

## 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).

| <b>BRAZIL</b>                    |   |  |
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| <b>GOALS</b>                     | <b>CURRENT STATUS</b>   | <b>CURRENT / PLANNED POLICIES &amp; PROGRAMMES</b>   |
| 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> Rapid urbanisation and industrialisation has impacted on air quality in large urban centres. Sao Paulo has twice as much particulates than WHO standard</li> <li>● <b>Air quality monitoring system:</b> Yes, in some cities</li> </ul>   | <ul style="list-style-type: none"> <li>● <b>National Ambient air quality standards:</b> PM10 meets WHO Interim Targets; O3, SO2 and NO2 don't meet WHO targets; there is no standard for PM2.5</li> <li>● <b>National Air Quality Policy:</b></li> <li>● <b>Air Quality legislation / programmes:</b> National Programme for Control of Air Quality (1989) established strategies of setting national standards for air quality and emissions at source; in 1990, set maximum limits for emission from external combustion processes</li> <li>● <b>Other:</b> Brazil has a generally advanced and comprehensive legislation on environmental protection and sustainability</li> </ul>  |
| REDUCE EMISSIONS FROM INDUSTRIES | <ul style="list-style-type: none"> <li>● <b>Industries that have the potential to impact air quality:</b> chemicals, cement, iron ore, tin, steel, textiles, petrochemicals</li> <li>● Brazil has a high concentration of pollution-intensive export industries</li> <li>● <b>GDP of country:</b> \$2 trillion</li> <li>● <b>Industries' share of GDP:</b> 27%</li> <li>● <b>Electricity sources:</b> hydro (80% - varies depending on amount of rain), biofuels (6%), natural gas (5%), nuclear (3%), oil (3%), coal (3%)</li> </ul> | <ul style="list-style-type: none"> <li>● <b>Emission regulations for industries:</b> national emission limits for point and non-point sources; for combustion plants, based on grams/kilocalorie; in 2012, emission standards were applied to older facilities as well, including boilers, electrical turbines, oil refineries, steel mills, aluminium smelters, lead foundries, cement kilns and fertiliser factories</li> <li>● <b>Small installation's emissions regulated:</b> Yes</li> <li>● <b>Renewable energy investment promoted:</b> Renewable energy target 86% of electricity generation by 2023. Funding for renewables available. Fuel tax and import duties exemptions, transmission discount. Incentives for solar water heating from sub-national solar mandates (buildings must meet a % of heating needs through solar energy)</li> <li>● <b>Energy efficiency incentives:</b> Energy Efficiency Program demands electricity providers to spend 0.5% of net income in energy efficiency projects</li> <li>● <b>Incentives for clean production and installation of pollution prevention technologies:</b> ???</li> <li>● <b>Actions to ensure compliance with regulations:</b> criminal penalties for environmental crimes; administrative sanctions for violations, including warning, fines, seizure of products and</li> </ul> |

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|   |  | <p>premises, suspension of activities, closing of premises, restriction of rights</p> <ul style="list-style-type: none"> <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> <li>● Fiscal incentives still exist to encourage car production (in 1956, car industry seen as important for economic development), and are contradictory to the new urban mobility policy</li> <li>● Protests in June 2013 led the federal government to increase transport investments through the Mobility Pact, to move away from increasing car lanes as the response to transport needs</li> <li>● Sao Paulo was the ITDP 2015 Sustainable Transport Award Finalist</li> </ul> | <ul style="list-style-type: none"> <li>● <b>Vehicle emission limit:</b> Euro 4 / 5</li> <li>● <b>Fuel Sulphur content:</b> 500 ppm and 10ppm available nationwide</li> <li>● <b>Restriction on used car importation:</b> Banned</li> <li>● <b>Actions to expand, improve and promote public transport and mass transit:</b> In Rio, a lot of activity, including a bus rapid transit system, with new lines being added for the 2016 Olympics, and expansion of the metro, 320km of exclusive bus lanes. In Curitiba, high-density transit corridors were integrated into the city's master plan to promote residential and industrial development in those areas; as a result of these corridors and other smart transit planning decisions, Curitiba has one of the most heavily used yet low-cost transit systems in the world</li> <li>● <b>Actions to promote non-motorized transport:</b> new urban mobility policy aims to prioritise non-motorised and public transport over private cars by redesigning roads to give more space to non-motorised vehicles and promoting more efficient, sustainable modes; 108km protected bike paths citywide (but paths are not connected in a wider network); city plans to have 400km bike lanes by end 2015</li> <li>● <b>Other transport-related actions:</b> Rio de Janeiro has mandatory annual vehicle emission inspections, with nonrenewal of registration if don't pass; government programme to incentivise more efficient vehicles; voluntary fuel efficiency labelling programme (so far, only 11 out of 107 models are labelled)</li> </ul> |
| <p>REDUCE EMISSIONS FROM OPEN BURNING OF AGRICULTURAL / MUNICIPAL WASTE (OUTDOOR)</p> | <ul style="list-style-type: none"> <li>● <b>Outdoor, open burning:</b> open burning of pre-harvest sugarcane fields is common and has significant impact on air pollution, thus lowering possible benefits of using biofuels</li> <li>● Sugarcane burning also has a significant impact on indoor air quality for communities near the fields</li> </ul>   | <ul style="list-style-type: none"> <li>● <b>Legal framework:</b> (ex: is burning banned?) ???</li> <li>● <b>Actions to prevent open burning of municipal waste and / or agricultural waste:</b> Alternatives to open burning of agricultural waste are being explored - in MERCOSUR (of which Brazil is a full member), ~80% of crops are planted using no-tillage methods (without burning); Cutting down on deforestation in Brazil, where land is often cleared by burning, has caused particulate matter concentrations to decline by about 30% during the dry season</li> <li>● There is no all-encompassing national law regarding waste management, so this is left to states and cities</li> </ul>  |
| <p>REDUCE EMISSIONS</p>   | <ul style="list-style-type: none"> <li>● <b>Dominant fuels used for cooking and space heating:</b> 13% use solid fuel</li> </ul>   | <ul style="list-style-type: none"> <li>● <b>Indoor air pollution regulated:</b> (Yes / No) ???</li> </ul>   |

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| FROM OPEN BURNING OF BIOMASS (INDOOR) | <ul style="list-style-type: none"> <li>● <b>Impact:</b> 10,700 deaths/year from indoor air pollution (13,600 from outdoor air pollution)</li> </ul> | <ul style="list-style-type: none"> <li>● <b>Promotion of non-grid / grid electrification:</b> 98% in urban areas, but lower in rural areas. Luz Para Todos was a programme to expand electrification within rural areas, using off-grid sources when necessary</li> <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> |
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**Secondary Sources used in the research:** <http://www.cleanairinstitute.org/calidaddelaireamericalatina/cai-report-english.pdf>, [http://www.unep.org/Transport/new/PCFV/pdf/Maps\\_Matrices/LAC/matrix/LAC\\_FuelsVeh\\_June2015.pdf](http://www.unep.org/Transport/new/PCFV/pdf/Maps_Matrices/LAC/matrix/LAC_FuelsVeh_June2015.pdf), <http://latinlawyer.com/>, [http://www.irena.org/DocumentDownloads/Publications/IRENA\\_RE\\_Latin\\_America\\_Policies\\_2015.pdf](http://www.irena.org/DocumentDownloads/Publications/IRENA_RE_Latin_America_Policies_2015.pdf), <http://airlex.web.ua.pt/pm10>, [http://www.who.int/quantifying\\_ehimpacts/national/countryprofile/en/#I](http://www.who.int/quantifying_ehimpacts/national/countryprofile/en/#I), <http://www.nrdc.org/international/files/latin-america-diesel-pollution-IB.pdf>, [https://energypedia.info/wiki/Energy\\_Efficiency\\_Program\\_%28PEE%29\\_in\\_Brazil](https://energypedia.info/wiki/Energy_Efficiency_Program_%28PEE%29_in_Brazil), <http://www.reegle.info/countries/brazil-energy-profile/BR>, <http://www.nature.com/nclimate/journal/v2/n1/full/nclimate1325.html>, <http://www.theguardian.com/sustainable-business/brazil-sustainability-government-automobile-policies>, <http://www.iea-coal.org.uk/documents/82536/7826/Brazil>, [http://www.cathalac.org/GEOSS\\_Americas/ppt\\_geoss\\_symposium/Wednesday\\_10\\_01\\_08/Air\\_Quality/03\\_Martins\\_AirQualitySPMRGEOSSfinal\\_CETESB.pdf](http://www.cathalac.org/GEOSS_Americas/ppt_geoss_symposium/Wednesday_10_01_08/Air_Quality/03_Martins_AirQualitySPMRGEOSSfinal_CETESB.pdf), <http://www.sciencedirect.com/science/article/pii/S0269749112001753>, <http://www.washingtonpost.com/news/energy-environment/wp/2015/09/16/scientists-say-air-pollution-causes-more-than-3-million-deaths-per-year-around-the-world/>, <http://latinlawyer.com/reference/article/40585/brazil/>, <http://www.bdlaw.com/news-1276.html>, <http://www.wricities.org/news/ensuring-brazil%E2%80%99s-urban-mobility-projects-support-sustainable-transport>, <http://riotimesonline.com/brazil-news/rio-real-estate/olympic-construction-transforms-public-transport-in-rio-de-janeiro/#>, <https://www.itdp.org/2015-sustainable-transport-award-finalist-sao-paulo-brazil/>