replacement of two wheelers from two stroke to 4 stroke	No new two wheelers with two stroke is licensed.
4.	Registration of two stroke Vehicles	Banned from April 2002. Only petrol auto rickshaws are permitted as a replacement.
5.	Clean Fuel availability	In Pune, LPG has been made available from 25th November 2002. Five dispensing units have already been started. Expected CNG will be available up to 2005.
6.	Retrofitting of LPG Kits	Pune RTO has authorized 80 LPG retrofitters.

ANNEXURE - III

ROAD MAP FOR VEHICULAR POLLUTION CONTROL

FUEL QUALITY:

- 0.05% Diesel Sulfur from 2003
- 0.035% Diesel Sulfur from 2005
- 0.005% Diesel Sulfur from 2010
- 1% Petrol Benzene from 2005.

EMISSION NORMS AS PER MoRTH:

- ◆ Bharat Stage-II to be implemented from 2004.
- ◆ Euro-III equivalent norms to be implemented from 2005
- ◆ Euro-IV equivalent norms to be implemented from 2010

▪ **All city buses & Taxis:**

From 1.4.2004 – Vehicles registered before 1.4.1996 to have minimum 1996 emission norms and those registered after 1.4.1996 to have applicable emission norms on date of registration.

From 1.4.2008 – Vehicles registered before introduction of Bharat Stage –II norms to have minimum India 2000 (Bharat Stage-I) emission norms and those registered after introduction of Bharat Stage-II norms to have applicable emission norms on date of registration.

▪ **All 3 Wheelers (Autos/Tempos):**

From 1.4.2004 – Vehicles registered before 1.4.2000 to have minimum 1996 emission norms and those registered after 1.4.2000 to have applicable emission norms on date of registration.

From 1.4.2008 – Vehicles registered before 1.4.2000 to have minimum India 2000 (Bharat Stage-I) emission norms and those registered after 1.4.2000 to have applicable emission norms on date of registration.

▪ **All Inter Stage buses/Trucks originating or culminating in city:**

From 1.4.2006 – Minimum of 1996 emission norms in respect of vehicles registered before 1.4.2000.

From 1.4.2007 – Minimum India 2000 (Bharat Stage-I) norms in respect of buses registered after 1.4.2000.

From 1.4.2008 – Minimum India-2000 (Bharat Stage-I) norms in respect of vehicles registered before 1.4.2005.

From 1.4.2011 – Minimum Bharat Stage-II norms in respect of vehicles registered after 1.4.2005.

▪ **Pollution Under Control (PUC) Norms**

▪ **Norms For CO**

Sr.No	Vehicle Type	Present Norms CO%	New Norms CO%
1.	2 Wheelers & 3 Wheelers(Manufactured prior to 31/03/2000)	4.5	4.5
2.	4 Stroke 2 Wheeler & 3 Wheeler vehicles fitted with catalytic converters (Manufactured after 31/03/2000)	4.5	3.5
3.	4 Wheeler vehicles (Manufactured after 31/03/2000) (Petrol/ CNG / LPG)	3.0	3.0
4.	Bharat Stage –II compliant passenger cars / CNG buses / LPG (fitted with 3 way closed loop cat. Converters)	3.0	0.5

▪ **Norms For HC**

Sr. No	Type of Vehicle	Permissible HC limit (In PPM)
1.	2 Stroke 2 wheelers	6000
2.	4 Stroke 2 Wheelers	4500
3.	3 Wheelers	4500
4.	2 Wheelers & 3 Wheelers manufactured prior to 01/04/2000	9000
5.	Bharat Stage – II compliant motorcar fitted with 3-way cat. Converters	750
6.	Other motor cars	1500

ROAD MAP FOR IN-USE VEHICLES

- I & M for all categories of vehicles to be put by 01-04-2006.
- Performance checking for cat converters and conversion kits to be put in place by 01-04-2005.
- ♦ Augmentation of city public transport system to be completed by 01-04-2005.

ANNEXURE - IV

STEPS SO FAR TAKEN FOR CONTROLLING VEHICULAR POLLUTION

PUNE

EMISSION NORMS:

- ◆ 1st Norm implemented from 1990/91
- ◆ 2nd emission norms introduced in 1996.
- ◆ Norms for cat converter vehicles implemented from 1998
- ◆ India Stage-I (Euro-I equivalent) implemented from 2000.
- ◆ Bharat Stage-II implemented from 2004.

FUEL QUALITY:

- Low leaded petrol (0.15 g/l) + unleaded petrol introduced in 1995.
- Leaded Petrol phased out in 2000.
- Petrol with 5% Benzene introduced in 1996 & 3% from 2000.
- Diesel Sulfur 0.5% from 1996, 0.25% from 2000
- Low smoke 2-T oil introduced in 1998.
- Petrol with 1% Benzene & Diesel with 0.05% Sulphur introduced from April 2003 by BPCL.

Status of Actions Needed to Control the Air Pollution in Pune as Per EPCA Format

Sr. No.	Issue	Proposed action	Implementing Agency	Target date for completion of on going activity, and that of proposed activity and planned improvements	Status of ongoing activity
1-	VEHICULAR POLLUTION				
1	New Vehicles Roadmap for improving vehicle technology (Vehicle-category-wise: cars (diesel and petrol), two-wheelers, three wheelers, radium duty vehicles, heavy duty vehicles truck and buses any other)	The Current status Status of implementation of Bharat-II norms Proposed plan and deadline i. Introduction of Bharat-III norms ii. Introduction of Euro IV norms iii. Implementation of Bharat stage-II, norms for 2 and 3 Wheelers. iv. Introduction of emission warranty for vehicles.	MoRTH	1/04/03	Bharat Stage - II pollution norms has been implemented in Pune from 01.04.2003 for 4 wheeled vehicles with GVW equal to or less than 3500 Kgs..
2	Improvement in Fuel quality	Current status a. Reduction of sulphur content in diesel and petrol to 0.05% and	Petroleum Ministry	2004	Please see Annexure - IV

		<p>lower levels immediately</p> <p>b. Reduction in benzene content to 1% in petrol</p> <p>Proposed</p> <p>c. Plan for introduction of Euro III and Euro IV fuels</p>		<p>2005</p> <p>2005-2010</p>	
3	In-use				
i	Phasing out of old vehicles	<p>a. Phasing out of 15 year-old commercial vehicles.</p> <p>b. Plan to lower the age cap further</p>	PMT/RTO	2003-2004	<p>1. MoRTH has not issued the notification to phase out 15 yrs old commercial vehicles for Pune.</p> <p>2. Emission norms for CO & HC has been tightened from 01.10.2004 for in-used vehicle based on the year of manufacturing.</p> <p>3. The new procedure to measure PUC norms has been laid down from 01.10.2004.</p>
ii	Vehicle Inspection	<p>Level of compliance. How many vehicles come for inspection currently and failure rate for different categories of vehicles.</p> <p>Policy measures to ensure that all vehicles come for tests.</p> <p>Modifications in test procedures and standards and additional pollutants to be introduced for testing in all categories of vehicles planned.</p> <p>Institutional systems put in place or planned for rigorous auditing & inspection of these</p>	RTO		<p>50% of vehicles come for inspection. The failure rate is 5%.</p> <p>Striker inspection of in-use vehicle is carried out by inspecting officer.</p>

		centers. On road inspection of vehicles planned & periodicity & coverage.			
iii	Centralised inspection & maintenance system	a. Provide a phase-in plan of improved centralized inspection and maintenance programme to replace the current PUC system. Prioritize the vehicle segments like commercial vehicles that would be first brought under the advanced inspection system.	Transport Commissioner, Maharashtra State	01-04-2006	Vehicles are checked regularly for PUC certificates and if found exceeding the emission limits, the registration of such vehicle is suspended till satisfactory repairs are carried out. Penal compounding fees are also recovered from such defaulting vehicles. Grant of PUC Renewal certificate is considered only after observing satisfactory performance of the vehicle. Around 50% vehicle comes for inspection & approximately 05% is failure rate. Periodical & surprised check of PUC center by Dept. In Pune, there are 99 nos. of PUC centers for Petrol, 15 nos. for diesel & 53 nos. for petrol & diesel. In Pimpri Chinchawad, there are total 53 nos. of PUC centers.
iv	Bypassing transit traffic	Plans for the following: a. Restriction on plying of interstate/intercity buses in city b. Restriction of entry of non-destined commercial vehicles in city.	PMC & RTO		Restriction is put on goods Vehicle and passenger buses entering the city by PMC and Police Commissionerate.
v.	Proportioning of 2T oil for two stroke engines	a. Installation of premix oil dispensers for 2-stroke 2 and 3 wheelers b. Measurers to ban sale of loose 2 T oil	Petroleum Ministry / RTA		Continuous efforts

4	Adulteration of fuels	<p>a. Setting up of facility for independent fuel testing in the city</p> <p>b. Improvements planned for more effective monitoring of retail outlets, depots and tankers etc.</p> <p>c. Status of implementation of naphtha, kerosene and solvents control order. Propose how to make the implementation effective.</p> <p>d. Any plans for public broadcast of defaulting petrol pump</p> <p>e. Plans to make penalty more stringent to act as strong deterrent</p> <p>f. Rationalization of state taxes on imported kerosene and other solvents/fuels etc to narrow the price gap</p> <p>g. Any other measure like electronic marker system etc.</p>	<p>Petroleum Ministry/ F & C.S. Dept. Govt. of Maharashtra</p>		<p>Continuous efforts</p>
5.	Alternative fuels.				
i	Introduction of cleaner fuel(s) LPG/CNG	<p>Indicate the priority vehicles segments like three wheelers, small commercial vehicles, buses etc that would be targeted for phased introduction of alternative</p>	<p>Petroleum Ministry</p>		<ol style="list-style-type: none"> 1. In Pune city, there are 5 LPG outlets. 2. Pune RTO has authorized 80 LPG Retrofitters. 3. The No. of vehicles converted to LPG fuel are 3,576. 4. The only new A/R or old A/R converted into LPG fuel are accepted for replacement on permit in Pune city.

		<p>fuels. Give a schedule of implementation.</p> <p>Based on this plan estimate the demand for cleaner fuel over the time frame for implementation.</p> <p>Provide plan and schedule for setting up of infrastructure facility for dispensing and (compressing) of gas Number of stations with capacities planned. If feasibility plans are under preparation report its results and indicate a tight time frame for its completion.</p>	<p>Petroleum Ministry</p> <p>Petroleum Ministry</p>		<p>5. It is not yet made compulsory to convert into LPG fuel for any kinds of vehicle.</p>
ii	<p>Institutional plans for implementation of gaseous fuel programmes.</p>	<p>Provide the institutional plan for specially designed safety inspection programme for CNG and LPG vehicles and frequency of inspection.</p> <ul style="list-style-type: none"> • How capacity and skills will be created in the inspection centres for safety inspection? Independent auditing and supervision of these centre. • Authorization of conversion workshop 	<p>Transport Commissioner</p> <p>Govt. of Maharashtra</p> <p>Transport Commissioner</p>		<p>There are 5 LPG outlets in Pune of which two are operated by BPCL, Two by HPCL and One by IOCL. IOCL Pune is setting up one more auto LPG dispensing station and the work on it is in progress. Besides, IOCL has plans to set up three additional stations in Pune subject to availability of suitable sites with statutory approvals. HPCL also has similar plans to set up two more stations subject to above conditions. However, the actual implementation of the above planed LPG outlets would depend on the availability of the gas, suitable retail outlet sites and the demand for the auto LPG. At present there is no CNG outlet in Pune. Expected CNG will be available up to 2005.</p>

		<p>and Fitment of kits etc.</p> <ul style="list-style-type: none"> • Fiscal measures to encourage replacement of old vehicles with new vehicles on gaseous fuels. • Regulatory and fiscal approach to stop fitment of unauthorized conversions kits. • (PI note: Simple conversion of old diesel engines to gaseous fuels should not be allowed. Diesel vehicles should be replaced with new dedicated gaseous fuel vehicles). 			
iii	Enthanol blend petrol and bio fuel programme if any		Petroleum Ministry		----
6.	Traffic and transport management				
		Public transport Current status of public transport in terms of number of buses, load factor etc. and proposed plans to augment the fleet.	PMC,PCMC, PMT & PCMT RTO/MSRTC		<p>1. RTA has instructed PMT, PCMT to provide an efficient adequate, economical and properly co-coordinated bus service in Pune city, which will help to reduce the use of personalized vehicles.</p> <p>2. To reduce the congestion, in Pune city RTA, Pune has banned the operation of six seater totally from</p>

		<p>Plans to move public transport to run on clean fuels.</p> <p>Any other form of public transport planned: Metro, bus rapid transit or any other. Plan, scale and schedule of implementation.</p> <p>Transport Policy</p> <p>Formulation of transport policy to induce a modal shift from private to public modes of transport and implementation including fiscal measures.</p> <p>Formulation and implementation of parking policy</p> <p>Other measures to reduce traffic congestion: e.g. Planning and construction of by-pass roads</p> <p>Removal of encroachment on roads, promote non-motorized transport, pedestrianisation etc.</p>	<p>PMC, PCMC, RTA</p> <p>Traffic Police, PMC & PCMC</p> <p>Traffic Police, PMC & PCMC, MSRDC</p> <p>PMC, Police</p>	<p>01.01.2004.</p> <p>3. The action is being taken against the person violating the traffic rule consistently in Pune city.</p> <p>DPR has been prepared by Konkan Railway Corporation for proposed Sky-bus system for Pune city.</p> <p>PMC has no locus standing</p> <p>Parking policy has been prepared by PMC and the implementation will start only after the final approval of the General body.</p> <p>Planning and construction of by-pass roads is under the preview of MSRDC.</p> <p>This is a regular activity of PMC to remove encroachments.</p>
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		<p>Traffic signaling system</p> <p>Penalties for traffic rule violations</p> <p>Any other</p>	<p>Traffic Police, PMC Police & M.V. Dept.</p>		<p>Six corridors consisting of 38 signalized junctions are identified for the implementation of Area Traffic Control system (ATCS).</p> <p>PMC has no locus standing.</p>
7	Fiscal measures	<p>Fiscal measures to discourage use of older and polluting vehicles (E.g. Bangalore has imposed green tax on old vehicles etc.).</p> <p>Any other fiscal measure to control traffic congestion.</p>	<p>Govt. of Maharashtra / PMC/RTO</p>		<p>The state Govt. has to issue notification in this regard.</p>
8.	Industrial Pollution Control	<p>Installation of adequate pollution control measures in industries</p> <p>Feasibility of alternate cleaner fuels and implementation.</p> <p>Monitoring programmes of industries</p>	<p>MPCB</p>		<p>Adequate air pollution control equipments like dust collectors and scrubbers are provided by the industries.</p> <p>Activities are in progress.</p>
9.	Thermal Power Plant	<p>a. Use of washed / beneficiated coal for coal based TPP</p> <p>b. Installation of bag filter with ESP</p> <p>c. Schemes for utilization of fly ash</p>	<p>N.A.</p>		<p>There is no thermal power plant in Pune, PCMC and in the vicinity of both these municipal corporation areas. Therefore there are no emissions as a result of the absence of the power plants.</p>

		d. Identification of new sites for fly ash disposal and methods of utilization.			
10.	Strengthening of air quality monitoring network				
i		<p>Plants to strengthen the air quality monitoring. e.g.</p> <p>a. Plants to increase number of monitoring stations, improving frequency of monitoring etc</p> <p>b. Quality control of air quality data</p> <p>c. Monitoring of additional pollutants</p> <p>d. Installation of automatic monitoring stations.</p>	PMC & MPCB	DRAFT	<p>Presently Ambient Air Quality Monitoring is carried at two places in the city. (Viz. Phule Mandai & Karve Road)</p> <p>As per the CPCB norms.</p>
ii		<p>Plans to develop air pollution inventory for the city</p> <p>Indicate current efforts and new studies planned with tight deadline.</p>	PMC & MPCB		<p>Recently ARAI has initiated studies to formulate emission factors for in-use vehicles under the six cities project sponsored by Indian Oil Corporation. The vehicular emission load can be prepared only after the said norms are in place.</p>
iii		Plans to sponsor studies on health impact of air pollution in the city.	PMC & MPCB		<p>The PMC has set up air quality monitoring cell which proposes to undertake such studies in future. The modalities of the operation of AQM cell are being</p>

					finalized by PMC. There is no such proposal under consideration of PMC.
11.	Other sources of pollution		PMC & MPCB		
i.	Hospital incinerators		PMC & MPCB		The PMC has commissioned an incinerator for disposal of hospital waste generated from the PMC hospitals in 1997. Two more incinerators are set up by PMC to dispose of the hospital waste from the private hospitals on pay & use basis in the premises of Kailas crematorium. The biomedical waste thus generated is presently collected by Image India appointed by PMC and is subsequently incinerated. The central incineration facility set up by PMC with collection and disposal of biomedical waste by Image India has been started in December 2000 and is working well with 80 collection points across the city in two collecting vans. Currently 535 nursing homes with a bed capacity of 6834(422 are hospitals with a bed capacity of 5852), along with 12 pathological laboratories & 6 blood banks are registered with PMC under the pay & use scheme for incineration of biomedical hazardous waste. In addition, 5 private hospitals have the exclusive facility for disposing the bio-medical waste by incineration.
ii.	Generator sets	a. Plan to control numbers b. Monitoring the use of cleaner fuels c. Enforcement of emissions standards for generator sets.	PMC, PCMC & MPCB		There are about 120 D.G.sets established by the industries in Pune and Pimpri Chinchwad. The emissions from these sources are generated only when the D.G. sets are operated in case of power failure or load shedding. These are regulated under the existing legislation. Because of the power shortage experienced in this region, the shop keepers and households are using small generators to meet their power requirement. These are mostly Kerosene

					powered and hence are a non-point source of air emissions. The details on the number of small D.G.sets is not available nor are they regulated by the MPCB.
iii.	Biomass burning	Ban open burning of biomass and plan for effective control and finding alternative ways like composting etc	PMC & PCMC/MPCB		Open burning is banned by PMC. Citizens are sensitized by PMC to carry out vermi-composting in their housing societies, institutions and hospitals. Presently construction of vermicompost pits is mandatory in the newly constructed housing societies. The completion certificate is held up in case of noncompliance.
12.	Supervisory powers and coordination	Single nodal agency to supervise, monitor, and coordinate and report on the progress of implementation of the action plan when it is finalized.			A Task Force is formed on 2 nd June 2004 to draw an Action Plan for controlling air pollution in Pune. The agencies involved are Transport Dept, Public Sector Oil Companies, MPCB, PMC, PCMC, District Supply Office, MoRTH, and Ministry of Petroleum and Natural gas, Regional Transport offices, PMT. MPCB has been appointed as a Convener to prepare the action plan.
13	Plantations	Target and implementation plan for a. Tree plantation (to ensure high survival rate) b. Green area development – give targets	PMC / PCMC/MPCB/RTO/MIDC		----

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