

Ethiopia 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.

Ethiopia Air Quality Policy Matrix		
Goals	Status	Current Policies & Programmes
GENERAL OVERVIEW	<p>Overall situation with respect to air quality in the country, including key air quality challenges: ???</p> <p>Air quality monitoring system: ???</p>	<p>National Ambient air quality standards: ???</p> <p>National Air Quality Policy: ???</p> <p>Air Quality legislation / programmes: ???</p> <p>Other: ???</p>
REDUCE EMISSIONS FROM INDUSTRIES	<p>Industries that have the potential to impact air quality:</p> <ul style="list-style-type: none"> • Food processing, beverages, textiles, leather, chemicals, metals processing, cement manufacturing are the dominant source of industrial emissions in Ethiopia • Most industrial emissions are associated with combustion facilities within the industries, e.g. boilers and standby power generators. <p>GDP of country: USD 47.34B in 2013</p> <p>Industries' share of GDP: 10.8%</p> <p>Electricity sources:</p> <ul style="list-style-type: none"> • 9.9% of the installed electricity generating capacity (2.061 million KW in 2010) is generated from fossil fuel; and 89.7% is generated from hydropower and the rest 0.4% is generated from various renewable sources. <p>Others</p> <ul style="list-style-type: none"> • Currently no data is available on the impacts of 	<ul style="list-style-type: none"> • Emission regulations for industries: Industrial emission standard have been established Verify ??? Small installation's emissions regulated: (Yes/No) ??? Renewable energy investment promoted: ??? Energy efficiency incentives: (ex: Subsidies, labelling, rebates etc) ??? Incentives for clean production and installation of pollution prevention technologies: ??? Actions to ensure compliance with regulations: (monitoring, enforcement, fines etc) ??? Other actions at national, sub-national and / or local level to reduce industrial emissions: (can include incentives to move industries to less populated areas here) ???

	<p>these emissions on human health or the environment.</p> <ul style="list-style-type: none"> • Particulate matter is considered the most important air pollutant in the country¹ • Growth in industrial emissions is projected to increase in the coming years 	
REDUCE EMISSIONS FROM TRANSPORT	<p>Key transport-related air quality challenges: (ex: vehicle growth, old fleet, dirty fuel, poor public transport etc)</p> <ul style="list-style-type: none"> • Transport is the main source of air pollutant in Ethiopian urban centres • Rapid increase in vehicle numbers in major cities, driven by increased urban population, economic development and urbanization • Old vehicles, poor maintenance and inefficient public transport are factors driving emissions in the transport sector • Generally vehicle ownership in Ethiopia is low at 3 in 1000² • Motorization rate is high, approximately 10% per year, with more than 50% of the current fleet being more than 15 years old • Use of three wheel vehicles has been on the increase • The sector is also an important indirect source of O₃ 	<p>Vehicle emission limit: (Euro rating) ???</p> <p>Fuel Sulphur content: (in ppm)</p> <ul style="list-style-type: none"> • Diesel sulphur content capped at 5000 ppm • Petrol sulphur content capped at 1000ppm <p>Fuel Lead content Phased out leaded fuel in 2004</p> <p>Restriction on used car importation:</p> <ul style="list-style-type: none"> • No age restriction on all imported motorcycles <p>Actions to expand, improve and promote public transport and mass transit: ???</p> <p>Actions to promote non-motorized transport: (ex: include sidewalks and bike lanes in new road projects, car-free areas etc) ???</p> <p>Other transport-related actions: ???</p>
REDUCE EMISSIONS FROM OPEN BURNING	<p>Outdoor, open burning: (ex: is it commonly done? burning what kinds of wastes? etc)</p> <ul style="list-style-type: none"> • Burning of agricultural waste is still a major 	<p>Legal framework: (ex: is burning banned?)</p> <ul style="list-style-type: none"> • Addressed in the environmental policy under the Solid Waste Management Proclamation

¹ M. Tesfaye V. Etyemezian, 'Results from a Pilot-Scale Air Quality Study in Addis Ababa, Ethiopia', *Atmospheric Environment*, 39 (2005), 7849–60 <<http://dx.doi.org/10.1016/j.atmosenv.2005.08.033>>.

² World Bank, *Worldwide Total Motor Vehicles (per 1,000 People)*, 2011 <<http://chartsbin.com/view/1114>> [accessed 30 June 2015].

OF WASTE (OUTDOOR)	source of air pollutants	Actions to prevent open burning of municipal waste and / or agricultural waste: ???
REDUCE EMISSIONS FROM BIOMASS BURNING (INDOORS)	<p>Dominant fuels used for cooking and space heating:</p> <ul style="list-style-type: none"> ● Wood is the dominant fuels used by the poor for cooking accounting for 94% of the energy mix in Ethiopia³ ● Solid fuel combustion causes an estimated 72,400 premature deaths every year⁴ ● Even in urban areas, half the households rely on traditional biomass (wood, dung and agricultural residues) for cooking, and in rural areas, virtually all do (except for 0.2% who use kerosene, and 1.2% charcoal) ● Impact: ● Air pollution from indoor sources is the single largest contributor to the negative health effects of air pollution in Ethiopia ● Rate of electrification stands at 10% 	<p>Indoor air pollution regulated: (Yes / No) ???</p> <p>Promotion of non-grid / grid electrification: ???</p> <p>Promotion of cleaner cooking fuels and clean cook stoves: ???</p> <p>Other actions to reduce indoor biomass burning, or to reduce its emissions: ???</p>

³ Shannon Kooser, 'Clean Cooking: The Value of Clean Cookstoves in Ethiopia', *Journal of Environmental and Resource Economics at Colby*, 01 (2014), 9.

⁴ WHO, 'WHO | Country Profiles of Environmental Burden of Disease', *WHO*, 2008
<http://www.who.int/quantifying_ehimpacts/national/countryprofile/en/#T>.