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.

NEPAL		
GOALS	**CURRENT STATUS**	**CURRENT / PLANNED POLICIES & PROGRAMMES**
GENERAL OVERVIEW	• **Overall situation with respect to air quality in the country, including key air quality challenges**: 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 • Nepal ranked 177th out of 178 for air quality in 2014 Environmental Performance Index • Air quality data reported on government website http://www.most.gov.np/pollution/pollution.php • **Air quality monitoring system**: there are several monitoring stations in Kathmandu Valley, but they aren't working	• **National Ambient air quality standards**: meet WHO Interim Targets, except NO2 (meets WHO standards); there are no standards for PM2.5 or for annual PM10 • **National Air Quality Policy**: No • **Air Quality legislation / programmes**: No specific law to address air pollution; Environment Protection Act (1997) and Environment Protection Rules (1999) are umbrella legislation • **Other**: 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
REDUCE EMISSIONS FROM INDUSTRIES	• **Industries that have the potential to impact air quality**: 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	• **Emission regulations for industries**: 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 • **Small installation's emissions regulated**: (Yes/No) ??? • **Renewable energy investment promoted**: Yes – Renewable Energy Subsidy Policy 2000 grants

	• Many of industries are located in Kathmandu Valley, especially construction and brick kilns • Tourism has an indirect impact on air quality through cooking with wood (which has contributed to deforestation), agricultural residues and animal waste • **GDP of country**: $67 billion (includes remittances from non-resident Nepalis) • **Industries' share of GDP**: 20% • **Electricity sources**: hydro provides majority but during dry season, power sharing means many facilities use diesel generators	subsidies for solar, hydro, biogas investments • **Energy efficiency incentives:** 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 • **Incentives for clean production and installation of pollution prevention technologies**: 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 • **Actions to ensure compliance with regulations:** (monitoring, enforcement, fines etc) ??? • **Other actions at national, sub-national and / or local level to reduce industry emissions**: closure of Himal Cement Plant (was the largest source of air pollution in Kathmandu)
REDUCE EMISSIONS FROM TRANSPORT	• **Key transport-related air quality challenges**: increasing numbers of vehicles, causing congestion on narrow roads; old, poorly maintained vehicles; fuel adulteration; 63% of vehicles are two-wheelers • More than half of registered vehicles are in Kathmandu Valley • 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	• **Vehicle emission limit**: Euro 3, although pre-Euro vehicles are still being used • **Fuel Sulphur content**: 350 ppm (imported from India) • **Restriction on used car importation**: vehicles older than 5 years are banned • **Actions to expand, improve and promote public transport and mass transit**: Asian Development Bank project to revamp public transport in Kathmandu • **Actions to promote non-motorized transport**: (ex: include sidewalks and bike lanes in new road projects, car-free areas etc) ??? • **Other transport-related actions**: 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
REDUCE EMISSIONS FROM OPEN BURNING OF AGRICULTURAL / MUNICIPAL	• **Outdoor, open burning**: waste burning is common, as is rice-straw burning	• **Legal framework**: (ex: is burning banned?) ??? • **Actions to prevent open burning of municipal waste and / or agricultural waste**: ???

WASTE (OUTDOOR)		
REDUCE EMISSIONS FROM OPEN BURNING OF BIOMASS (INDOOR)	• **Dominant fuels used for cooking and space heating**: 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 • **Impact**: 8,700 deaths/year from indoor air pollution (800 from outdoor air pollution)	• **Indoor air pollution regulated**: Yes – National Indoor Air Quality Standard and Implementation Guidelines 2009 • **Promotion of non-grid / grid electrification**: National Rural Electrification Programme • **Promotion of cleaner cooking fuels and clean cook stoves**: Clean stove program headed by Alternative Energy Promotion Center, a government body under the Ministry of Environment, Science and Technology • **Other actions to reduce indoor biomass burning, or to reduce its emissions**: ???

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, 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, *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.unep.org/Transport/New/PCFV/pdf/Maps_Matrices/AP/matrix/AP_Matrix_June2015.pdf, 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