

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: BARBADOS		
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: <ul style="list-style-type: none"> ● Trade winds in recent years has been a growing concern about ambient air quality as the island has continued to develop and associated activities intensified¹. ● Increases in vehicular traffic, industrial activity and the incidence of Sahara dust have become the sources of growing concern about the quality of the air and its possible linkage to certain health problems on the island². ● A significant contributor to atmospheric pollution is Sahara dust, which has a strong, visible background signature during the spring and summer months. ● Air quality monitoring system: 	<ul style="list-style-type: none"> ● National Ambient air quality standards: ??? ● National Air Quality Policy: ??? ● Air Quality legislation / programmes: <ul style="list-style-type: none"> ● The draft Environmental Management Plan⁴. ● Other: ???

¹ State of Environment Report, 2000; <http://mapas.centrogeo.org.mx/unep/documentos/Barbados/BARBADOSaire.pdf>

² State of Environment Report, 2000; <http://mapas.centrogeo.org.mx/unep/documentos/Barbados/BARBADOSaire.pdf>

⁴ State of Environment Report, 2000; <http://mapas.centrogeo.org.mx/unep/documentos/Barbados/BARBADOSaire.pdf>

	<ul style="list-style-type: none"> • There is no routine monitoring programme that has been established though there is one pilot monitoring study which was set up in 1994, but has since then been discontinued³. 	
	<ul style="list-style-type: none"> • Industries that have the potential to impact air quality: <ul style="list-style-type: none"> • Industrial and Transport Sector. • GDP of country: \$7.004 billion (2013 estimate)⁵. • Industries' share of GDP: 13.9%⁶. • Electricity sources⁷: <ul style="list-style-type: none"> • Heavy fuel Oil – 84.8% • Diesel & Jet Fuel – 15.2% 	<ul style="list-style-type: none"> • Emission regulations for industries: ??? • Small installation's emissions regulated: (Yes/No) ??? • Renewable energy investment promoted: <ul style="list-style-type: none"> • The Barbados Light and Power Company Limited introduced the Renewable Energy Rider initiative in mid-2010. This initiative allows customers to connect to the grid and sell any excess electricity generated from renewable sources to Barbados Light and Power Company Limited. The program currently limits size to 5kW for domestic and 50kW for other tariff brackets. All kWh supplied to the grid are credited for 1.8 times the Fuel Clause Adjustment or 31.5 cents/kWh, whichever is greater. Thus far, more than 200 customers have benefited from the initiative⁸. • To facilitate renewable energy generation on the island, the GoBA is also expected to pass renewable energy legislation in Parliament in October of 2013. This new legislation is to help reposition Barbados' economy and establish a complete renewable energy sector in the country⁹. • In 2010, Barbados's power utility established a net metering program, which included 25 consumer generators as participants until the end of 2012. Last year, a private company financed the purchase of 1.4MW of solar photovoltaic panels to help reduce its electricity bill and carbon footprint¹⁰. • Distribution of solar photovoltaic (PV) capacity under the RER program. Offered on a pilot basis since 2010, the program was expanded per Fair Trading Commission (FTC) approval in August 2013. By the end of 2013, BL&P reported that 271 solar PV systems were connected to the grid with a combined capacity of 1.7 MW¹¹.

³ State of Environment Report, 2000; <http://mapas.centrogeo.org.mx/unep/documentos/Barbados/BARBADOSaire.pdf>

⁵ Index Mundi; http://www.indexmundi.com/barbados/gdp_composition_by_sector.html

⁶ Index Mundi; http://www.indexmundi.com/barbados/gdp_composition_by_sector.html

⁷ Energy Transition Initiative; <http://www.nrel.gov/docs/fy15osti/64118.pdf>

⁸ Reegle; <http://www.reegle.info/policy-and-regulatory-overviews/BB>

⁹ Reegle; <http://www.reegle.info/policy-and-regulatory-overviews/BB>

¹⁰ Reegle; <http://www.reegle.info/policy-and-regulatory-overviews/BB>

¹¹ Energy Transition Initiative; <http://www.nrel.gov/docs/fy15osti/64118.pdf>

		<ul style="list-style-type: none"> ● Energy efficiency incentives: (ex: Subsidies, labelling, rebates etc.) ??? ● Incentives for clean production and installation of pollution prevention technologies¹²: <ul style="list-style-type: none"> ● Zero value-added tax rate on all renewable energy and energy-efficient systems and products produced in Barbados; ● An income tax holiday of 10 years for developers, manufacturers, and installers of renewable energy products; ● A 150% deductible on expenditures for staff training, marketing of products for the sale of electricity, and product development or research that is related directly to the generation and sale of electricity. ● Actions to ensure compliance with regulations: (monitoring, enforcement, fines etc.) ??? ● Other actions at national, sub-national and / or local level to reduce industry emissions: ???
<p>REDUCE EMISSIONS FROM TRANSPORT</p>	<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"> ● Vehicular traffic on the island has been increasing steadily since the 1960s. Data from the Barbados Licensing Authority shows that the number of registered vehicles increased from around 17 000 in 1967 to approximately 34 000 in 1980, and from just under 40 000 in 1984 to about 57 000 in 19963. Data for June 1999 gave a total of 73 723 registered motor vehicles on the island, an average of about one per 3.6 persons in the population¹³. 	<ul style="list-style-type: none"> ● Vehicle emission limit: (Euro rating) No <ul style="list-style-type: none"> ● The Barbados National Standard BNS 258: 2011¹⁴. (<i>Note: Motor vehicles – Exhaust emissions was published in September 2011. It applies to exhaust emissions from all motor vehicles sold or offered for sale in Barbados, both on-the road and off-the road, fuelled by gasoline, diesel, compressed natural gas (CNG), and mixtures of other types of fuels. This standard is voluntary and has not yet been legislated. Additionally, testing and certification by the Competent Authority has not yet commenced.</i>) ● Fuel Sulphur content: (in ppm) <ul style="list-style-type: none"> ● Diesel was change from Industrial spec to Ultra-Low Sulphur Diesel of 15ppm in Dec 2012¹⁵. (<i>Note: The maximum allowable sulphur level in diesel is not currently legislated, however, there is a national contract specification as set by the authority responsible. The Barbados National Oil Company Limited (BNOCL) is the sole importer of petroleum in country. In Dec 2013 the sulphur content went to 15ppm, previously was at 5,000ppm.</i>)¹⁶ ● Restriction on used car importation: <ul style="list-style-type: none"> ● Used vehicles must be less than 4 years old, and an environmental tax is paid on arrival. In addition the vehicle must have new tyres and must be less than 50,000 km¹⁷.

¹² Reegle; <http://www.reegle.info/policy-and-regulatory-overviews/BB>

¹³ State of Environment Report, 2000; <http://mapas.centrogeo.org.mx/unep/documentos/Barbados/BARBADOSaire.pdf>

¹⁴ United Nations Environment Programme; http://www.unep.org/transport/pcfV/PDF/Maps_Matrices/LAC/matrix/LAC_FuelsVeh_Feb2014.pdf

¹⁵ Fuel Quality and Vehicle Standards in the Caribbean: Current Policy & Future Scenarios; http://www.unep.org/Transport/PCFV/PDF/jamaica2014_ST_PRIX_Presentation.pdf

¹⁶ United Nations Environment Programme; http://www.unep.org/transport/pcfV/PDF/Maps_Matrices/LAC/matrix/LAC_FuelsVeh_Feb2014.pdf

¹⁷ United Nations Environment Programme; http://www.unep.org/transport/pcfV/PDF/Maps_Matrices/LAC/matrix/LAC_FuelsVeh_Feb2014.pdf

		<ul style="list-style-type: none"> ● Actions to expand, improve and promote public transport and mass transit: <ul style="list-style-type: none"> ● Barbados will receive The IDB loan which will finance the rehabilitation and improvement of approximately 31 kilometres of key segments of Barbados' primary road network, including construction of sidewalks. It will also contribute to the strengthening of transport sector governance through capacity building within Barbados' Ministry of Transport and Works (MTW) in the key areas of transport planning and asset management, maintenance financing, technical standards for quality control and assurance, gender parity, and road safety¹⁸. ● Actions to promote non-motorized transport: (ex: include sidewalks and bike lanes in new road projects, car-free areas etc.) <ul style="list-style-type: none"> ● The Barbados Trailway is a proposed project to promote health and wellness, sustainable transport and tourism in Barbados which would convert the old Barbados Railway reserve from Bulkeley Sugar Factory, St. George to Consett Bay, St. John into an accessible pathway for pedestrians, runners and cyclists. The trail is currently used for an annual hike called the 'Colin Hudson Great Train Hike'¹⁹. ● Other transport-related actions: ???
REDUCE EMISSIONS FROM OPEN BURNING OF AGRICULTURAL / MUNICIPAL WASTE (OUTDOOR)	<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"> ● Open burning is commonly practiced mainly through cane fires; burning of grass/bush fires and the burning of refuse including garden waste²⁰. 	<ul style="list-style-type: none"> ● Legal framework: (ex: is burning banned?) ??? ● Actions to prevent open burning of municipal waste and / or agricultural waste: ???
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 5% of Barbados population are using Solid fuels for cooking and space heating²¹. 	<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: ???

¹⁸ Inter America Development Bank; <http://www.iadb.org/en/news/news-releases/2015-11-20/barbados-transport-and-road-maintenance,11328.html>

¹⁹ The Barbados Trailway; http://walk21vienna.com/?dg_voting_submission=the-barbados-trailway

²⁰ State of Environment Report, 2000; <http://mapas.centrogeo.org.mx/unep/documentos/Barbados/BARBADOSaire.pdf>

²¹ Environmental Health Perspectives; WHO; March 2006: https://isfcolombia.uniandes.edu.co/images/documentos/20110628-lec.ad.assessing_household_solid_fuel_use_multiple_implications_for_the_millennium_development_goal.pdf

	● Impact: ???	
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Secondary Sources used in the research: