

Air Quality Policies

This document is based on research that UNEP conducted in 2015, in response to Resolution 7 of the UNEA 1. It describes country-level policies that impact air quality. Triple question marks (???) indicate that information for the section couldn't be found.

Please review the information, and provide feedback. A Word version of the template can be provided upon request. Corrections and comments can be emailed to Vered.Ehsani@unep.org and George.Mwaniki@unep.org.

INDIA		
GOALS	CURRENT STATUS	CURRENT / PLANNED POLICIES & PROGRAMMES
GENERAL OVERVIEW	<ul style="list-style-type: none"> ● Overall situation with respect to air quality in the country, including key air quality challenges: air pollution a serious issue, with most cities violating PM10 targets; main sources are fuel wood and biomass burning (a significant contributor to Asian brown cloud), fuel adulteration, vehicle emissions, large scale crop residue burning ● Some improvements have been made: between 1995 and 2008, average nationwide levels of major air pollutants have dropped by 25 – 45%, but some cities show more improvement than others ● Air pollution regulations are associated with these improvements; their success is linked with high demand by citizens for better air quality, indicating that strong public support allows environmental regulations to succeed even in weak institutional settings ● Even still, PM in 180 cities was 6x WHO standards, and many industries pollute with impunity; While regulations have become stronger, implementing and enforcing them remains a challenge 	<ul style="list-style-type: none"> ● National Ambient air quality standards: PM10, PM2.5 and SO2 meet WHO Interim Targets. Ozone and NO2 meet WHO standards ● National Air Quality Policy: Air (Prevention and Control of Pollution) Act (1981) ● Air Quality legislation / programmes: Yes http://envfor.nic.in/division/air-pollution ● Other: India's Prime Minister Narendra Modi indicated that his primary concern is economic development, not controlling pollution. A committee was asked to review the country's five major environmental laws in order to streamline environmental clearance processes that are seen as thwarting growth (http://news.uchicago.edu/article/2014/10/14/addressing-india-s-air-quality-health-and-climate-requires-public-action-study-fi)

	<ul style="list-style-type: none"> ● Air quality monitoring system: Yes 	
REDUCE EMISSIONS FROM INDUSTRIES	<ul style="list-style-type: none"> ● Industries that have the potential to impact air quality: petroleum refining, chemicals, textiles, steel, cement, mining, basic metal industries, non-metallic mineral products ● Average annual SO_x and NO_x emission levels and violations in industrial areas were significantly lower than in residential areas ● GDP of country: \$2.3 trillion ● Industries' share of GDP: 26% ● Electricity sources: Coal (59%), Hydro (17%), Renewables - wind, bagasse, solar, biomass, waste to power, water mills (12%), Natural gas (9%), Nuclear (2%) 	<ul style="list-style-type: none"> ● Emission regulations for industries: Yes ● Small installation's emissions regulated: (Yes/No) ??? ● Renewable energy investment promoted: Yes. Feed-in tariffs; Tax holiday under domestic income tax law (expired March 2014 – renewed???); exemptions from customs and excise duties; state-level tax exemptions; Indian Renewable Energy Development Agency to promote and finance renewable energy projects; accelerated depreciation can be claimed; national and state programmes to promote solar projects; and more ● Energy efficiency incentives: incentives to purchase energy efficient equipment ● Incentives for clean production and installation of pollution prevention technologies: Yes. There are four regional cleaner production centres to create awareness, provide training etc. Credit-linked capital subsidy scheme for technology upgrades of small scale industries ● Actions to ensure compliance with regulations: (monitoring, enforcement, fines etc) ??? ● Other actions at national, sub-national and / or local level to reduce industry emissions: Finance Act 2015 provides incentives for manufacturing facilities to be set up in rural areas of some states
REDUCE EMISSIONS FROM TRANSPORT	<ul style="list-style-type: none"> ● Key transport-related air quality challenges: rapid growth; a number of older vehicles still in use without catalytic converters; some taxis and auto-rickshaws use adulterated fuel (differential taxes encourage this) 	<ul style="list-style-type: none"> ● Vehicle emission limit: Euro 3 (Euro 4 in 11 major cities) ● Fuel Sulphur content: 350 ppm (50 ppm in 11 major cities) ● Restriction on used car importation: Banned ● Actions to expand, improve and promote public transport and mass transit: A few cities have bus rapid transit systems, metro rail and/or monorail, and others are under construction / planning. Ministry of Road Transport and Highways has introduced a scheme for strengthening public transport systems by providing financial assistance for latest technologies and for preparing a state-level mobility plan ● Actions to promote non-motorized transport: (ex: include sidewalks and bike lanes in new road projects, car-free areas etc) ??? ● Other transport-related actions: Incentives for production or purchase of green vehicles, such as the electric vehicle incentive program (“Faster Adoption and Manufacturing of Electric vehicles”) which will offer variety of incentives for buyers, including subsidies

<p>REDUCE EMISSIONS FROM OPEN BURNING OF AGRICULTURAL / MUNICIPAL WASTE (OUTDOOR)</p>	<ul style="list-style-type: none"> ● Outdoor, open burning: common way to handle waste (almost 30% of Delhi air pollution from burning of garbage, leaves, plastic); Despite ban, open burning continues ● India one of worst offenders for trash burned by individual residents 	<ul style="list-style-type: none"> ● Legal framework: National Green Tribunal has recently directed corporations, authorities and state governments to ensure garbage not burned openly; Cities are not complying with the Municipal Solid Waste (Management & Handling) Rules 2000 ● Actions to prevent open burning of municipal waste and / or agricultural waste: ???
<p>REDUCE EMISSIONS FROM OPEN BURNING OF BIOMASS (INDOOR)</p>	<ul style="list-style-type: none"> ● Dominant fuels used for cooking and space heating: 82% households use solid fuels - fuelwood, agricultural waste and biomass cakes (mix of grass, wood, leaves and livestock dung – produces numerous pollutants at concentrations 5 times higher than coal) ● Increasing use of LPG as domestic fuel ● Impact: 488,200 deaths/year from indoor pollution (119,900 from outdoor air pollution) 	<ul style="list-style-type: none"> ● Indoor air pollution regulated: No ● Promotion of non-grid / grid electrification: Yes ● Promotion of cleaner cooking fuels and clean cook stoves: ??? ● Other actions to reduce indoor biomass burning, or to reduce its emissions: ???

Secondary Sources used in the research: https://en.wikipedia.org/wiki/Air_pollution_in_India, https://en.wikipedia.org/wiki/Air_pollution_in_India#Fuel_wood_and_biomass_burning, <http://news.uchicago.edu/article/2014/10/14/addressing-india-s-air-quality-health-and-climate-requires-public-action-study-fi>, http://www.nytimes.com/2014/02/14/opinion/indias-air-pollution-emergency.html?_r=0, <http://www.dcmsme.gov.in/ssiindia/performance.htm>, <http://msme.gov.in/mob/home.aspx>, https://en.wikipedia.org/wiki/Electricity_sector_in_India, <http://smallb.sidbi.in/%20/environment%20/clean-production>, <http://economictimes.indiatimes.com/news/economy/finance/tax-incentives-for-manufacturing-units-in-rural-bihar/articleshow/48544284.cms>, <http://www.msmediagra.gov.in/writereaddata/clcssdetails08.pdf>, <http://cdf.ifmr.ac.in/?working-paper=a-review-of-implementation-gaps-in-the-enforcement-of-environmental-regulation-in-india>, <http://evobsession.com/india-unveils-electric-car-incentives-program/>, http://morth.nic.in/writereaddata/linkimages/Public_transport_scheme2333491876-1208253756.pdf, <http://india.gov.in/official-website-ministry-road-transport-and-highways>, <http://indianexpress.com/article/cities/delhi/ngt-order-fines-slapped-for-burning-waste-in-the-open/>, http://zeenews.india.com/news/videos/special/aib-despite-ngt-ban-open-burning-of-waste-continuous-in-delhi_1612819.html, <http://www.theguardian.com/connect4climate-partner-zone/tackling-india-waste-crisis>, <http://latincorrespondent.com/brazil/brazil-mexico-major-offenders-trash-burning-global-pollution/>, Greenstone, Michael, and Rema Hanna. 2014. "Environmental Regulations, Air and Water Pollution, and Infant Mortality in India." *American Economic Review*, 104(10): 3038-72. (<http://www.nber.org/papers/w17210.pdf>)