

## 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](mailto:Vered.Ehsani@unep.org) and [George.Mwaniki@unep.org](mailto:George.Mwaniki@unep.org).

<b>NEPAL</b>		
<b>GOALS</b>	<b>CURRENT STATUS</b>	<b>CURRENT / PLANNED POLICIES &amp; PROGRAMMES</b>
GENERAL OVERVIEW	<ul style="list-style-type: none"> <li>● <b>Overall situation with respect to air quality in the country, including key air quality challenges:</b> in urban areas, particulate matter is the main pollutant of concern; PM10 exceeds WHO guidelines by as much as 72 times; in Kathmandu Valley, high levels of pollutants, especially PM, from brick kilns, domestic fuel burning, vehicles and road dust, mobile sources being the most significant</li> <li>● Nepal ranked 177<sup>th</sup> out of 178 for air quality in 2014 Environmental Performance Index</li> <li>● Air quality data reported on government website <a href="http://www.most.gov.np/pollution/pollution.php">http://www.most.gov.np/pollution/pollution.php</a></li> <li>● <b>Air quality monitoring system:</b> there are several monitoring stations in Kathmandu Valley, but they aren't working</li> </ul>	<ul style="list-style-type: none"> <li>● <b>National Ambient air quality standards:</b> meet WHO Interim Targets, except NO2 (meets WHO standards); there are no standards for PM2.5 or for annual PM10</li> <li>● <b>National Air Quality Policy:</b> No</li> <li>● <b>Air Quality legislation / programmes:</b> No specific law to address air pollution; Environment Protection Act (1997) and Environment Protection Rules (1999) are umbrella legislation</li> <li>● <b>Other:</b> Ministry of Environment, Science and Technology established to prohibit use of any matter, fuel, equipment etc that has adverse impacts on environment; several agencies have responsibilities relating to air pollution, but there is a lack of coordination in enforcement</li> </ul>
REDUCE EMISSIONS FROM INDUSTRIES	<ul style="list-style-type: none"> <li>● <b>Industries that have the potential to impact air quality:</b> metal manufacture; construction; brick kilns, which are the heaviest polluting of all the industries - areas with brick kilns have three times more pollution than areas without; use of diesel generators</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Emission regulations for industries:</b> Yes; there are Standard for Emission from Industrial Boilers, Standard for Emission from Cement and Crusher Industries, Standard for Emission from Diesel Generators, and Standard for Emission from Brick Kilns</li> <li>● <b>Small installation's emissions regulated:</b> (Yes/No) ???</li> <li>● <b>Renewable energy investment promoted:</b> Yes – Renewable Energy Subsidy Policy 2000 grants</li> </ul>

	<ul style="list-style-type: none"> <li>● Many of industries are located in Kathmandu Valley, especially construction and brick kilns</li> <li>● Tourism has an indirect impact on air quality through cooking with wood (which has contributed to deforestation), agricultural residues and animal waste</li> <li>● <b>GDP of country:</b> \$67 billion (includes remittances from non-resident Nepalis)</li> <li>● <b>Industries' share of GDP:</b> 20%</li> <li>● <b>Electricity sources:</b> hydro provides majority but during dry season, power sharing means many facilities use diesel generators</li> </ul>	<p>subsidies for solar, hydro, biogas investments</p> <ul style="list-style-type: none"> <li>● <b>Energy efficiency incentives:</b> Industrial Energy Management Project (started 1994) conducted energy audits of industrial boilers and equipment, and hotel lighting, and established Office of Energy Efficiency Services – 2/3 of industries audited invested in improving energy efficiency</li> <li>● <b>Incentives for clean production and installation of pollution prevention technologies:</b> ban of old brick kiln technology within Kathmandu Valley, and introduction of the cleaner Vertical shaft Brick Kiln technology which provides energy cost savings, better quality and less pollution; Industrial Enterprises Act grants 50% reduction in taxable income for companies that invest in industry process / equipment that controls pollution for 3 years</li> <li>● <b>Actions to ensure compliance with regulations:</b> (monitoring, enforcement, fines etc) ???</li> <li>● <b>Other actions at national, sub-national and / or local level to reduce industry emissions:</b> closure of Himal Cement Plant (was the largest source of air pollution in Kathmandu)</li> </ul>
<p>REDUCE EMISSIONS FROM TRANSPORT</p>	<ul style="list-style-type: none"> <li>● <b>Key transport-related air quality challenges:</b> increasing numbers of vehicles, causing congestion on narrow roads; old, poorly maintained vehicles; fuel adulteration; 63% of vehicles are two-wheelers</li> <li>● More than half of registered vehicles are in Kathmandu Valley</li> <li>● Public transport vehicles privately owned, and often break traffic laws with impunity; system of mini-buses and 3-wheelers can't address the urban mass transit needs</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Vehicle emission limit:</b> Euro 3, although pre-Euro vehicles are still being used</li> <li>● <b>Fuel Sulphur content:</b> 350 ppm (imported from India)</li> <li>● <b>Restriction on used car importation:</b> vehicles older than 5 years are banned</li> <li>● <b>Actions to expand, improve and promote public transport and mass transit:</b> Asian Development Bank project to revamp public transport in Kathmandu</li> <li>● <b>Actions to promote non-motorized transport:</b> (ex: include sidewalks and bike lanes in new road projects, car-free areas etc) ???</li> <li>● <b>Other transport-related actions:</b> Electric vehicles promoted, especially for public transport; electric 3-wheelers are common in Kathmandu, and there are a number of charging stations; no tax on electric vehicle parts that are imported, however electric vehicles still have high operating costs compared to petrol and LPG 3-wheelers; In Kathmandu Valley, 3-wheeled diesel vehicles, vehicles more than 20 years old and 2-stroke engines were banned in 1999, but not implemented; ban on registration of new 2-stroke engine vehicles was implemented in Kathmandu</li> </ul>
<p>REDUCE EMISSIONS FROM OPEN BURNING OF AGRICULTURAL / MUNICIPAL</p>	<ul style="list-style-type: none"> <li>● <b>Outdoor, open burning:</b> waste burning is common, as is rice-straw burning</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Legal framework:</b> (ex: is burning banned?) ???</li> <li>● <b>Actions to prevent open burning of municipal waste and / or agricultural waste:</b> ???</li> </ul>

WASTE (OUTDOOR)		
REDUCE EMISSIONS FROM OPEN BURNING OF BIOMASS (INDOOR)	<ul style="list-style-type: none"> <li>● <b>Dominant fuels used for cooking and space heating:</b> 81% use solid fuel, mainly wood (which has contributed to deforestation as well as indoor air pollution), agricultural residues and animal waste; in urban areas, cooking gas is more commonly used</li> <li>● <b>Impact:</b> 8,700 deaths/year from indoor air pollution (800 from outdoor air pollution)</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Indoor air pollution regulated:</b> Yes – National Indoor Air Quality Standard and Implementation Guidelines 2009</li> <li>● <b>Promotion of non-grid / grid electrification:</b> National Rural Electrification Programme</li> <li>● <b>Promotion of cleaner cooking fuels and clean cook stoves:</b> Clean stove program headed by Alternative Energy Promotion Center, a government body under the Ministry of Environment, Science and Technology</li> <li>● <b>Other actions to reduce indoor biomass burning, or to reduce its emissions:</b> ???</li> </ul>

**Secondary Sources used in the research:** *Country Synthesis Report on Urban Air Quality Management: Nepal*. Asian Development Bank and the Clean Air Initiative for Asian Cities, 2006., [https://en.wikipedia.org/wiki/Economy\\_of\\_Nepal](https://en.wikipedia.org/wiki/Economy_of_Nepal), <http://www.theguardian.com/cities/2014/mar/21/air-pollution-kathmandu-nepal-liveable-smog-paris>, <http://www.indexmundi.com/facts/nepal/electricity-production-from-hydroelectric-sources>, <http://www.economist.com/blogs/banyan/2012/08/public-transport-nepal>, <http://nepalitimes.com/article/nation/political-will-for-public-transport-needed,1876>, <http://www.hhrjournal.org/2013/12/10/a-rights-based-approach-to-indoor-air-pollution/>, [http://moste.gov.np/legal\\_documents/Regulation#.Vd3LapfD-mM](http://moste.gov.np/legal_documents/Regulation#.Vd3LapfD-mM), *Situation Analysis of Environmental Health in Nepal 2009*, WHO and Nepal Health Research Council. <http://airlex.web.ua.pt/pm10>, [http://www.who.int/quantifying\\_ehimpacts/national/countryprofile/nepal.pdf?ua=1](http://www.who.int/quantifying_ehimpacts/national/countryprofile/nepal.pdf?ua=1), [http://www.unep.org/Transport/New/PCFV/pdf/Maps\\_Matrices/AP/matrix/AP\\_Matrix\\_June2015.pdf](http://www.unep.org/Transport/New/PCFV/pdf/Maps_Matrices/AP/matrix/AP_Matrix_June2015.pdf), [https://energypedia.info/wiki/Nepal\\_Energy\\_Situation](https://energypedia.info/wiki/Nepal_Energy_Situation), <http://www.reegle.info/countries/nepal-energy-profile/NP>, [http://cleanairasia.org/wp-content/uploads/portal/files/agenda/meeting\\_report\\_of\\_consultation\\_for\\_joint\\_forum\\_and\\_5th\\_govt\\_meeting\\_feb2015.pdf](http://cleanairasia.org/wp-content/uploads/portal/files/agenda/meeting_report_of_consultation_for_joint_forum_and_5th_govt_meeting_feb2015.pdf)