

## Ghana Air Quality Catalogue

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 [air.quality@unep.org](mailto:air.quality@unep.org).

<b>Ghana Air Quality Catalogue</b>		
<b>Goals</b>	<b>Status</b>	<b>Current Policies &amp; Programmes</b>
<b>GENERAL OVERVIEW</b>	<p><b>Overall situation with respect to air quality in the country, including key air quality challenges:</b></p> <ul style="list-style-type: none"> <li>• Roadside air quality higher than EPA guideline level of 70µg/m<sup>3</sup> as compared with that of Residential, commercial and Industrial areas.</li> <li>• Higher PM10 levels recorded from December-March with higher Acute respiratory incidence recorded from June-July; November – January.</li> </ul> <p>Challenges include:</p> <ol style="list-style-type: none"> <li>1. Inadequate funds and logistics for AQM and roll-up to other Regional capitals as well as pollution related health studies, education/awareness creation by health workers among others.</li> <li>2. Damages to roadside air monitoring stations by vehicular accidents, constructional works &amp; theft of portable monitoring equipment.</li> <li>3. Poor electrical supplies to the stationary monitoring stations leading to data gaps.</li> </ol> <p><b>Air quality monitoring system:</b></p> <p>Air quality is monitored, although not in all areas of interest</p>	<p><b>National Ambient air quality standards:</b></p> <ul style="list-style-type: none"> <li>• Air quality guidelines in operation being converted into standards, by 2016</li> </ul> <p><b>National Air Quality Policy:</b></p> <ul style="list-style-type: none"> <li>• No comprehensive policy on Air quality but National Environmental Policy (2014) has identified the need to have a comprehensive National Air Quality Policy</li> </ul> <p><b>Air Quality legislation / programmes:</b></p> <ul style="list-style-type: none"> <li>• AQ Regulations development will follow the prescribed standards by 2016</li> <li>• Air pollution prevention is regulated by the decree on air pollution prevention of 2003</li> </ul> <p><b>Other:</b></p> <ul style="list-style-type: none"> <li>• EPA ambient and point source emission guidelines and the Environmental Impact Assessment system / Environmental Management Plan have been developed</li> </ul>

<p>REDUCE EMISSIONS FROM INDUSTRIES</p>	<p><b>Industries that have the potential to impact air quality:</b></p> <ul style="list-style-type: none"> <li>• The most important industries are; mining, lumbering, light manufacturing, aluminium smelting, food processing, cement, small commercial ship building, petroleum among others<sup>1</sup></li> </ul> <p><b>GDP of country:</b> USD 45.5B in 2013</p> <p><b>Industries' share of GDP:</b> 29%</p> <p><b>Electricity sources:</b></p> <ul style="list-style-type: none"> <li>• A quarter of electricity generated in Ghana is derived from fossil fuels, thus power generation is also an important source of air pollutants</li> <li>• 40.6% of the installed electricity generating capacity (1.985 million KW in 2010) is generated from fossil fuel, the rest 59.4% is generated from hydropower<sup>2</sup></li> <li>• PM SO<sub>2</sub>, and NO<sub>x</sub> are some of the most important air pollutant from industrial sources in the country</li> </ul>	<p><b>Emission regulations for industries:</b></p> <ul style="list-style-type: none"> <li>• Industrial emissions are regulated under the National Point source emission guidelines</li> </ul> <p><b>Small installation's emissions regulated:</b> <i>(Yes/No)</i> –</p> <ul style="list-style-type: none"> <li>• small/medium/large installations that could impact on the environment are all regulated</li> </ul> <p><b>Renewable energy investment promoted:</b></p> <ul style="list-style-type: none"> <li>• Feed-in tariffs to encourage power generation from renewable sources</li> <li>• No import duty on renewable energy production systems</li> </ul> <p><b>Energy efficiency incentives:</b><i>(ex: Subsidies, labelling, rebates etc)</i></p> <ul style="list-style-type: none"> <li>• Residential Efficient Lighting Initiative – 6 million incandescent bulbs have been replaced by compact fluorescent (CFLs), funded by the government, saving 200-240 MW in capacity</li> <li>• “Energy Efficiency in Public Buildings Project”, retrofitting buildings with EE equipment and electrical devices, including universities and ministries.</li> </ul> <p><b>Incentives for clean production and installation of pollution prevention technologies:</b></p> <ul style="list-style-type: none"> <li>• Akoben Rating system promotes that initiative to achieve environmental excellence and recognition.</li> </ul> <p><b>Actions to ensure compliance with regulations:</b><i>(monitoring, enforcement, fines etc)</i></p> <ul style="list-style-type: none"> <li>• Yes; through Akoben Rating system to name and shame non-compliant undertakings/companies; compliance monitoring of industries by EPA; services provided to needy industries by the National Cleaner Production Centre.</li> </ul> <p><b>Other actions at national, sub-national and / or local level to reduce industry:</b> <i>(can include incentives to move industries to less populated areas here)</i></p> <ul style="list-style-type: none"> <li>• Fuel substitution under the UNFCCC – LPG, CNG, and electricity considered for public transport..</li> <li>• Mandatory “Ghana Electrical Appliance labelling and Standards Programme”</li> </ul>
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<sup>1</sup>Countries of the World - 32 Years of CIA World Fact Books', 2015 <<http://www.theodora.com/wfb/#R>>.

<sup>2</sup>Countries of the World - 32 Years of CIA World Fact Books'.

		(GEALSP) for CFLs and room air conditioning
REDUCE EMISSIONS FROM TRANSPORT	<p><b>Key transport-related air quality challenges:</b> (<i>ex: vehicle growth, old fleet, dirty fuel, poor public transport etc</i>)</p> <ul style="list-style-type: none"> <li>• Road transport is the dominant form of transport accounting for 95% of all transport in Ghana</li> <li>• Freight and passenger transport is usually provided by private companies or individuals.</li> <li>• Some Government Agencies such as Metro Mass Transit Company (MMT) and ISTC Coaches Ltd also provide an extensive network of urban, intra urban, inter-city and rural-urban bus services</li> <li>• Private car ownership is low with 44 car per 1000 individuals in 2008</li> <li>• Vehicle ownership is on the increase with vehicle number increases of approximately 7% in urban centres</li> <li>• In 2009 83% of all the cars imported into Ghana were second hand cars</li> <li>• Vehicle emissions are a major source of PM, NO<sub>2</sub> and CO</li> <li>• The vehicle fleet is characterized by aged vehicle, poor maintenance and driving techniques which worsens the air quality situation especially in urban areas</li> </ul>	<p><b>Vehicle emission limit:</b> (<i>Euro rating</i>)</p> <ul style="list-style-type: none"> <li>• Euro 1 for diesel and Euro11 for petrol vehicles guidelines proposed and would be converted into standards next year.</li> </ul> <p><b>Fuel Sulphur content:</b> (<i>in ppm</i>) Fuel (diesel)sulphur content restricted at 3000ppm</p> <p><b>Fuel Lead content:</b> Unleaded gasoline restrictions since 2004</p> <p><b>Restriction on used car importation:</b></p> <ul style="list-style-type: none"> <li>• Imported cars that are more than 10 years old attract additional charges, but they can still be imported into the country</li> <li>• Pre-importation inspection is required for road worthiness</li> </ul> <p><b>Actions to expand, improve and promote public transport and mass transit:</b></p> <p><b>Actions to promote non-motorized transport:</b> (<i>ex: include sidewalks and bike lanes in new road projects, car-free areas etc</i>)</p> <p><b>Other transport-related actions:</b></p> <ul style="list-style-type: none"> <li>• Duty charged on imported vehicle based on the value of the car, which encourages the import of older cheaper cars</li> <li>• Import duty charged based on engine size, with bigger engines paying more compared to smaller engines</li> </ul>
REDUCE EMISSIONS FROM OPEN BURNING OF AGRICULTURAL / MUNICIPAL WASTE (OUTDOOR)	<p><b>Outdoor, open burning:</b> (<i>ex: is it commonly done? burning what kinds of wastes? etc</i>)</p> <ul style="list-style-type: none"> <li>• Uncontrolled waste burning, which is a common practice, is one of the practices that contributes to deteriorating air quality in urban centres</li> <li>• uncontrolled burning of e-wastes in the city for precious metals is also a contributor to air pollution</li> <li>• Agricultural waste burning can also impact air</li> </ul>	<p><b>Legal framework:</b> (<i>ex: is burning banned?</i>)</p> <ul style="list-style-type: none"> <li>• Regulated under the waste management regulation of 1991</li> </ul> <p><b>Actions to prevent open burning of municipal waste and / or agricultural waste:</b></p> <p>Development of the following policies:</p> <ol style="list-style-type: none"> <li>1. <b>National Environmental Sanitation Strategy and Action Plan (2010)</b> <ul style="list-style-type: none"> <li>• Among others, MMDAs were to improve revenue mobilization, increase the proportion of house-to-house (door-to-door) services for improving</li> </ul> </li> </ol>

	<p>quality in the rural areas.</p> <ul style="list-style-type: none"> <li>• Due to the waste composition (plastics, waste tires, and other organic/inorganic materials) unregulated waste burning can be a source of health impairing emissions such as dioxins and furans</li> <li>• The country produces more than 3 million tons of waste annually in Accra, 10% is correctly collected and disposed off</li> </ul>	<p>paid-for refuse collection and aggressively promote household latrines.</p> <ul style="list-style-type: none"> <li>• Establishment of Environmental Health and Sanitation Directorate (EHSD) leading to the development of a comprehensive National Environmental Sanitation Strategy and Action Plan (NESSAP) and a Strategic Environmental Sanitation Investment Plan (SESIP). These are expected to facilitate gradual reversal of the deficits in services through effective implementation by MMDAs and other stakeholders.</li> </ul> <p>2. National Urban Policy Framework and Action Plan (2012)</p> <ul style="list-style-type: none"> <li>• to improve environmental quality of urban life.</li> <li>• Recognises the need to pursue rigorous public education and law enforcement against reprehensible public attitudes and conduct that induce environmental degradation etc.</li> </ul>
<p>REDUCE EMISSIONS FROM OPEN BURNING OF BIOMASS (INDOOR)</p>	<p><b>Dominant fuels used for cooking and space heating:</b></p> <ul style="list-style-type: none"> <li>• Most Ghanaians rely on biomass sources, particularly wood fuels and charcoal, for household needs. Government statistics place consumption of biomass fuels at slightly more than 60% of total energy consumption in Ghana.<sup>3</sup></li> </ul> <p><b>Impact:</b></p> <ul style="list-style-type: none"> <li>• Air pollution from indoor sources is the single largest contributor to the negative health effects of air pollution in Ghana.</li> <li>• Indoor air pollution causes an estimated 14,000 deaths every year and 3000 deaths in children below 5 years. It is a major risk factor in Non-communicable diseases in Ghana and perhaps the leading risk factor for rural women (Ghana Health Services Burden of Disease, 2010),</li> </ul>	<p><b>Indoor air pollution regulated:</b> (<i>Yes / No</i>) Not really but various interventions being put in place including introduction of new improved clean stove; promotion of use of LPG and subsidised LPG cylinders for rural areas.</p> <p><b>Promotion of non-grid / grid electrification:</b></p> <ul style="list-style-type: none"> <li>• Promotion of rural electrification</li> </ul> <p><b>Promotion of cleaner cooking fuels and clean cook stoves:</b></p> <ul style="list-style-type: none"> <li>• introduction of new improved clean stove; promotion of use of LPG and subsidised LPG cylinders for rural areas</li> </ul> <p><b>Other actions to reduce indoor biomass burning, or to reduce its emissions:</b></p> <ul style="list-style-type: none"> <li>• As part of the Ghana Shared Growth and Development Agenda, Ghana would like to reduce reliance on wood fuels and charcoal by expanding access to the national electric grid and developing oil and gas resources.</li> <li>• Efficient Lighting Initiative – 6 million incandescent bulbs have been replaced by CFLs, funded by the government, saving 200-240 MW in capacity.</li> <li>• Mandatory “Ghana Electrical Appliance labelling and Standards Programme” (GEALSP) for CFLs and room air conditioning.</li> <li>• Introduction of a net metering code</li> </ul>

<sup>3</sup>{Citation}