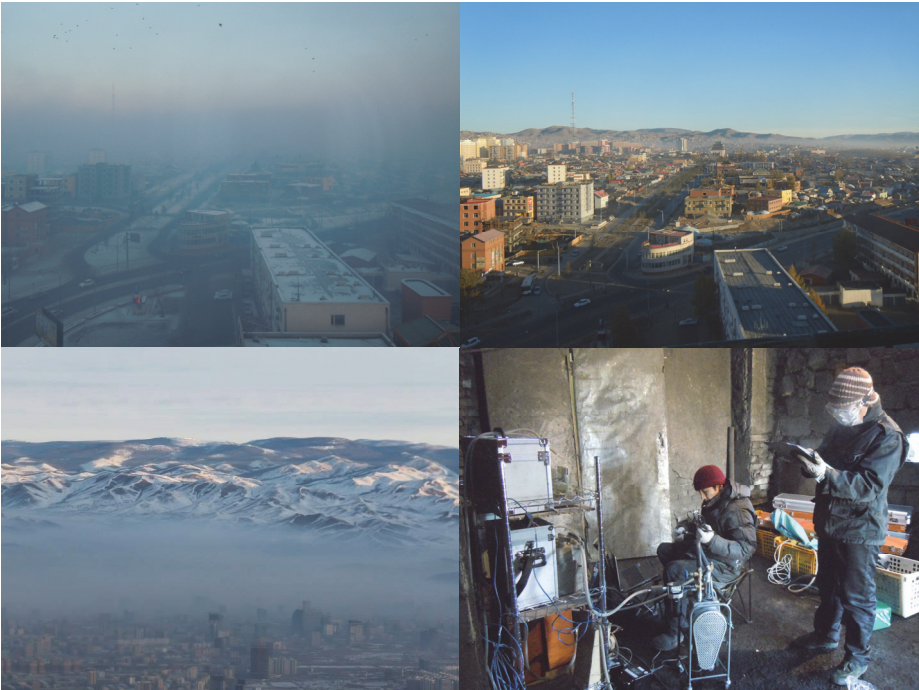


Capacity Development Project for Air Pollution Control in Ulaanbaatar City, Phase 2 News Letter Vol. 1: Project Outline (February, 2014)



Top: Gandan Temple and TV Tower view from Durun-Zam on dusty and clean days in 2010
Bottom, Left: City view from Bogdkhan Mountain in Tsagaan Sar, 2014 (shared by Mr. B. Byambasuren)
Bottom, Right: Air pollutants emission measurement in dusty environment in 2011

JICA (Japan International Cooperation Agency) Mongolia Office

7F, Bodi Tower Sukhbaatar Square 3, Ulaanbaatar

TEL: 976-11-325939, 312393

FAX: 976-11-310845

<http://www.jica.go.jp/mongolia/index.htm>

Project Office

c/o: AQDCC (Air Quality Department of Ulaanbaatar City)

4F, Khangarid Building, Chingeltei District, Jigjidjav St-9, Ulaanbaatar

TEL: 976-11-318551

FAX: 976-11-318551

<http://www.airquality.ub.gov.mn/>

Background

The air pollution in Ulaanbaatar city has been severe especially in the winter time. Major pollutants are particulate matters including dust, PM₁₀ and PM_{2.5}. According to NAMEM (National Agency for Meteorology and Environment Monitoring), the highest monthly average value of PM₁₀ ambient concentration showed as much as 1,000 µg/m³ during the winter in 2011 and all monitoring sites show high concentration of PM₁₀ exceeding the Mongolian ambient air quality standards (100 µg/m³ for 24 hours average and 50 µg/m³ for yearly average) posing serious health risks on the citizens. Also other pollutants such as SO₂ and NO₂ are problematic throughout the year occasionally exceeding the Mongolian air quality standards.

The major emission sources are coal combustion estimated at more than six million tons annually at the old three coal fired power plants for power and heat generation (the Combined Heat and Power Plant No.4, No.3 and No.2), 200 HOB (Heat Only Boilers), about 1,000 small boilers such as CFWHs (Coal Fired Water Heaters), numerous traditional stoves and wall stoves at more than 170,000 families in Ger areas. Mongolia is a coal rich country with limited options for energy sources, heavily dependent on the coal which contains a great amount of water and ash resulting in dust-emitting characteristics. In addition to the coal combustion, increasing automobile emissions, wind-blown dust from ash ponds of the power plants and other fugitive sources are also contributing to the severe air pollution. The total amounts of dust and PM₁₀ emission were estimated at 38,758 tons and 26,529 tons respectively for the year 2011 by the JICA Project Phase 1.

Due to scarcity of credible data and information necessary for air quality analysis, the air pollution structure for PM₁₀ and PM_{2.5} at the Ulaanbaatar city has not yet been well analyzed despite of various efforts supported by international donors. Extremely cold winter also creates various technical difficulties to monitor the both of emissions and ambient air qualities at credible levels. Effective air pollution control requires solid technical and scientific base, strong coordination among numerous relevant authorities and well-designed legal and regulatory frameworks, nevertheless human resource and institutional capacity has not yet been prepared for those requirements in the country. It has been critical to develop human resources and institutional capacity of the relevant authorities at the national and the city level for effective air pollution control for Ulaanbaatar city.

To cope with this situation, based on the request by the Government of Mongolia, the Government of Japan provided technical assistance through JICA 'Capacity Development Project for Air Pollution Control in Ulaanbaatar City' during 2010 – 2013, which focused on the capacity development of the AQDCC and other relevant agencies at city and national level especially to control the emission sources. Major activities included technical transfer for on-site emission measurements of boilers including dust and PM₁₀ among other pollutants, credible emission inventory elaboration, and air pollution simulation model, creation of the boiler registration and management system and elaboration of emission control measures and their technical evaluation of emission reduction as well as air quality improvements.

In order to continue the capacity development in this area further, the Government of Mongolia requested the Phase 2 of the project in 2012. The Government of Japan approved the project for 2013 implementation.

Overall Goal, Project Purpose and Outputs

The project is designed for AQDCC and relevant agencies to reach overall goal in future, by achieving the project purpose and 9 outputs by the project team consists of counterpart, counterpart working group and JICA Experts.

Table: Duration, Overall Goal, Project Purpose and Expected Outputs

Project Title	Capacity Development Project for Air Pollution Control in Ulaanbaatar City Phase 2
Duration	November, 2013 to May, 2017 (3 years and 6 months)
Overall Goal	Measures for emission reduction of air pollutants will be strengthened in Ulaanbaatar City.
Project Purpose	Capacity for air pollution control in Ulaanbaatar City is strengthened, paying special attention to the development of human resource and coordinating mechanism of the AQDCC and other relevant agencies among other aspects of the capacity development.
Output 1	Capability of emission source monitoring is strengthened.
Output 2	Capability of ambient air quality monitoring is strengthened.
Output 3	Capability to evaluate pollution structure is strengthened by integrating emission inventory, simulation model and ambient air quality monitoring.
Output 4	Decision making process for air pollution control is improved, by utilizing technical abilities of AQDCC and the relevant agencies.
Output 5	AQDCC and the relevant agencies promote public awareness program and implement advisory system for citizen in Ulaanbaatar city on air pollution.
Output 6	Capability of technical evaluation of air pollution control measures is strengthened.
Output 7	Capability of AQDCC and the related agencies to regulate and to control emission sources is strengthened.
Output 8	Emission control measures at major polluters are enhanced by AQDCC and the related agencies.
Output 9	Coordinating mechanism by AQDCC and the related agencies for output 1 to 8 are developed.

Based on the achievements and lessons obtained through the Project Phase 1, in order to achieve the project goal and purpose, the Project Phase 2 is designed to establish air quality management cycle reflecting the realities of the Mongolian side, consisting of the four steps (i) Analysis of air quality and emission source and evaluation of air pollution control measures, (ii) Air pollution control strategy, policy and decision making, (iii) Evaluation of air pollution control measures, and (iv) Implementation of air pollution control measures. This cycle would enable the sound decision making at Mongolian authorities as a whole in the air pollution control for the Ulaanbaatar City area by utilizing technical capabilities developed at the professional agencies such as AQDCC and NAMEM through the Project. In addition to the continuing emphasis on human resource development since Phase 1, the Project emphasizes strengthening of the coordinating mechanisms among relevant authorities and stakeholders involved.

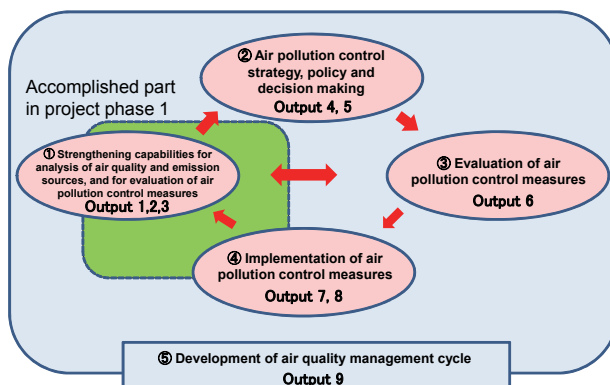


Chart: Desirable Air Quality Management Cycle

Implementation Structure of the Project

The project consists of the organizations and experts as shown in the chart. AQDCC is the C/P (counterpart), the responsible agency of the Project. C/P-WG (Counterpart Working Group) is organized by related organizations in order to implement project activities. Director of AQDCC is the project director, responsible for overall administration and implementation of the Project, while Deputy Director of AQDCC is the project manager, responsible for the managerial and technical matters of the Project. JICA Experts will give necessary technical guidance, advice and recommendations to the C/P and C/P-WG for the implementation of the Project. JCC (Joint Coordinating Committee) is established in order to facilitate inter-organizational coordination.

The project will closely be coordinated with the relevant donors' activities such as the Ulaan Baatar Clean Air Project (UBCAP) supported by the World Bank. The project will be also coordinated with other JICA's relevant projects and programs to create synergy effects.

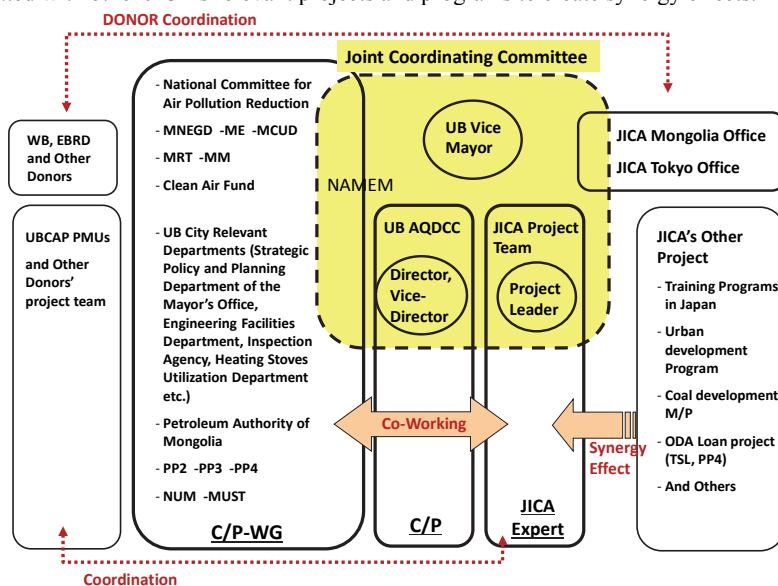


Table: JCC (Joint Coordinating Committee)

<p>Chairperson</p> <p>1) Deputy Mayor</p> <p>Members</p> <p>2) National Committee for Air Pollution Reduction</p> <p>3) Ministry of Economic Development</p> <p>4) Ministry of Mining</p> <p>5) Ministry of Nature, Environment and Green Development</p> <p>6) Professional Inspection Agency</p> <p>7) National Agency for Meteorology and Environment Monitoring</p> <p>8) Ministry of Energy</p> <p>9) Strategic Policy and Planning Department of the Mayor's Office</p> <p>10) Engineering Facilities Department</p> <p>Secretary</p> <p>11) AQDCC</p>	<p>1) JICA Mongolia Office</p> <p>2) JICA Headquarter (Tokyo Office)</p> <p>3) JICA Experts</p> <p>4) Relevant personnel appointed by JICA</p>
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