

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.

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GOALS	CURRENT STATUS	CURRENT / PLANNED POLICIES & PROGRAMMES
GENERAL OVERVIEW	<ul style="list-style-type: none"> ● Overall situation with respect to air quality in the country, including key air quality challenges: Almaty was rated as the 9th most polluted city in the world (Mercer Human Resource Consulting); ten out of eleven cities tested for PM10, SO2 and NO2 had concentrations many times higher than EU limits, indicating very high exposure to ambient air pollution; : industries with aging equipment, oil production, metallurgy, vehicles, mining, power plants are key issues ● Study in 2012 on particulate air pollution (TSP only) indicated no less than 7,500 premature deaths annually, with an expected mean of 16,500 deaths, plus morbidity damages caused by diseases, disability and lost productivity ● Pro-environmental legal framework, but poor law enforcement and human resources, particularly at local level; Environmental Code provides obligation to ensure public access to results of environmental self-monitoring and permit compliance control; in practice, publication of information isn't mandatory 	<ul style="list-style-type: none"> ● National Ambient air quality standards: based on TSP (total suspended particles), rather than on PM2.5 and PM10 ● National Air Quality Policy: No ● Air Quality legislation / programmes: Environmental Code (2007) provides basic legislative framework for environmental protection ● Other: Green Economy Concept 2013-2020 includes 6 pillars, one of which is air pollution reduction, and outlines 5 actions for the industrial sector (update emission standards, install dust and gas collectors, improve monitoring and compliance, establish system for specific emissions per unit of production, design system for monitoring validation of projects), and 3 actions for transport (update vehicle emission standards to Euro regulations, conduct annual car exhaust inspections, convert public transport to natural gas in major cities)

	<ul style="list-style-type: none"> ● Air quality monitoring system: Yes, needs upgrading 	
REDUCE EMISSIONS FROM INDUSTRIES	<ul style="list-style-type: none"> ● Industries that have the potential to impact air quality: extractive industries: oil, coal, iron ore, lead, copper, gold etc; agricultural machinery, agribusiness, machinery building, production of construction materials ● Mining and production industry is outdated and energy-intensive; No widespread adoption of cleaner production or Best Available Techniques, due to uncertainty and lack of transparency in regulatory standards and legislation; Power stations use low quality coal and no emission control devices ● Almaty – largest urban area – doesn’t have a high concentration of industry ● GDP of country: \$212 billion ● Industries’ share of GDP: 38% ● Electricity sources: coal (81%), gas, hydro ● Wind energy has a lot of potential that isn’t being used 	<ul style="list-style-type: none"> ● Emission regulations for industries: Yes, by Emission Limit Values, which is based on flow rate (grams/second) whereas best practice is to set standards according to emissions concentration (milligrams/m3), to benchmark relative hazard of emissions with the health-based standard ● Small installation’s emissions regulated: Yes ● Renewable energy investment promoted: new law in 2013 – On Supporting the Use of Renewable Energy Sources, promoting technology-specific feed-in tariffs for electricity from renewable sources; wind, solar, biomass, geothermal and water up to 35MW are eligible for the tariff; Government plans to develop 1040MW of alternative and renewable energy by 2020, mostly from wind, with a long-term goal of generating 50% of all power from alternative sources (currently less than 1%); a number of incentives for renewable energy investments, such as providers do not pay for transmission services, exemptions from custom duties for imported materials, tax deductions etc ● Energy efficiency incentives: World Bank Energy Efficiency Project to improve energy efficiency in public facilities; Energy Efficiency 2020 programme adopted in 2013 to reduce energy consumption ● Incentives for clean production and installation of pollution prevention technologies: No ● Actions to ensure compliance with regulations: Set of environmental fines for violating standards is viewed as ineffective as a deterrent ● Other actions at national, sub-national and / or local level to reduce industry: ???
REDUCE EMISSIONS FROM TRANSPORT	<ul style="list-style-type: none"> ● Key transport-related air quality challenges: increasing number of vehicles, poor fuel quality, insufficient monitoring capacity for fuel quality in some areas of the country; 85% of air pollutants in Almaty from vehicles ● Almaty has one metro line, a public-private authority for transport, and 200 CNG buses, with plans to convert all the taxis to CNG; 	<ul style="list-style-type: none"> ● Vehicle emission limit: Euro 4 (postponed?) ● Fuel Sulphur content: 500 ppm ● Restriction on used car importation: vehicles older than 5 year old are banned; engine must not exceed 3 litres ● Actions to expand, improve and promote public transport and mass transit: BRT being developed in Astana; City of Almaty Sustainable Transport Strategy 2013-2023 includes BRT system, increased bus service to cover all villages, and expansion of subway system and light rail transit line

	Kyzylorda also purchasing CNG buses	<ul style="list-style-type: none"> ● Actions to promote non-motorized transport: (ex: include sidewalks and bike lanes in new road projects, car-free areas etc) ??? ● Other transport-related actions: Establishing energy efficiency requirements for vehicles
REDUCE EMISSIONS FROM OPEN BURNING OF AGRICULTURAL / MUNICIPAL WASTE (OUTDOOR)	<ul style="list-style-type: none"> ● Outdoor, open burning: agricultural burning creates haze (reaches into Northern Alaska) 	<ul style="list-style-type: none"> ● Legal framework: burning is banned, but still common place ● Actions to prevent open burning of municipal waste and / or agricultural waste: ???
REDUCE EMISSIONS FROM OPEN BURNING OF BIOMASS (INDOOR)	<ul style="list-style-type: none"> ● Dominant fuels used for cooking and space heating: 11% use solid fuels ● Impact: 100 deaths/year from indoor air pollution (2,400 from outdoor air pollution) 	<ul style="list-style-type: none"> ● Indoor air pollution regulated: No ● Promotion of non-grid / grid electrification: 99% access to electricity ● Promotion of cleaner cooking fuels and clean cook stoves: ??? ● Other actions to reduce indoor biomass burning, or to reduce its emissions: ???

Secondary Sources used in the research: <http://documents.worldbank.org/curated/en/2013/01/17193746/kazakhstan-energy-efficiency-project-environmental-assessment>, <http://www.uitp.org/news/kazakhstan-pt>, <http://europeandcis.undp.org/blog/2013/02/28/clean-public-transportation-a-greener-future-for-kazakhstan/>, <http://www.tyrsa.com/en/developing-a-brt-system-in-astana-kazakhstan/>, <http://thecityfix.com/blog/almaty-plans-first-brt-corridor-cis-region-vineet-john-yelena-yerzakovich/>, <http://astanatimes.com/2013/12/kazakhstans-2020-transit-plan-helps-connect-europe-asia/>, <http://onlinelibrary.wiley.com/doi/10.1029/2008GL036194/full>, http://www.catf.us/resources/publications/files/Agricultural_Fires_and_Arctic_Climate_Change.pdf, http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/01/10/000461832_20140110182738/Rendered/PDF/839150WP0P133300Box0382116B00OU090.pdf, <http://kaznmu.kz/press/2014/10/10/improving-air-quality-health-kazakhstan-monitoring-risk-assessment-management/>, <http://www.adb.org/sites/default/files/linked-documents/cps-kaz-2012-2016-ena.pdf>, https://en.wikipedia.org/wiki/Energy_in_Kazakhstan#Electricity, <http://www.eurasia.undp.org/content/dam/rbec/docs/Kazakhstan.pdf>, <http://energytransition.de/2014/02/kazakhstan-goes-renewable/>, <https://jctjapan.wordpress.com/kazakhstan-used-car-market/>, http://carecnet.org/assets/files/promo_carec/english/unep%20-%20eng.pdf, https://energypedia.info/wiki/Kazakhstan_Energy_Situation, http://www.unep.org/Transport/new/PCFV/pdf/cleanfue_transport_UNEP-CARECreport.pdf