

Bahrain 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.

Bahrain 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> <ul style="list-style-type: none"> • WHO estimates that air pollution causes less than 100 premature deaths annually¹ 	<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"> • Air pollution from industrial installations emanates from the following; petroleum processing and refining, aluminium smelting, iron pelletization, fertilizer manufacture, ship repairing among others. <p>GDP of country: USD 28.36B in 2013</p> <p>Industries' share of GDP:</p> <p>Electricity sources: 46.7%</p> <ul style="list-style-type: none"> • 100% of the installed electricity generating capacity (3.169 million KW in 2010) is generated from fossil fuel. 	<p>Emission regulations for industries:</p> <ul style="list-style-type: none"> • For industrial installations, several policy tools are used to regulate emissions, such tools include; <ul style="list-style-type: none"> • requirement for an Environmental Impact Assessment for new projects • Compliance Plan for existing establishment • Compliance Reports to emission standards for all operational plants • Complaints investigation • Routine Inspection <p>Small installation's emissions regulated: (Yes/No) ???</p> <p>Renewable energy investment promoted:</p> <p>Currently, there are no dedicated policies for the promotion of sustainable energy in Bahrain, although the need to promote such energy sources is recognized by the Ministry of Electricity and Water.</p>

¹ WHO, 'WHO | Country Profiles of Environmental Burden of Disease', WHO, 2008
<http://www.who.int/quantifying_ehimpacts/national/countryprofile/en/#T>.

	<p>Others</p> <ul style="list-style-type: none"> ● Industrial emissions are one the most important emission sources of NMHC, PM and SO₂ ● The oil and gas industry accounts for more than 19% of the GDP ● Electricity demand in Bahrain has grown rapidly in recent years, and the government expects demand to continue growing at 10% per annum. 	<p>Energy efficiency incentives: <i>(ex: Subsidies, labelling, rebates etc) ???</i></p> <ul style="list-style-type: none"> ● The Electricity and Water Authority in Bahrain has set a target of 40% reduction of building electricity consumption and CO₂ emissions to be achieved by using envelope thermal insulation codes. <p>Incentives for clean production and installation of pollution prevention technologies: ???</p> <p>Actions to ensure compliance with regulations: <i>(monitoring, enforcement, fines etc) ???</i></p> <p>Other actions at national, sub-national and / or local level to reduce industrial emissions: <i>(can include incentives to move industries to less populated areas here) ???</i></p>
<p>REDUCE EMISSIONS FROM TRANSPORT</p>	<p>Key transport-related air quality challenges: <i>(ex: vehicle growth, old fleet, dirty fuel, poor public transport etc)</i></p> <ul style="list-style-type: none"> ● Transport in Bahrain relies heavily on roads, with use of private cars being the most dominant mode of transport. ● Use of private cars is encouraged as demonstrated by the low fuel cost which stood at USD 0.27 per litre in 2015. ● Currently there is only one public transport provider in Bahrain - Cars Transport Corporation – which is privately owned and operated. ● Plans exits to expand public transport to include a tram service. ● Private car ownership is high with 537 cars per 1000 individuals in 2009² 	<p>Vehicle emission limit: <i>(Euro rating)</i></p> <ul style="list-style-type: none"> ● Ministerial Order (8) year of 2004 made specific requirement foe vehicle emission standards, some of these requirements were; <ul style="list-style-type: none"> ● All vehicle models made after 2004 and above must be fitted with catalytic converters ● CO in gasoline engines should not exceed 45ppm- HC 1.2ppm ● Opacity for diesel engines should not exceed 40% <p>Fuel Sulphur content: <i>(in ppm):</i></p> <ul style="list-style-type: none"> ● Diesel sulphur content is regulated at 500ppm, but the country produces diesel at 10ppm sulphur content for export. <p>Fuel Lead content: All vehicles use lead free gasoline since 2002</p> <p>Restriction on used car importation:</p> <p>Actions to expand, improve and promote public transport and mass transit: ???</p> <p>Actions to promote non-motorized transport: <i>(ex: include sidewalks and bike lanes in new road projects, car-free areas etc) ???</i></p> <p>Other transport-related actions: ???</p>

² World Bank, 'Motor Vehicles (per 1,000 People) | Data | Table', 2014

<<http://web.archive.org/web/20140209114811/http://data.worldbank.org/indicator/IS.VEH.NVEH.P3>> [accessed 25 September 2015].

<p>REDUCE EMISSIONS FROM OPEN BURNING OF AGRICULTURAL / MUNICIPAL WASTE (OUTDOOR)</p>	<p>Outdoor, open burning: <i>(ex: is it commonly done? burning what kinds of wastes? etc)</i></p>	<p>Legal framework: <i>(ex: is burning banned?)</i> ???</p> <p>Actions to prevent open burning of municipal waste and / or agricultural waste: ???</p>
<p>REDUCE EMISSIONS FROM OPEN BURNING: INDOOR</p>	<p>Dominant fuels used for cooking and space heating: ???</p> <p>Impact: ???</p> <p>Others</p> <ul style="list-style-type: none"> ● Burning traditional incense can have considerable detrimental effects on indoor air quality 	<p>Indoor air pollution regulated: <i>(Yes / No)</i> ???</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>