Environmental Status Report
Amravati Municipal Corporation
(2019-2020)

Environmental Status Report

2019-2020

For

Amravati Municipal Corporation

पर्यावरण संवर्धन अधिकारी
महानगरपालिका, अमरावती

अमित र. डेंगरे
सिस्टीम मॅनेजर
(Amit Dengre)
System Manager
&
Nodal Officer(UOF)

Declaration:

We hereby declare that the Environmental Status Report of Amravati city is a record of a work carried out by Amravati Municipal Corporation which is based solely on the assessment of secondary data provided by various government departments within given time frame, ULBs (Urban Local Bodies), and observations recorded consultations and interviews with concerned officials. The references taken from various published and unpublished reports are appropriately cited in the report.

The maps generated and incorporated in the entire report, including sections on water and land is based on the data attributes for the sub-categories of the land use pattern as per Standard classification. The data source for the concentrations of air pollutants has been procured from MPCB (Maharashtra Pollution Control Board) unless stated otherwise.

Details of the same are provided as annexes at the chapter end for reference. The section extracts its fundamental theories from literature review based on published papers, government reports and so on. The same are detailed in the chapter as relevant.

Amravati Municipal Corporation

Amravati

ACKNOWLEDGEMENT

Environmental Status Report related to health, living standard, and environment of the citizens and the Town. According to the State Law **(ACT No. LIX of 1949)** As per clause 67(A) was inserted by Mah. 41 of 1994 of Maharashtra Municipal Corporation Act, it is mandatory to present the current environment Status Report to the General Body of Local Authority. & **Maharashtra Act No XL of 1965** (The Maharashtra Municipal Councils Nagar Panchyayat and Industrial Townships Act 1965) as per section 77 sub-section (1A) by Mah. 41 of 1994, s144 Council related 74th amendment in year 1992, have made preparation of ESR.

Amravati City is emerging as a well established city in Maharashtra and its demographic and economic growth is accelerating. Considering the present situation and future needs, the improvement in the existing infrastructure and addition of new facilities has become essential. The content of this ESR may be referred during the designing and implementing new development projects. The basic facilities provided in different wards indicate city serviceable capacity.

We sincerely express our gratitude and immense respect to **Hon'ble Shri Sanjay Nipane** Municipal Commissioner, AMC, Amravati. His guidance, directions, patience meticulous tasking and painstaking efforts helped us to wide a diverse mass of information and material into a cohesive and purposeful for completion of this work.

We thank the all concern department from Amravati Municipal Corporation who help us directly or indirectly for successful completion of this report, we also express our gratitude towards **Department of Environmental Science, Shri. Shivaji Science College, Amravati** for provide us the analysis report.

We acknowledge the help and co-operation of all those, whose names we may have inadvertently forgotten to mention here.

Amravati Municipal Corporation

Amravati

ABBRIVETIONS	FULL FORM
AAQM	Ambient Air Quality Monitoring
AMC	AMRAVATI MUNICPAL CORPORATION
BMTPC	Building Material and Promotion Council
BOT	Build, Operate and Transfer
BSNL	Bharat Sanchar Nigam Limited
Ca	Calcium
CBSE	Central Board for Secondary Education
CGWB	Central Ground Water Board
CIRT	Central Institute of Road Transport
CO	Carbon Monoxide
CPCB	The Central Public Health and Environmental Engineering Organization
Cr	Chromium
CSIR	Council for Scientific and Industrial Research
CWC	Central Water Commission
D.O.	Dissolved Oxygen
dB (A)	Decibel A- Waited
DEM	Digital elevation Model
DGCA	Directorate General of Civil Aviation
DP	Development Plan
DPSIR	Driving Force, Pressure, State, Impact, and Response
ESR	Environmental Status Report
ETP	Effluent Treatment Plant
F	Female
Fe	Iron
GPO	Government Post Office
GSDA	Groundwater Surveys & Development Agency
HIV	Human Immune Virus
ICSE	Council for the Indian School Certificate Examinations
IRC	Indian Road Congress
IRDP	Integrated Road Developmental Program
JnNRUM	Jawaharlal Nehru National Rural Urban Mission
K	Potassium
Km	Kilo meter
lpcd	Liters per Capita per Day
M	Male
M.S.R.T.C.	Maharashtra State Road Transport Corporation
MADC	Maharashtra Airport Development Company
MIDC	Maharashtra Industrial Development Corporation
MLD	Million Liter per Day
mm	Mile Meter
Mn	Magnesium
MoEF&CC	Ministry of Environment, Forest and Climate Change
MPCB	Maharashtra Pollution Control Board

MSW	Municipal Solid Waste
MT	Metric Tone
Na	Sodium
NATMO	National Atlas and Thematic Mapping Organization
NH	National Highway
^{o}C	Degree Celsius
P.A.	Phenolphthalein Alkalinity
PPP	Public- private partnership
PUC	Pollution Under Control
PWD	Public Works Department
RTO	Regional Transport Office
SC	Schedule Tribe
SoE	State of Environment
ST	Schedule Tribe
T.A.	Total Alkalinity
T.D.S.	Total Dissolved Solids
T.H.	Total Hardness
TP	Total Population
UHP	Urban Heath Post
UNCED	United Nations Conference on Environment and Development
WHO	World Health Organization
WTP	Wastewater Treatment Plant
Zn	Zinc

Chapter-5

5.1 Recommendation Policies

Financial Aspect

1) Improve municipal services standard on international level on the principal of pay & use.
2) Develop essential service on PPP basis & monitor costing aspect.
3) To provide garbage / debris or such inert material collection & transportation & its disposal facility on Pay& use basis.
4) Municipal standard services such as water purification & supply, super health facility shall develop on PPP basis & Municipal authority having power to price control.
5) Imposition of special sanitary tax on hawkers / market places & commercial establishment & effective cost recovery by adding special sanitation tax either in cess tax/ vat tax by amending concern law.
6) Develop performance base budgetary system & ULB is under obligation to publish its financial report in international profit & loss A/c.
7) Incentive to recycling industry.
8) Conduct necessary survey & measures to improve living standard of urban poor by providing health, educational & all other up social lifting scheme.

Public Participation

1. Public participation in information, education, communication, & awareness program.
2. Involvement of professional communicator
3. Hotline information
4. SWM coordinator
5. Strengthen area committee by delegating necessary power development policies at area level & pass expenses incurred thereon, By this way ULB will be unique democratic features having adequate power to maintain essential municipal services and power to collect expenses incurred on municipal services similarly municipal

5.2 Another Issue which is Important to Address to Improve Sustainability of the City

A sustainable community uses its resources to meet current needs while ensuring that adequate resources are available for future generations. It seeks improved public health and a better quality of life for all its residents by limiting waste, preventing pollution, maximizing conservation, promoting efficiency, and developing local resources to revitalize the local economy.

"Sustainable communities are defined as towns and cities that have taken steps to remain healthy over the long term. Sustainable communities have a strong sense of place. They have a vision that is embraced and actively promoted by all of the key sectors of society, including businesses, disadvantaged groups, environmentalists, civic associations, government agencies, and religious organizations. They are places that build on their assets and dare to be innovative. These communities value healthy ecosystems, use resources efficiently, and actively seek to retain and enhance a locally based economy. There is a pervasive volunteer spirit that is rewarded by concrete results. Partnerships between and among government, the business sector, and non-profit organizations are common. Public debate in these communities is engaging, inclusive, and constructive. Unlike traditional community development approaches, sustainability strategies emphasize: the whole community (instead of just disadvantaged neighborhoods); ecosystem protection; meaningful and broad-based citizen participation; and economic self-reliance." (Institute for Sustainable Communities: http://www.iscvt.org)

5.3 Restoration and Beautification of Lakes

Challenge

Aquatic ecosystems perform numerous valuable environmental functions such as recycling of nutrients, purify water, recharge ground water, augment and maintain stream flow, and provide habitat for wide variety of flora and fauna and recreation for people. Various anthropogenic activities alter the physical, chemical and biological processes within aquatic ecosystems. Restoration means returning an ecosystem to a close approximation of its condition prior to disturbance. This ensures that the ecosystem structure and function are recreated or restored, and that natural dynamic ecosystem

processes operate effectively again. The most widespread problems facing lakes is hydrologic and physical changes and siltation from catchment activities resulting in spatial decline. There are 2 lakes in AMC area. These lakes need restoration and beautification for maintenance of aquatic ecology and improving quality of environment.

Plan for Achievement

- Identifying sources of pollution of the lakes
- Restoring physical, chemical and biological integrity of lakes by controlling nonpoint source of pollution
- Development of plans for watershed restoration through collaboration among scientists, economists, managers, policy makers and local people;
- Restoration of all types of habitats with priority to the habitats of endangered species; and
- Beautification of lakes with involvement of private sector

5.4 Promotion of Use of Renewable Energy

Challenge

In the past century, it has been seen that the consumption of non-renewable sources of energy has caused more environmental damage than any other human activity. Electricity generated from fossil fuels such as coal and crude oil has led to high concentrations of harmful gases in the atmosphere. This has in turn led to many problems being faced today such as ozone depletion and global warming. Hence, alternative sources of energy have become very important and relevant to today's world. These sources, such as the sun and wind, can never be exhausted and therefore are called renewable. They cause less emission and are available locally. Their use can, to a large extent, reduce chemical, radioactive, and thermal pollution. They stand out as a viable source of clean and limitless energy. These are also known as non-conventional sources of energy. Most of the renewable sources of energy are fairly non-polluting and considered clean though biomass, a renewable source, is a major polluter indoors.

A host of fiscal incentives and facilities are available to both manufacturers and users of renewable energy systems, which include:

- 100% accelerated depreciation for tax purposes in the first year of the installation of projects/systems;
- No excise duty on manufacture of most of the finished products. Low import tariffs for capital equipment and most of the materials and components;
- Soft loans to manufacturers and users for commercial and near commercial technologies;
- Financial Incentives/Subsidies for devices with high initial cost;
- Encouragement to NGOs and small entrepreneurs; and
- Allotment of land on long term basis at token lease rent and supply of garbage free of cost at project site by State Governments, in respect of projects on energy recovery from municipal waste.

Plan for Achievement

- Conducting energy audit of AMC buildings/plants;
- Installation of solar water heaters for government buildings;
- Installation of photovoltaic systems for garden and street lighting;
- Replacement of incandescent lamps with LED in government buildings/street lights;

5.5 Strategy for Improving Public Transport

Considering the poor patronage of public transport and consequent alarming growth of 2 –wheelers calls for intervention from planning and Government authorities. Pro-active policies from government are required to encourage the public transport.

AMC should aim at following realistic targets for achieving proper share for Public transport:

- In short term (within a year) AMC should target around 25000 to 30000 thousand passengers/ day with a fleet size of 50 to 60 buses.

- In medium term (with 2 to 3 years) AMC should target around 1.0 lakh passengers /day with a fleet size of total 100 buses.
- Traffic & Transportation survey should be done and a Master Plan should be prepared for 10 to 15 years to incorporate systematic Traffic & Transportation Management practices in future.
- The following steps should be taken to improve the Public transport:
- Bus stops should be provided every 450m to 500m.
- Access to all bus stops should be improved.
- Feeder service (such as auto) should be encouraged to Bus stands.
- Frequency of the buses should be increased from current 15 min to 5-10 min
- There are no proper bus stops at present. Construction of new bus stops/ improvement of existing bus stops should be planned with proper signage and information display. Public –private partnership (PPP) model can be considered for adoption.
- Transport authority should issue a timetable and public awareness campaign should be carried out. Transport Authority should handle services professionally with a motto of serving the people. There should be public relationship officer who is available to clarify / alleviate the public transport related issues.
- Public transport bus should target the education trips by introducing monthly concessional passes at 50% of the cost, although monthly passes are being served to the students. This is a first step, which is expected to increase the modal share in favour of bus. New routes should be planned to cater to educational trips.
- For other category of commuters, some form of monthly passes should be introduced with 10% -25% of discount.
- The coverage of bus service (<40%) should be improved and more bus routes needs to be planned.
- New bus terminals should be planned and constructed.

- Private vehicles should be discouraged by imposing pollution levy and higher registration fees. Restrictions and heavy penalties should be imposed for unauthorized on-street parking. Off –street parking should be made costly and no subsidies should be given. Off –street parking facilities should be self –sustaining. These measures should only be carried once ensuring adequate supply of public transport with good level of service and frequency.
- For safety of pedestrians, separate foot ways/ footpath should be provided along the carriageway of urban street. As per IRC, the recommended minimum width is 1.5m. The width of the footpath depends upon the pedestrian flows. However research in Mumbai suggests footpath width should be minimum 2.5m for effective usage.
- Cyclists create conflict with fast moving vehicles at narrow streets, congested areas, intersections etc. The result is that the cyclist is involved in a number of accidents. So, to improve the safety and mobility, segregation of traffic is needed. However with ever – increasing demand for road space, this may not be feasible to allocate dedicated lane to cyclists. However AMC can consider a pilot project and results can be evaluated. The minimum width of a cycle track shall be two lanes.

5.6 Recommendations for Traffic and Transportation

One of the recommendations of the Regional Plan is to immediately undertake detailed studies and prepare a traffic and transportation plan for the Amravati City. The following broad policies need to be incorporated:

- Where pedestrian traffic is heavy, it should be segregated by developing pedestrainization scheme and pedestrian segregation facilities.
- Entry to the mechanized vehicle should be controlled progressively in the central part of the city where the pedestrian and cycle traffic is very heavy, deserving priority.

- Parking spaces should be developed for bringing control on motorized vehicles in the central parts of the city and making the full capacity of existing road network for traffic movements.
- The through (fast) traffic and the local traffic on highways should be segregated by developing a system of service roads along the highways or by diverting the highways along the ring road of the city.
- With a view to providing a cheap mode of transport an alternative system for the cyclists and users of other modes and to reduce congestion on the arterial roads, the mass transportation services should be augmented substantially by developing higher capacity mass transportation of buses and railway and creating infrastructure for the purpose.
- Movement of goods vehicles should be controlled by providing necessary infrastructural facilities for goods transport, such as truck terminals, parking and repairs facilities.
- For reducing the traffic congestion hawkers and other road encroachers shall have to be moved to outer areas and main traffic roads will have to be made shopping free roads. Parking of vehicles will be insisted within the compounds of the premises.

Awareness Campaigns

Various events were organized by the Regional Transport Office (RTO) to create awareness among the citizens of Amravati city about the various rules & regulations about the road safety. The main highlights of these events are summarized below:

- Photo Exhibition was organized
- Awareness through display of banners
- Distribution of Handbills of Traffic Rules
- Eye checkup camp arranged for drivers on National Highway No. 6 near toll naka
- School Children and other residents were given information about traffic Rules
- Helmet checking expedition done for Two Wheelers vehicles
- Reflectors were distributed to the hand carts, bullock carts & tractor trailors

- At the Irwin Square PUC checking camp were held free of cost with the cooperation of PUC Centers and Certificates were issued.

Action Points for Environmental Conservation

- Launch extensive awareness drive against polluting vehicles, Immediate
- Ensure Strict Action against visibly polluting vehicles;
- Take steps to prevent parking of vehicles in the non-designated areas;
- Introduce early alarm system for benefit of commuters related to traffic congestion on major routes for route diversion;
- Consider introducing plan for Flexi/staggered timings to minimize peak movement of vehicles on the road
- Take steps for retrofitting of diesel vehicles with Particulate Filters;
- De-congest pathways;
- Synchronize traffic movements / Introduce intelligent traffic systems for lane-driving;
- Install vapor recovery system in fueling stations
- Take steps for installation of remote sensor based PUC system etc.;
- Formulate action plan for controlling decongestion of fuel stations including increasing number of dispensing machines;
- Prepare action plan to check fuel adulteration and random monitoring of fuel quality data;
- Prepare action plan for public transport on CNG mode;
- Undertake road widening and improvement of infrastructure for decongestion of road
- Promote battery operated vehicles
- Take steps to expedite early completion of Western and Eastern Peripheral expressway and submit completion schedule