

Croatia 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.

Croatia 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> <ul style="list-style-type: none"> ● In rural areas the air is generally clean, and pollution is transported there from polluted urban or industrial areas. ● PM10 pollution is the most important source of air pollution in Croatia ● The PM pollution generally emanates from traffic, large combustion plants and large point sources ● WHO estimates that outdoor air pollution causes 1000 premature deaths annually¹ <p>Air quality monitoring system:</p> <ul style="list-style-type: none"> ● Air quality is monitored in settlements and cities or their parts where a more significant pollution occurs. 	<p>National Ambient air quality standards:</p> <ul style="list-style-type: none"> ● Complete harmonization of European Union air quality legislation <p>National Air Quality Policy:</p> <ul style="list-style-type: none"> ● The EU air quality policy has a long term goal of achieving levels of air quality that do not result in unacceptable impacts on, and risks to, human health and the environment." ● European Union air quality policy aims to; <ul style="list-style-type: none"> - Develop and implement appropriate instruments to improve air quality. - Control of emissions from mobile sources, through fuel quality improvement, - Promoting and integrating environmental protection requirements into the transport and energy sector are part of these aims. <p>Air Quality legislation / programmes:</p> <ul style="list-style-type: none"> ● The Croatian legislation on air pollution is in fully compliance with the EU requirements ● The control of air pollutants and the management of air quality is for the most part the same as the EU's practice. <p>Other:</p> <p>„On 1 July 2013 the Republic of Croatia became a full member of the European Union, with all the rights and obligations arising from this membership. In the accession process, environmental legislation was fully transposed into national legislation.</p> <p>1.) Programme for gradual reduction of emissions for certain pollutants in the Republic of Croatia for the period until the end of 2010 with emission projections for the period from 2010 to 2020 (OG 152/08) covers the following pollutants: SO₂, NO₂, volatile organic</p>

		<p>compounds (VOC), NH₃, PM and heavy metals: Cd, Pb and Hg</p> <p>2.) Decision on the adoption of the Plan for the protection of air, ozone layer and climate change mitigation in the Republic of Croatia for the 2013 – 2017 period (OG 139/13)</p> <p>-the Plan sets objectives and priorities in the protection of air, ozone layer and climate change mitigation in the Republic of Croatia in the five-year period from 2103 – 2017. The aim of the Plan is definition and development of goals and measures by sectors of influence with defined priorities, time frames and responsibilities. The main goal is to protect and continuously improve the quality of air in the Croatian territory.</p>
<p>REDUCE EMISSIONS FROM INDUSTRIES</p>	<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: chemicals and plastics, machine tools, fabricated metal, electronics, pig iron and rolled steel products, aluminium, paper, wood products, construction materials, textiles, shipbuilding, petroleum and petroleum refining, food and beverages among others <p>GDP of country: USD 59.14 B in 20132</p> <p>Industries' share of GDP: 25.8%3</p> <p>Electricity sources:</p> <ul style="list-style-type: none"> • 45.9% of the installed electricity generating capacity (4.132 million KW in 2010) is generated from fossil fuel, 44.7% from hydroelectric plants and the rest 2.3% is generated from other renewable sources4 <p>Others</p>	<p>Emission regulations for industries:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Industrial emissions within the European Union are regulated under the Industrial Emissions Directive (IED), which was issued on 21 December 2007 <input type="checkbox"/> The directive's aim was to achieve significant benefits to the environment and human health by reducing harmful industrial emissions across the EU, in particular through better application of Best Available Techniques. <input type="checkbox"/> The IED entered into force on 6 January 2011 and has to be transposed into national legislation by Member States by 7 January 2013. <input type="checkbox"/> European legislation establishes air quality objectives (limit and target values) for the different pollutants. Limit values are concentrations that must not be exceeded in a given period of time. <p>Emission limit values for industrial installations are transposed from IED Directive by the Regulation on emission limit values of air pollutants from stationary sources (OG 117/12 and 90/14).</p> <p>Small installation's emissions regulated: <i>(Yes/No) yes</i></p> <p>Small installation's emissions are regulated by the Regulation on emission limit values of air pollutants from stationary sources (OG 117/12 and 90/14).</p> <p>Renewable energy investment promoted:</p> <ul style="list-style-type: none"> <input type="checkbox"/> The principal objectives of the energy policy of the Republic of Croatia are: <input type="checkbox"/> Improvement of energy efficiency <input type="checkbox"/> Utilization of renewable sources of energy <input type="checkbox"/> Environmental protection, <input type="checkbox"/> Education and promotion of best practices. <input type="checkbox"/> The feed-in tariff system in Croatia is comprehensive, with different tariff structures existing for plants smaller and larger than 1 MW.

	<p>Energy efficiency incentives: <i>(ex: Subsidies, labelling, rebates etc)</i> Through the national Environmental Protection and Energy Efficiency Fund different energy projects are co-financed: reconstruction of family houses and apartment buildings, reconstruction of non-residential buildings, energy efficient construction, purchase of household appliances class A +++, use of renewable energy, energy efficient lighting and cleaner transport.</p> <p>Incentives for clean production and installation of pollution prevention technologies: Environmental Protection and Energy Efficiency Fund is on an annual basis co-financing measures for introducing ISO 14001 and EMAS into organizations and preparation for EU Ecolabel certification.</p> <p>Actions to ensure compliance with regulations. <i>(monitoring, enforcement, fines etc)</i></p> <p>Emission monitoring from industrial installations is regulated by the Regulation on emission limit values of air pollutants from stationary sources (OG 117/12 and 90/14) which determines air pollutants, as well as their monitoring dynamics, and the Ordinance on monitoring emissions of air pollutants from stationary sources (OG 129/12, 97/13) regulates the manner of monitoring emissions of air pollutants from stationary sources, scope and type of measurement, reference measurement methods, the method of proving equivalence for other methods of measurement, method of checking accuracy and calibration of measuring instruments, the manner of verification of the measuring system for continuous measurement of air pollutants from stationary sources, the sampling procedure and evaluation of the measurement results, the method of submitting data for the air emissions information system and method for regularly informing the public on monitoring the emissions.</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>The most important is Directive 2010/75/EU on industrial emissions (IED), which replaced Directive 2008/1/EC concerning integrated pollution prevention and control (IPPC Directive) and Directive 2000/76/EC on Waste Incineration of January 2014. The aim of the IPPC Directive/IED is to ensure a high level of protection of the environment in industrial processes. Industrial facilities which include activities covered by Annex I of the Directive are required to obtain an environmental permit. Emissions of all relevant polluting substances, which are likely to be emitted in significant quantities, have to be regulated in the permit. The conditions set out in this permit, in particular the emission limits, have to be based on the application of the Best Available Techniques (BAT). The European Commission enabled exchange of information on BATs for different industrial sectors, using the so-called reference documents on best available techniques (BREF).</p> <p>Regulation on environmental permit (OG 8/14) –prescribes ELVs for emissions into the air,</p>
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<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"> ● Croatia has a large and a well-developed modern transport system comprising of busses, trains, trams and taxis. ● Use of private cars is discouraged as demonstrated by the high fuel cost which stood at USD 1.32 per litre in 20155. ● Private car ownership is high, with 380 cars per 1000 individuals in 20106 	<p>soil and water in accordance with BREF documents</p> <p>Vehicle emission limit: (<i>Euro rating</i>)</p> <ul style="list-style-type: none"> ● Emissions standards for vehicles correspond to Euro 6 for LDV vi HDV standards. ● European Union emission regulations for new light duty vehicles (passenger cars and light commercial vehicles) are specified in Regulation 715/2007 (Euro 5/6) [2899]. ● Emission standards for light-duty vehicles are applicable to all vehicles not exceeding 2610 kg (Euro 5/6). ● EU regulations introduce different emission limits for <i>compression ignition</i> (diesel) and <i>positive ignition</i> (gasoline, NG, LPG, ethanol,...) vehicles. Diesels have more stringent CO standards but are allowed higher NOx. Positive ignition vehicles were exempted from PM standards through the Euro 4 stage. Euro 5/6 regulations introduce PM mass emission standards, equal to those for diesels, for positive ignition vehicles with direct injection engines. <p>Fuel Sulphur content: (<i>in ppm</i>)</p> <ul style="list-style-type: none"> ● The 2000/2005 emission standards were accompanied by an introduction of more stringent fuel regulations that require “Sulphur-free” diesel and gasoline fuels (≤ 10 ppm S) must be mandatory from 2009. ● Maximum allowable sulphur level in petrol and diesel fuels is 10ppm <p>Fuel Lead content: All vehicles use lead free gasoline</p> <p>Restriction on used car importation:</p> <p>Actions to expand, improve and promote public transport and mass transit: Regarding the 3rd National Energy Efficiency Action Plan the Ministry of Environmental and Nature Protection contributes to the implementation of the goals with the Environmental Protection and Energy Efficiency Fund which co-finances the measures for improving energy efficiency in transportation through 3 programmes: co-financing the purchase of electric, plug-in hybrid and hybrid vehicles for citizens, companies and trades, co-financing eco driving training and co-financing other energy measures.</p> <p>The purchase of new vehicles of category M1 and N1 were co-financed.</p> <p>Amount of eco-financing depends on the type of vehicle.</p> <p>The Environmental Protection and Energy Efficiency Fund, from funds provided by environmental fees for vehicles, co-finances projects that promote usage of other alternative fuels (LNG,CNG).</p> <ul style="list-style-type: none"> ● Excise duties corrections – introducing environmental criteria
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<p>REDUCE EMISSIONS FROM OPEN BURNING: 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> YES</p> <p>Actions to prevent open burning of municipal waste and / or agricultural waste: YES</p> <p>1.) Act on Sustainable Waste Management (OG 94/13), Article 11 „ It shall be prohibited to incinerate waste in the environment, including the incineration of waste at sea and the incineration of waste plant material from agriculture and forestry in contravention of the provisions of this Act and the regulations adopted on the basis thereof.“</p> <p>2.) Ordinance on methods and requirements for thermal treatment of waste (OG 45/07)</p> <p>3.) By the Regulation on limit values for pollutant emissions from stationary sources into the air (OG 117/12 and 90/14)</p>

		<p>ELVs for waste co-incineration and incineration are regulated</p> <p>4.) Ordinance on good agricultural and environmental conditions and requirements of cross compliance (OG 65/13), - on the management of crop residues, specifically prohibits the burning of straw and stubble. Burning of crop residues is permitted only in order to prevent the spread and suppression of plant pathogens for which there is an officially ordered measure. Control of meeting the established good agricultural and environmental conditions applied by the Agency for payments in agriculture, fisheries and rural development, and the fulfilment of conditions payers are required to implement management of crop residues on agricultural land owned or used.</p> <p>5.) Agro-technical measures Regulations (OG 142/13) Article 9 also states that burning of crop residues on agricultural land is prohibited, and permitted only for the purpose of preventing the spread and control of plant pest.</p>
<p>REDUCE EMISSIONS FROM OPEN BURNING: INDOOR</p>	<p>Dominant fuels used for cooking and space heating:</p> <p>Impact:</p> <ul style="list-style-type: none"> • WHO estimates that indoor air pollution causes <100 premature deaths annually⁷ 	<p>Indoor air pollution regulated: (<i>Yes / No</i>) No</p> <p>In national legislation there is an Ordinance on limit values for exposure to hazardous substances at work and on biological limit values (OG 13/09 and 75/13).</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> <ul style="list-style-type: none"> <input type="checkbox"/> Energy efficiency measures include the use of low-energy bulbs and refrigerators in households.

¹WHO, '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'Countries of the World - 32 Years of CIA World Fact Books'.

⁴'Countries of the World - 32 Years of CIA World Fact Books'.

⁵'Gasoline Prices around the World, 28-Sep-2015 | GlobalPetrolPrices.com' <http://www.globalpetrolprices.com/gasoline_prices/> [accessed 5 October 2015].

⁶World Bank, *Worldwide Total Motor Vehicles (per 1,000 People)*, 2011 <<http://chartsbin.com/view/1114>> [accessed 30 June 2015].

⁷WHO, 'WHO | Country Profiles of Environmental Burden of Disease', WHO, 2008

<http://www.who.int/quantifying_ehimpacts/national/countryprofile/en/#T>.