



Urban Air Quality in Ethiopia: Guidance framework

Other pollution sources



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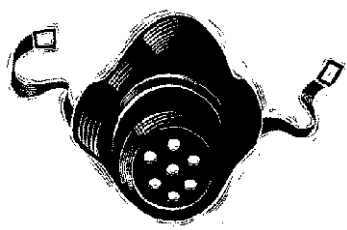
**Centre for Science and
Environment**

Workshop on Guidance
Framework for Air Quality
Management in Ethiopia:

Ministry of Environment
and Forests and Climate
Change with
Centre for Science and
Environment, India and
UNEP

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Action on other sources



Reduce emissions from vehicles

Leapfrog emissions standards

Reinvent mobility – link with urban planning and design

Reduce emissions from power plants (Not applicable)

Tighter control on coal based power plants

Set new standards for NOx and air toxics; reuse flyash

Shift to natural gas for power

Reduce emissions from air polluting industry

Review industrial emissions and control measures; industrial fuel

Reduce emissions from generator sets

Tighter emission standards for generator sets

Siting and acoustic measures for big gen sets

Energy efficiency measures to reduce electricity demand

Action on open burning

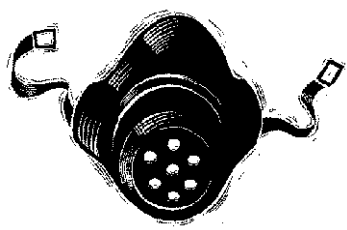
Adopt strong waste management practices. Monitor and awareness

Provide clean fuel for household cooking; reduce wood burning

Road dust and construction activities

Adopt dust control measures for construction industry, roads, and traffic

City based and regional plans



Control pollution from industrial areas



There are industrial hubs around Addis Ababa and in the state that are air polluting. These include cement, electroplating, petro-chemical, fertilisers.

Emissions standards for industry has been notified

Next steps

Regulate siting of polluting industry – away from densely populated areas

Adopt inspection, monitoring and compliance mechanism

Introduce stack monitoring –industry should also be made liable to monitor and report data to the government . At a later date continuous emissions monitoring system can be introduced

Strengthen environment impact assessment procedures and implementation



Power deficit and generator sets



The key elements of emissions regulation for generator sets are as follow:

The mandatory diesel genset norms for acoustic enclosures and stack height cell phone towers and other captive users needs to be monitored closely
Generator-set standards for commercial operations to be improved.

Implement stricter standards

Inventorize diesel gensets in commercial areas and lay down stringent rules for their acoustic and emission compliance (stack height)

Devise mechanisms for effective regulations of the informal market (meeting with Market Traders Associations)

Devise energy-efficiency measures in buildings to reduce overall demand for electricity

Regulate location of big diesel gensets to reduce exposure

Energy efficiency measures for buildings

Diesel gensets should be substituted by renewables for high-end users, such as mobile towers.



Control open burning



An outright ban/absolute curb on open burning anywhere within the city limits.

Development and implementation of clear composting rules and decentralized strategies for organic waste. Composting of organic waste should be promoted as a disposal mechanism instead of incineration.

Segregation of waste at the source.

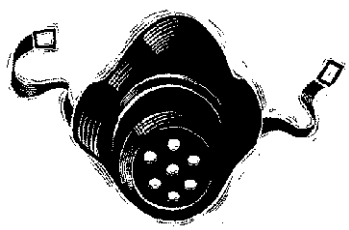
Universal coverage of an efficient waste collection and disposal mechanism ideally delegated to the local neighbourhood level. Timely and regular collection of waste will also mitigate health and sanitation issues.

Prepare strategies to stop open burning of both horticultural and municipal waste.

Urgent measures to increase public awareness on the issue.

Building awareness campaign through residential societies, ecology and environment clubs and urban local bodies. Delegation of responsibilities to local organizations which are directly affected.

Addressing the availability of cleaner fuels such as LPG or PNG, for domestic and commercial use. Facilitating transition from highly polluting biomass burning for cooking.



Control dust from construction and demolition and road dust



Formally adopting dust-control regulations and techniques

Road dust: Developing and implementing street-design guidelines for footpaths and cycle tracks with adequate vegetative barriers.

Construction and demolition: Special procedure for demolition activities, dismantling should be preferred over demolition.

Using water-sprinkling and other dust-suppressing techniques to stabilise surfaces and loose soil during and after construction activities.

Tighter dust control measures to be adopted for ready-mix concrete batching.

Making it obligatory for developers to provide evidence of proper covered storage and disposal of debris from construction and demolition activities on site and ultimately at designated disposal sites.

Transportation of building material and debris should be done via covered vehicles to avoid fugitive dust immersions. All building materials and debris should be adequately watered to cut dust while transportation.

Promoting on-site recycling of C&D waste for large building and infrastructure projects.

Setting up proper disposal sites for C&D waste and decentralized recycling facilities for small projects.



Control pollution from solid fuel in households



Indoor air pollution also contributes to outdoor air pollution -- In India the share is as high as 25%

-- Make clean energy available to all

-- Need fiscal strategy to help poor households to move up the energy ladder



Set up institutional process for clean air action



Prepare pollution-source-wise action plan with time line

Develop indicators to assess if all cross sector action are delivering on clean air and energy efficiency

List action with time line and attribute it to the ministry/department responsible for implementation

Harmonise action across departments

Set up inter-departmental task force to monitor implementation

Take stock periodically to further refine and upgrade the plan.

Adopt strong legal framework for implementation and compliance



Thank You