

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.

COUNTRY NAME: BAHAMAS		
GOALS	CURRENT STATUS	CURRENT / PLANNED POLICIES & PROGRAMMES
GENERAL OVERVIEW	<ul style="list-style-type: none"> ● Overall situation with respect to air quality in the country, including key air quality challenges: Ambient air quality in most of The Bahamas is relatively good for the following reasons¹: <ul style="list-style-type: none"> ● The local meteorology is dominated by strong easterly trade winds for the majority of the year, and multi-directional but still windy conditions in the remainder of the year. The strong winds will tend to transport emissions from sources located on the Islands out over water, rather than allowing them to accumulate and concentrate in ambient air over areas of population. This same effect will also preclude the chance for sufficient accumulations of ozone precursors that could lead to elevated levels of ambient ozone. 	<ul style="list-style-type: none"> ● National Ambient air quality standards: (<i>Exist</i>) It meets the recommended Ambient Air Quality Standards and WHO interim targets for SO₂ and NO₂. On the other hand it does not meet standards set for PM₁₀ while there are not set standards for PM_{2.5}³. ● National Air Quality Policy⁴: The Environmental Health Act (1987) provides a general framework for developing environmental regulations in The Bahamas. The Act authorizes the DEHS to develop regulations that prevent and control air pollution, soil contamination, and preserve water quality. ● Air Quality legislation / programmes⁵: The draft Environmental Health Air Emissions Regulations are enforced under Section 31 of the Environmental Health Act. The Air Emissions Regulations require all projects/developments with associated emissions, depositions, or discharges of any regulated air contaminant to obtain permit approval by the Director of the DEHS prior to initiating discharges to ambient air. ● Other⁶: The Government of Bahamas (GOB), through BEST, drafted in 2000 a new Environmental Planning and Protection Act and various guidelines to enhance the conservation and protection of the environment of The Bahamas consistent with the goal of sustainable development.

¹ National Environmental Management Action Plan (NEMAP) FOR THE BAHAMAS, 2005: <http://www.thegef.org/gef/sites/thegef.org/files/documents/document/nca-bahamas-nemap.pdf>

³ AirLex; <http://airlex.web.ua.pt/pm10>

⁴ National Environmental Management Action Plan (NEMAP) FOR THE BAHAMAS, 2005: <http://www.thegef.org/gef/sites/thegef.org/files/documents/document/nca-bahamas-nemap.pdf>

⁵ National Environmental Management Action Plan (NEMAP) FOR THE BAHAMAS, 2005: <http://www.thegef.org/gef/sites/thegef.org/files/documents/document/nca-bahamas-nemap.pdf>

⁶ National Environmental Management Action Plan (NEMAP) FOR THE BAHAMAS, 2005: <http://www.thegef.org/gef/sites/thegef.org/files/documents/document/nca-bahamas-nemap.pdf>

	<ul style="list-style-type: none"> • The density of industrial activity (and emission) on the islands is low. Areas of relatively low industrial activity tend to have acceptable concentrations of air contaminants. • Due to its small industrial base and low population density, the Bahamas is not a major contributor to greenhouse gases (GHGs). • Electricity generation and the transportation sector (through the burning of petroleum products) are determined to be the two most significant sources of GHG emissions in The Bahamas. <p>• Air quality monitoring system:</p> <ul style="list-style-type: none"> • Many locals from New Providence have expressed disillusionment with the Bahamian government, which is accused of neglecting to monitor and control pollution. But a local environmental group, known as Raise Awareness about the Bahamas Landfill (RABL), has taken matters into their own hands by launching a series of monitoring surveys across New Providence². 	
	<p>• Industries that have the potential to impact air quality:</p> <ul style="list-style-type: none"> • Electricity generation and the transportation sector (through the burning of petroleum products) were determined to be the two most 	<p>• Emission regulations for industries¹¹:</p> <ul style="list-style-type: none"> • Regulations on industrial emissions for industries exist under Environmental Health Services Act. “.....<i>Any person who, otherwise than in accordance with this Act and the regulations, deposits in, adds to, emits or discharges into the environment any contaminant or pollutant or who permits the deposit, emission or discharge into the environment of any contaminant or pollutant from any source including control of emissions of smoke, gases, dust, particles, fumes or any combination of these, offensive</i>

² Environmental Technology; http://www.envirotech-online.com/news/air-monitoring/6/breaking_news/new_providence_environmentalists_to_launch_air_quality_monitoring_projects/35248/

	<p>significant sources of GHG emissions.</p> <ul style="list-style-type: none"> ● GDP of country: \$11.4 billion (2013 estimate)⁷ ● Industries' share of GDP: 7.1%⁸ ● Electricity sources: <ul style="list-style-type: none"> ● Bahamas depends on imported fuels to generate over 99% of its electricity demand⁹. ● Generation is currently fueled by all imported petroleum with a mix of diesel (56.5%) and heavy fuel oil (43.5%), totalling 1,930 gigawatt-hours (GWh) for the entire country¹⁰. 	<p><i>odours or excessive noise from factories, vessels, vehicles or any other premises or thing; is guilty of an offence.</i>"</p> <ul style="list-style-type: none"> ● Small installation's emissions regulated: (Yes/No) ??? ● Renewable energy investment promoted: <ul style="list-style-type: none"> ● The Ministry of Environment launched a pilot program to distribute 100 solar water heaters and 33 residential photovoltaic systems of 2kW to electricity end-users at no cost. Consumers receiving solar panels will be able to connect to the Bahamian national power grid, and the government will monitor system performance to assess the viability and potential for distributed generation¹². ● With energy-related costs estimated at 15% to 20% of annual operating budgets for small- and medium-sized hotels in the Bahamas, the Bahamian hotel industry launched a significant energy efficiency initiative in 2013 in partnership with the Government of the Bahamas to reduce energy related costs. The initiative aims to conduct energy audits at participating hotels, recommend energy efficiency improvements, and develop financial proposals to obtain funding for implementation¹³. ● Energy efficiency incentives: (ex: Subsidies, labelling, rebates etc.) ??? ● Incentives for clean production and installation of pollution prevention technologies: <ul style="list-style-type: none"> ● In 2008, the Government of the Bahamas incentivized solar technologies by reducing the import duties from 42% to 10%¹⁴. ● Actions to ensure compliance with regulations: (monitoring, enforcement, fines etc.) <ul style="list-style-type: none"> ● ".....Any person who fails to carry out or contravenes any of the provisions of Environmental Health Services Act or any regulations made thereunder is guilty of an offence and where there is no specific penalty provided, is liable on summary conviction to a fine not exceeding one thousand dollars or to imprisonment for a term not exceeding nine months or to both such fine and imprisonment, and in the case of a second or subsequent offence, to a fine not exceeding five thousand dollars or to imprisonment for a term not exceeding twelve months or to both such fine and imprisonment."
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¹¹ Environmental Health Services Act; http://laws.bahamas.gov.bs/cms/images/LEGISLATION/PRINCIPAL/1987/1987-0004/EnvironmentalHealthServicesAct_1.pdf

⁷ Index Mundi; http://www.indexmundi.com/the_bahamas/gdp_composition_by_sector.html

⁸ Index Mundi; http://www.indexmundi.com/the_bahamas/gdp_composition_by_sector.html

⁹ Bahamas: Energy Resources; <http://en.openei.org/wiki/Bahamas>

¹⁰ Energy Snapshot Bahamas; <http://www.nrel.gov/docs/fy15osti/62691.pdf>

¹² Small and Medium Initiatives with a Large Impact; <http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38170604>

¹³ Energy Snapshot Bahamas; <http://www.nrel.gov/docs/fy15osti/62691.pdf>

¹⁴ Energy Snapshot Bahamas; <http://www.nrel.gov/docs/fy15osti/62691.pdf>

		<ul style="list-style-type: none"> ● Other actions at national, sub-national and / or local level to reduce industry emissions: ???
REDUCE EMISSIONS FROM TRANSPORT	<ul style="list-style-type: none"> ● Key transport-related air quality challenges: (ex: vehicle growth, old fleet, dirty fuel, poor public transport etc.) <ul style="list-style-type: none"> ● Transportation is the second greatest user of energy¹⁵. ● The transport sector is characterized by the use of larger, less fuel-efficient vehicles. ● Traffic congestion contributes significantly to the loss of working hours on the island, the wear and tear on motor vehicles, the consumption of gasoline, the increase in air pollution, and the stress and anxiety level of many citizens¹⁶. ● Vehicular gasoline consumed locally increased from 63.291 million Bahamian dollars in 2002 to 201.147 million Bahamian dollars in 2008 – a three-fold increase. Similar changes occurred with jet fuel and aviation gasoline¹⁷. 	<ul style="list-style-type: none"> ● Vehicle emission limit: (Euro rating) <ul style="list-style-type: none"> ● For both Light and Heavy Trucks the set vehicle emission limits for Diesel and Petrol do not meet Euro 4 set standards¹⁸. ● Fuel Sulphur content: (in ppm) 5000 ppm ● Restriction on used car importation: No import restriction¹⁹. ● Actions to expand, improve and promote public transport and mass transit: <ul style="list-style-type: none"> ● The Inter-American Development Bank (IDB) approved a supplemental loan of up to US\$65 million to complete the expansion and rehabilitation of the road network under The Bahamas' New Providence Transport Program. The project seeks to reduce transportation costs for road users by providing a more rational and efficient transport system for New Providence Island, where the capital Nassau is located. The program is expected to improve road safety and public transportation and reduce environmental impacts caused by traffic congestion. Traffic accidents and road fatalities are expected to drop by 15 percent upon the program's completion²⁰. ● Actions to promote non-motorized transport: (ex: include sidewalks and bike lanes in new road projects, car-free areas etc.) No²¹. ● Other transport-related actions: ???
REDUCE EMISSIONS FROM OPEN BURNING OF AGRICULTURAL / MUNICIPAL WASTE	<ul style="list-style-type: none"> ● Outdoor, open burning: (ex: is it commonly done? burning what kinds of wastes? etc.) <ul style="list-style-type: none"> ● A common sight in most places in Bahamas is of accumulated garbage burning²². 	<ul style="list-style-type: none"> ● Legal framework: (ex: is burning banned?) ??? ● Actions to prevent open burning of municipal waste and / or agricultural waste: ???

¹⁵ The Bahamas National Energy Policy 2013 – 2033; <https://brief.org/wp-content/uploads/2015/07/NatlEnergyPolicy.pdf>

¹⁶ https://ianstrachan.files.wordpress.com/2011/02/transportation_report.pdf

¹⁷ The Bahamas National Energy Policy 2013 – 2033; <https://brief.org/wp-content/uploads/2015/07/NatlEnergyPolicy.pdf>

¹⁸ Environmental Health (Vehicle Emissions) Regulations, 2013: <http://myplp.org/wp-content/uploads/2014/03/Vehicle-Emissions.pdf>

¹⁹ Status of Fuel Quality and Vehicle Emission Standards Latin America and the Caribbean;

http://www.unep.org/Transport/new/PCFV/pdf/Maps_Matrices/LAC/matrix/LAC_FuelsVeh_January2015.pdf

²⁰ Inter-American Development Bank; <http://www.iadb.org/en/news/news-releases/2012-09-05/supplemental-loan-to-new-providence-transport-program,10101.html>

²¹ https://books.google.co.ke/books?id=Ndrf6DuCQHMC&pg=PA56&lpg=PA56&dq=promoting+non-motorized+transport+in+bahamas&source=bl&ots=tdgKHvWVv&sig=j0oBZAF11NAhw0MjfrGN9rhDSI&hl=en&sa=X&redir_esc=y#v=onepage&q=promoting%20non-motorized%20transport%20in%20bahamas&f=false

²² Web Governments; <https://webgovernments.wordpress.com/2011/08/24/bahamas-solid-waste-a-grave-concern-for-the-environment/>

(OUTDOOR)		
REDUCE EMISSIONS FROM OPEN BURNING OF BIOMASS (INDOOR)	<ul style="list-style-type: none"> ● Dominant fuels used for cooking and space heating: <ul style="list-style-type: none"> ● Less than 5% of households are using solid fuels for cooking²³. This is further broken down as shown in the list below²⁴; <ul style="list-style-type: none"> ● Gas – 74.2% ● Electricity – 22.3% ● Oil – 1.02% ● Coal/Wood/Others – 2.34% ● Impact: ??? 	<ul style="list-style-type: none"> ● Indoor air pollution regulated: (Yes / No) ??? ● Promotion of non-grid / grid electrification: ● Promotion of cleaner cooking fuels and clean cook stoves: ??? ● Other actions to reduce indoor biomass burning, or to reduce its emissions: ???

Secondary Sources used in the research:

²³ World Health Organization; http://www.who.int/quantifying_ehimpacts/national/countryprofile/bahamas.pdf?ua=1

²⁴ National Census Report 2000, The Bahamas; <http://www.caricomstats.org/Files/Publications/NCR%20Reports/The%20Bahamas.pdf>