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		
GOALS	**CURRENT STATUS**	**CURRENT / PLANNED POLICIES & PROGRAMMES**
GENERAL OVERVIEW	● **Overall situation with respect to air quality in the country, including key air quality challenges**: • Airborne emissions from industry and transportation constitute significant environmental problems in Cuba. • Emissions—mostly from electric power plants and industrial facilities fuelled by oil and oil products—are a source of concern, particularly in the areas surrounding the source of the emissions. • Oil refineries and cement and nickel plants emit huge amounts of dust and particulant matter into the atmosphere, damaging air quality. ● **Air quality monitoring system**: Cuba has a national monitoring system for air quality which indicates high levels of NOx and NH3 in the urban areas[1].	● **National Ambient air quality standards**: *(Exist)* does not meet the recommended Ambient Air Quality Standards and WHO interim targets. ● **National Air Quality Policy**: **???** ● **Air Quality legislation / programmes**: • Technical standards and an Environmental Impact Assessment (EIA) and system of environmental permits are in place. ● **Other**: **???**
REDUCE EMISSIONS FROM	● **Industries that have the potential to impact air quality**: • Industries that have potential impact on	● **Emission regulations for industries**: **???** ● **Small installation's emissions regulated**: (Yes/No) **???**

1 Cuba's environmental profile: GoC-EU-Study

INDUSTRIES	air quality include electric power plants, industrial facilities, Oil refineries, cement and nickel plants ● **GDP of country**: USD $77.15 Billion 2013[2] ● **Industries' share of GDP**: 22.3% ● **Electricity sources**: ● Total electricity installed capacity as at (2009) was 4,900 MW with Thermoelectric accounting for 84%; combined cycle plants 12%; Natural gas 0.5%; Diesel 1.5% and other renewable energies 2%[3].	● **Renewable energy investment promoted**: ● Cuba is encouraging an increase in the use of Renewable Energy Sources in all economic sectors to foment a change in the energy matrix allowing to reduce dependency from fossil fuels, energy costs, and environmental impact ● Cuba has a solar farm, located in the central city of Santa Clara, 280 kilometres east of the country's capital, having 5,200 solar panels, which are enough to generate 962 kilowatts of electricity per day. ● Cuba currently derives 4 percent of its domestic energy consumption from renewable sources, including hydroelectric plants, biofuels and wind farms, but hopes to boost that figure to 10 percent by 2030[4]. ● **Energy efficiency incentives:** (ex: Subsidies, labelling, rebates etc.) Distribution of power-saving lamps and the fans to households free of charge.5 For the exchange of refrigerator households had to raise around 6,100 Cuban pesos (about 180 euros) However, if they could not pay the amount directly, they had the possibility to take out a loan. 230,500 television sets, 268,000 water pumps and 266,000 inefficient air conditioners were also exchanged. For businesses, 800,000 inefficient fluorescent tubes with magnetic ballasts for more efficient lamps with electronic ballasts were exchanged. Households were provided with simple electric hotplates, a special rice cooker and a pressure cooker 10 (both electric), as well as immersion heaters and pots at subsidized rates.

2 World Bank; http://data.worldbank.org/country/cuba

3 Renewable Energy and Energy Efficiency Partnership; http://www.reegle.info/policy-and-regulatory-overviews/CU

4 Global Times; http://www.globaltimes.cn/content/805102.shtml

5 Cuban Energy Revolution ; A Model for Climate Protection? Dieter Seifried

		• **Incentives for clean production and installation of pollution prevention technologies**: **???** • **Actions to ensure compliance with regulations:** (monitoring, enforcement, fines etc.) **???** • **Other actions at national, sub-national and / or local level to reduce industry emissions**: **???**
REDUCE EMISSIONS FROM TRANSPORT	• **Key transport-related air quality challenges**: (ex: vehicle growth, old fleet, dirty fuel, poor public transport etc.) • Cars in Cuba are of quite old vintage, a large portion predating use of catalytic converters, and are in a state of disrepair hence producing a lot of smoke[6]. • Automobile emissions present less of an environmental problem in Cuba compared to other countries because of the relatively low density of automobiles per capita in the island. • In the cities air pollution from (old) cars is a growing concern but traffic density is low compared to other cities in countries in the region. • A higher proportion of Vehicles in Cuba consists of old American (pre-1959) and Russian cars; new imports from China.	• **Vehicle emission limit**: (Euro rating) **???** • **Fuel Sulphur content**: (in ppm) 8000 ppm in diesel and 1200ppm in Petrol[7] • **Restriction on used car importation**: • Imported used vehicles must be less than four years old (by date of manufacture, not model year)[8] • **Actions to expand, improve and promote public transport and mass transit**: Through Havana project Cuban government is promoting investment support to reduce the volume of traffic generated by the standard model of urban transport development. The emphasis of such new initiatives is to encourage the greater use of public transport and reduce greenhouse gas (GHG) emissions[9]. • **Actions to promote non-motorized transport**: (ex: include sidewalks and bike lanes in new road projects, car-free areas etc.) Encouragement of non-motorised mobility (including walking and cycling) and urban planning to minimise transport needs[10]. • **Other transport-related actions**: **???**
REDUCE EMISSIONS FROM OPEN BURNING OF AGRICULTURAL	• **Outdoor, open burning**: (ex: is it commonly done? burning what kinds of wastes? etc.) **???**	• **Legal framework**: (ex: is burning banned?) **???** • **Actions to prevent open burning of municipal waste and / or agricultural waste**: **???**

6 THE ENVIRONMENT AND THE CUBAN TRANSITION: Sergio Díaz-Briquets and Jorge F. Pérez-López

7 Latin America And The Caribbean Sulphur Levels In Diesel Fuel; http://www.unep.org/transport/pcfv/pdf/matrixlacsulphurjan09.pdf

8 Status of Fuel Quality and Vehicle Emission Standards: Latin America and the Caribbean; March 2012

9 Havana transport project: introductory notes; http://www.ucl.ac.uk/americas/ia-events/events_documentation/Havana_transport__introductory_notes_final.pdf

10 Havana transport project: introductory notes; http://www.ucl.ac.uk/americas/ia-events/events_documentation/Havana_transport__introductory_notes_final.pdf

/ MUNICIPAL WASTE (OUTDOOR)		
REDUCE EMISSIONS FROM OPEN BURNING OF BIOMASS (INDOOR)	● **Dominant fuels used for cooking and space heating**: Main fuels used for cooking and space heating are Electricity, Kerosene and LPG gas, although 21% of households use solid fuel for cooking ● **Impact**: 600 deaths/year from indoor air pollution; 1,800 deaths/year from outdoor air pollution	● **Indoor air pollution regulated**: (Yes / No) **???** ● **Promotion of non-grid / grid electrification**: • Cuban Ministry of Energy rolled out an education campaign on how to save energy using all kinds of media, from national television to advertisements on billboards and messaging on pre-paid cell phone cards[11]. ● **Promotion of cleaner cooking fuels and clean cook stoves**: • Three million households were converted to electric cooking from kerosene for cooking which was both an energy and public health problem within months which saved about 250,000 tons of oil annually[12] . ● **Other actions to reduce indoor biomass burning, or to reduce its emissions**: **???**

Secondary Sources used in the research: