

South Africa

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.

South Africa Air Quality Overview		
Goals	Status	Current Policies & Programmes
GENERAL OVERVIEW	<p>Overall situation with respect to air quality in the country, including key air quality challenges:</p> <ul style="list-style-type: none"> • In South Africa air quality varies temporarily and spatially, with worst air quality being experienced in urban centers during cold and calm nights, • Remote and rural areas enjoy relatively pristine air for the most part of the year, but this is usually interrupted by increase particulate and carbon monoxide pollution during the dry season, when forest and savannah fires are common. • Poor ventilation and use of biomass and kerosene for cooking and lighting respectively, degrades indoor air quality. • Historically, SO₂ and PM₁₀ have been the air pollutant of concern in South Africa, nevertheless recent data indicate that the concentrations of SO₂ in various regions is reducing while that of PM₁₀ remains unchanged or increasing in some region <p>Air quality monitoring system:???</p>	<p>National Ambient air quality standards: are operational</p> <p>National Air Quality Policy???</p> <p>Air Quality legislation / programmes:</p> <ul style="list-style-type: none"> • In South Africa, the environment is governed by the National Environmental Management Act, 1998 (Act 107 of 1998) (“NEMA”). • The Air Quality Act (Act 39 of 2004) (“AQA”) was promulgated as part of NEMA. Provisions in this Act includes: a national air quality framework; the establishment of national, provincial and local ambient air quality and emission standards; declaration and management of priority areas for areas where air quality is of particular concern; listed activities that require an atmospheric emissions license; listing of controlled emitters and controlled fuels; and a range of new criminal offences. <p>Other:</p> <ul style="list-style-type: none"> • An amendment to the AQA issued in 2010, established a list of emission sources to be regulated, it also established the minimum emission standards for each of these emission sources. • Some of the emission sources established by this amendment include; solid fuel combustion installation, petroleum industry, combustion installations, metallurgical industry, organic chemical industries, waste disposal, pulp and paper industry among others.

	<p>Other:</p> <ul style="list-style-type: none"> Outdoor air pollution is estimated to cause 1,100 premature deaths annually¹ 	<ul style="list-style-type: none"> For these industries, the amendment caps the emissions of PM, SO₂, NO_x, and NO₂. The amendment also caps the emission of other minor pollutants from specific industries, such as ammonium, hydrogen chloride and chlorine from the precious and base metal production and refining industries among others.
REDUCE EMISSIONS FROM INDUSTRIES	<p>Industries that have the potential to impact air quality²:</p> <ul style="list-style-type: none"> Mining (world's largest producer of platinum, gold, chromium), automobile assembly, metalworking, machinery, textiles, iron and steel, chemicals, fertilizer, foodstuffs, agriculture, commercial ship repair industries among others <p>GDP of country: USD 353.9 Billion in 2013</p> <p>Industries' share of GDP: 29%.</p> <p>Electricity sources:</p> <ul style="list-style-type: none"> 90.8% of electricity produced (257.9 billion KWH, 2012 estimates) from fossil fuels Electricity production from coal is one of the major drivers of air pollution in the country <p>Other:</p> <ul style="list-style-type: none"> PM₁₀ and SO₂ are considered to be the most important industrial air pollutants in the country Growth in industrial emissions is projected to increase in the coming years 	<p>Emission regulations for industries: Industrial emissions are regulated through the Air Quality Act source emission requirements that will be enforceable by 2020, although companies can apply for an extension</p> <p>Small installation's emissions regulated: Small installations are not regulated</p> <p>Renewable energy investment promoted:</p> <ul style="list-style-type: none"> Renewable energy production is subsidized to encourage investment in the sector. Some of the initiatives include the South African Renewables Initiative (SARI) and the South African Renewable Energy Council (SAREC), the creation of the Green Economy Accord - through the launch of the Country's Green Economy Accord in November 2011, In addition to the the Government of South Africa has committed to procuring 3,725 MW of renewable energy for the national grid by 2016 Additional initiatives includes the incorporation of green growth goals in the Industrial Action Plan (IPAP2), the introduction and revision of the Integrated Resources Plan in 2009 and 2010, and finally the Renewable Energy Independent Power Producer Procurement Programme (REIPPP)³ <p>Energy efficiency incentives:</p> <ul style="list-style-type: none"> There are several incentives and support schemes to encourage clean production, there are also several policy instruments to support the same, such as the Energy Efficient Motors Program, which issues direct subsidies to the purchase of new motors

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

² 'Countries of the World - 32 Years of CIA World Fact Books', 2015 <<http://www.theodora.com/wfb/#R>>.

³ 'Reegle - Clean Energy Information Gateway', Reegle - Clean Energy Information Gateway <<http://www.reegle.info>> [accessed 22 September 2015].

		<ul style="list-style-type: none"> • There are incentives to encourage energy efficiency within industries and the country aims to improve energy efficiency for various sectors by 12% by 2015 <p>Actions to ensure compliance with regulations???</p> <p>Other actions at national, sub-national and / or local level to reduce industry???</p>
REDUCE EMISSIONS FROM TRANSPORT	<p>Key transport-related air quality challenges: (ex: vehicle growth, old fleet, dirty fuel, poor public transport etc)</p> <ul style="list-style-type: none"> • The transport sector is estimated to emit up to 55% of all VOCs in urban centers and 45% of all PM <p>Other:</p> <ul style="list-style-type: none"> • Public transport in South Africa is dominated by bus system which are publicly run, although there are several private companies that run busses for public transport. • Use of private cars is discouraged as demonstrated by the high fuel cost which stood at USD 0.93 per liter in Sept, 2015. • Private car ownership is low with 165 cars per 1000 individuals in 2010⁴ • Vehicle emission standards in South Africa are regulated using several policy instruments targeting the major drivers of emission from vehicles including; vehicle emission restrictions that matches Euro 2 specification, restriction on used car importations, CO2 tax and labelling on fuel efficiency for all new vehicles. • Although much has been done to improve fuel quality, the fuel quality is still not sufficient to support the use of much cleaner technologies and it 	<p>Vehicle emission limit: Euro 2 standards</p> <p>Fuel Sulphur content: capped at 500ppm, but cleaner fuel at 50ppm is available in the market</p> <p>Fuel lead content: Leaded fuel was phase out in 2006</p> <p>Restriction on used car importation: ???</p> <p>Actions to expand, improve and promote public transport and mass transit: Investments have been made in bus rapid transit system in some urban areas and Investment have been made in intercity train services</p> <p>Actions to promote non-motorized transport ???</p> <p>Others ???</p>

⁴ 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].

	is usually sited as one of the major hindrance for the adoption of much stricter vehicle emission standards such as Euro 4 or Euro 5.	
REDUCE EMISSIONS FROM OPEN BURNING: OUTDOOR	<p>Outdoor, open burning (<i>ex: is it commonly done? burning what kinds of wastes? etc</i>):</p> <ul style="list-style-type: none"> • Burning of agricultural waste is a common practice in south Africa 	<ul style="list-style-type: none"> • Legal framework: (<i>ex: is burning banned?</i>) ??? • Actions to prevent open burning of municipal waste and / or agricultural waste: ???
REDUCE EMISSIONS FROM OPEN BURNING: INDOOR	<p>Dominant fuels used for cooking and space heating:</p> <ul style="list-style-type: none"> • Wood is the dominant fuels for 13% of the population <p>Impact: Indoor air pollution causes an estimated 3,200 premature deaths every year</p> <p>Others</p> <ul style="list-style-type: none"> • Air pollution from indoor sources is the single largest contributor to the negative health effects of air pollution. 	<p>Indoor air pollution regulated: (Yes / No) ???</p> <p>Promotion of non-grid / grid electrification: ???</p> <p>Promotion of cleaner cooking fuels and clean cook stoves: 73% of its population has access to electricity⁵</p> <p>Other actions to reduce indoor biomass burning, or to reduce its emissions: ???</p>

⁵ 'Reegle - Clean Energy Information Gateway.'