

## 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).

COUNTRY NAME		
GOALS	CURRENT STATUS	CURRENT / PLANNED POLICIES & PROGRAMMES
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> <ul style="list-style-type: none"> <li>● Air pollution in Jamaica comes mainly from industrial activities and motor vehicles.</li> <li>● The main industries that contribute to air pollution in Jamaica are: bauxite\alumina, electricity and steam generation, cement and lime manufacturing chemical processing and petroleum refining.</li> </ul> </li> <li>● <b>Air quality monitoring system:</b> <ul style="list-style-type: none"> <li>● Air Quality monitoring is not currently conducted routinely in Jamaica. As a result, ambient air quality monitoring data are limited.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● <b>National Ambient air quality standards:</b> (<i>Exist</i>) does not meet the recommended Ambient Air Quality Standards and WHO interim targets. <ul style="list-style-type: none"> <li>● National Ambient Air Quality Standards (gazetted August 1996)</li> <li>● Draft stack emission standards were also developed in 1997 and were provided to stakeholders for review. The Stack Emission Standards was incorporated into the draft air quality regulations (1999)<sup>1</sup>.</li> </ul> </li> <li>● <b>National Air Quality Policy: ???</b></li> <li>● <b>Air Quality legislation / programmes:</b> <ul style="list-style-type: none"> <li>● In reference to Natural Conservation Authority (Air Quality Regulations) Act of 2006, Facilities in two different parishes for example each must have SO<sub>2</sub> emissions that are equivalent to no more than emissions from burning 3% Sulphur for existing sources (or 2.2% for new sources) and monitor emissions and ambient air affecting surrounding communities<sup>2</sup>. (<i>Note: The Stack Emission Standards do not include specification of emission limits for sulphur dioxide for fuel combustion. Instead the regulations specify the sulphur content of fuel used in combustion since the amount of SO<sub>2</sub> emitted is directly related to the sulphur content of fuel</i>).</li> <li>● Air Quality Management Programme; geared towards the reduction of air pollution and the management of the polluters through compliance.</li> </ul> </li> </ul>

<sup>1</sup> Technical Support Document For The Regulatory Impact Analysis For Air Quality Regulations Developed By The National Environment And Planning Agency; November, 2002: <http://www.nepa.gov.jm/regulations/RIAS-Final-Report-Technical-Support-Document-for-RIAS.pdf>

<sup>2</sup> Natural Resource Conservation Authority; Ambient Air Quality Guideline, November, 2006: file:///D:/UNEP%20-%20George/air-ambient-guideline-2006.pdf

	<ul style="list-style-type: none"> <li>• With the introduction of the Natural Resources Conservation Authority (NRCA) in 1991, ambient air quality standards were developed and measures were initiated to monitor air quality.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Other: ???</b></li> </ul>
<p>REDUCE EMISSIONS FROM INDUSTRIES</p>	<ul style="list-style-type: none"> <li>• <b>Industries that have the potential to impact air quality:</b></li> <li>• Industries that have potential impact to air quality are bauxite/alumina, electricity and steam generation, cement and lime manufacturing chemical processing and petroleum refining.</li> <li>• <b>GDP of country:</b> \$14.39<sup>3</sup> billion (2013 estimates)</li> <li>• <b>Industries' share of GDP:</b> 29.4%<sup>4</sup></li> <li>• <b>Electricity sources:</b> <ul style="list-style-type: none"> <li>• 94.8% of total installed capacity (2010 est.) is generated from fossil fuels; 2.1% is generated from hydroelectric plants and 3% of total installed capacity is generated from other renewable sources<sup>5</sup></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Emission regulations for industries:</b> Under the polluter pays principle, licenced facilities are required to pay a fee according to their level of emissions<sup>6</sup>.</li> <li>• <b>Small installation's emissions regulated:</b> (Yes/No) ???</li> <li>• <b>Renewable energy investment promoted:</b> Jamaican government has promoted renewable energy investment through the following programmes; <ul style="list-style-type: none"> <li>• Wind Power for Domestic/Community Feasibility Study and Regulatory Review (MSTEM &amp; UNDP)<sup>7</sup></li> <li>• Solar Energy Pilot Project for the installation of PV systems targeting rural communities commenced (REP)</li> <li>• Solar-Hydrogen Gas for Domestic Cooking (UTech, MSTEM, Bureau of Standards Jamaica, UWI &amp; Brunel University)</li> </ul> </li> <li>• <b>Energy efficiency incentives:</b> (ex: Subsidies, labelling, rebates etc.)  The Development Bank of Jamaica (DBJ) in October 2008, officially launched the Petrocaribe Small and Medium Enterprise Energy Fund (the Petrocaribe Fund)<sup>8</sup>, which provides financial support for energy audits, ESCOs and manufacturers of energy efficiency equipment and Devices.</li> </ul>

<sup>3</sup> Jamaica Economy Profile 2014 - [http://www.indexmundi.com/jamaica/economy\\_profile.html](http://www.indexmundi.com/jamaica/economy_profile.html)

<sup>4</sup> Jamaica Economy Profile 2014 - [http://www.indexmundi.com/jamaica/economy\\_profile.html](http://www.indexmundi.com/jamaica/economy_profile.html)

<sup>5</sup> <http://www.theodora.com/wfb/>

<sup>6</sup> Jamaica Observer; [http://www.jamaicaobserver.com/mobile/career/Progress-in-emissions-reduction-for-Jamaica\\_9850000](http://www.jamaicaobserver.com/mobile/career/Progress-in-emissions-reduction-for-Jamaica_9850000)

<sup>7</sup> Renewable Energy Development in Jamaica; Yvonne Barrett-Edwards; <https://www.mona.uwi.edu/physics/sites/default/files/physics/uploads/RE%20Development%20MSTEM.pdf>

<sup>8</sup> The Collage of East Management, February 2013, Energy efficiency and conservation strategies among retailers in Jamaica and beyond

		<p>Ministry of Finance and Planning (MoFP): list of GCT exempted and CET suspended renewable energy and energy efficiency based items and technologies were developed and are currently instituted.</p> <p>National Housing Trust (NHT): loan facility available to homeowners for the installation of solar water heaters and PV systems at residential dwellings;</p> <p>MSTEM, Jamaica Public Service (JPS) and Office of Utilities Regulations: net billing is accommodated on the national grid. Customers who have a net billing arrangement with JPS can earn while reducing their electricity costs by transferring excess electricity generated primarily for their own use to the electricity grid. Customers who have this arrangement in place and generate electricity using renewable energy source (wind, water, solar, biomass) receive a premium of 15%.</p> <ul style="list-style-type: none"> <li>● <b>Incentives for clean production and installation of pollution prevention technologies: ???</b></li> <li>● <b>Actions to ensure compliance with regulations:</b> (monitoring, enforcement, fines etc.) <b>???</b> A fee not exceeding \$50,000 and/or 12 months imprisonment may be imposed by a resident magistrate for breaches of the regulations<sup>9</sup>.</li> <li>● <b>Other actions at national, sub-national and / or local level to reduce industry emissions: ???</b></li> </ul>
<p>REDUCE EMISSIONS FROM TRANSPORT</p>	<ul style="list-style-type: none"> <li>● <b>Key transport-related air quality challenges:</b> (ex: vehicle growth, old fleet, dirty fuel, poor public transport etc.)</li> </ul> <p>Emissions from gasoline-powered motor vehicles have increased dramatically since the early 1990's, prompted in part by Jamaica's healthy rates of economic growth in recent years<sup>10</sup>.</p>	<ul style="list-style-type: none"> <li>● <b>Vehicle emission limit:</b> (Euro rating) The current emission standard is a basic visual check for smoke (black or white) coming from a vehicle. Currently there are no legislated SOx and NOx limits for vehicles at this time.</li> <li>● Currently the National Environment and Planning Agency (NEPA) is finalising the draft paper for the motor vehicle emission standards, which is expected to be adopted into a regulatory framework, fiscal year 2014/2015<sup>13</sup>.</li> <li>● <b>Fuel Sulphur content:</b> (in ppm)</li> </ul>

<sup>9</sup> Jamaica Observer; [http://www.jamaicaobserver.com/mobile/career/Progress-in-emissions-reduction-for-Jamaica\\_9850000](http://www.jamaicaobserver.com/mobile/career/Progress-in-emissions-reduction-for-Jamaica_9850000)

<sup>10</sup> [www.iucnael.org/en/documents/826-eisen-jamaica/file](http://www.iucnael.org/en/documents/826-eisen-jamaica/file)

	<p>The number of motor vehicles in Jamaica more than doubled, from 171,000 to 502,265<sup>11</sup>, between 1993 and 2010, prompting gasoline consumption to nearly double during those years.</p> <p>Transportation is the heaviest user of fuel at 45% of total consumption according to data from 2008 and 2012<sup>12</sup>.</p> <p>The rapid growth in motor vehicle fleets has also contributed to the obvious deterioration in air quality in urban areas, particularly in the Kingston Metropolitan Region (KMR).</p>	<p>Ultra Low sulphur fuel (15ppm) available in parts of the country from July 2013.</p> <ul style="list-style-type: none"> <li>● <b>Restriction on used car importation:</b>  Imported cars must be less than 5yrs old  For pick-ups - Six(6) years  For motor cars - Five(5) years  Trucks, Trailers and other heavy duty equipment - Ten (10) years.</li> <li>● <b>Actions to expand, improve and promote public transport and mass transit: ???</b>  The government of Jamaica has come up with measures to improve fuel economy and efficiency in the transportation sector and reduce vehicle emissions through<sup>14</sup>: <ul style="list-style-type: none"> <li>• Expansion of the highway network for more efficient movement of persons and goods across the island;</li> <li>• Introduction of E10 fuel (a blend of 10 per cent ethanol and 90 per cent gasoline, and ultra low sulphur diesel fuel);</li> <li>• Undertaking improvements in the public transportation infrastructure; and</li> <li>• Reducing duties on hybrid and electric vehicles</li> </ul> </li> <li>● <b>Actions to promote non-motorized transport:</b> (ex: include sidewalks and bike lanes in new road projects, car-free areas etc.) ???  Government of Jamaica is planning to develop a properly coordinated approach to ensure non-motorized transport of all types can safely use the country's roads. This will involve education and training, improved road designs, good traffic management techniques and better enforcement<sup>15</sup>.</li> <li>● <b>Other transport-related actions: ???</b></li> </ul>
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13 <http://jis.gov.jm/nepa-completing-draft-motor-vehicle-emission-standards/>

11 World Health Organization; <http://apps.who.int/gho/data/node.main.A995>

12 Keynote Address by The Hon. Robert Pickersgill Minister of Water, Land, Environment and Climate Change: National Project Launch and Workshop of the GEF Project: Stabilizing Greenhouse Gas (GHG) Emission from Road Transport through Doubling of Global Vehicle Fuel Economy

14 United Nations Environmental Programme: [http://www.unep.org/transport/GFEI/jamaica\\_gfei.asp](http://www.unep.org/transport/GFEI/jamaica_gfei.asp)

15 Draft National Transport Policy, 2007 - [http://www.mhtww.gov.jm/general\\_information/reports/NationTransportPolicy2007.pdf](http://www.mhtww.gov.jm/general_information/reports/NationTransportPolicy2007.pdf)

<p>REDUCE EMISSIONS FROM OPEN BURNING OF AGRICULTURAL / MUNICIPAL WASTE (OUTDOOR)</p>	<ul style="list-style-type: none"> <li>● <b>Outdoor, open burning:</b> (ex: is it commonly done? burning what kinds of wastes? etc.)</li> </ul> <p>Households use three main methods for outdoor garbage disposal. Most households (63.5%) used a garbage collection service; burning is the second most common method (33.5% of households), followed by dumping at 3.2%<sup>16</sup>.</p> <p>The main kinds of wastes that are burnt outdoor are sugarcane in the fields and of solid waste at dumpsites and in backyards<sup>17</sup></p>	<ul style="list-style-type: none"> <li>● <b>Legal framework:</b> (ex: is burning banned?)</li> </ul> <p>Open burning without permission is illegal activity and is prohibited under the Country Fires Act and the Public Health (Nuisance) Regulations<sup>18</sup>.</p> <ul style="list-style-type: none"> <li>● <b>Actions to prevent open burning of municipal waste and / or agricultural waste:</b></li> </ul> <p>National Environment and Planning Agency (NEPA) indicates that open burning without permission, is an illegal activity and is prohibited under the Country Fires Act and the Public Health (Nuisance) Regulations. If caught, the penalty is a maximum \$50,000 in the Resident Magistrates Court<sup>19</sup>.</p>
<p>REDUCE EMISSIONS FROM OPEN BURNING OF BIOMASS (INDOOR)</p>	<ul style="list-style-type: none"> <li>● <b>Dominant fuels used for cooking and space heating:</b></li> </ul> <p>The three main dominant fuels used for cooking in households in Jamaica are LPG 80.5%; Wood 9%; Charcoal 6.1% and electricity 1.8%.<sup>20</sup></p> <ul style="list-style-type: none"> <li>● <b>Impact:</b> 500 deaths/year from indoor air pollution; 200 deaths/year from outdoor air pollution</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Indoor air pollution regulated:</b> (Yes / No) ???</li> <li>● <b>Promotion of non-grid / grid electrification:</b></li> </ul> <p>Rural electrification Program collaborating with Jamaica Public Service (JPS) in the recovery of house wiring loans to customers in rural communities and regularizing electrification under the JPS Loss Reduction Programme<sup>21</sup>.</p> <ul style="list-style-type: none"> <li>● <b>Promotion of cleaner cooking fuels and clean cook stoves: ???</b></li> <li>● <b>Other actions to reduce indoor biomass burning, or to reduce its emissions: ???</b></li> </ul>

**Secondary Sources used in the research:**

<sup>16</sup> Health in the Americas, 2012 Edition: Country Volume N ' Pan American Health Organization, 2012

<sup>17</sup> Health in the Americas, 2012 Edition: Country Volume N ' Pan American Health Organization, 2012

<sup>18</sup> [http://www.nepa.gov.jm/newscenter/Press\\_releases/Archive/2012/PR20121029-no-open-burning-debris.asp](http://www.nepa.gov.jm/newscenter/Press_releases/Archive/2012/PR20121029-no-open-burning-debris.asp)

<sup>19</sup> [http://www.nepa.gov.jm/newscenter/Press\\_releases/Archive/2012/PR20121029-no-open-burning-debris.asp](http://www.nepa.gov.jm/newscenter/Press_releases/Archive/2012/PR20121029-no-open-burning-debris.asp)

<sup>20</sup> 2011 Census of Population and Housing - Jamaica

<sup>21</sup> Rural Electrification Programme: <http://mstem.gov.jm/?q=rural-electrification-programme-rep>