

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC30628

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Project Name	CAPACITY STRENGTHENING FOR IMPLEMENTATION OF MINAMATA CONVENTION ON MERCURY PROJECT (P151281)
Region	EAST ASIA AND PACIFIC
Country	China
Sector(s)	Central government administration (80%), Other Mining and Extractive Industries (10%), Other industry (10%)
Theme(s)	Climate change (10%), Environmental policies and institutions (80%), Pollution management and environmental health (10%)
Lending Instrument	Investment Project Financing
Project ID	P151281
GEF Focal Area	Persistent Organic Pollutants
Borrower(s)	PEOPLE'S REPUBLIC OF CHINA
Implementing Agency	Ministry of Environmental Protection, Foreign Economic Cooperation Office
Environmental Category	B-Partial Assessment
Date PID Prepared/ Updated	21-Jul-2015
Estimated Date of Appraisal Completion	
Estimated Date of Board Approval	30-Sep-2016
Concept Review Decision	

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I. Introduction and Context

Country Context

China became a signatory to the Minamata Convention on October 10, 2013. With the objective to protect human and environmental health from anthropogenic emissions and releases of mercury and its compounds, the Minamata Convention has adopted a phased approach to reduce, and where possible, eliminate mercury use in key industrial sectors. Provisions of the Convention specify phase-out deadlines for mercury supply sources and trade, mercury added products, and manufacturing processes in which mercury or mercury compounds are used. Under the Convention, Parties may (Article 20) develop, execute, review and update a strategy for meeting their obligations.

China has a long history of mercury use, dating back to the 6th century B.C. It is now one of the few

countries with ongoing primary mercury mining at a level of about 780 tons annually. It is estimated that China now still uses about 1,000 tons of mercury annually, about 50% of the world's total annual consumption. Such uses are for industrial products and processes that use mercury and mercury compounds as raw materials, additives and catalysts. This production, varied uses and China's high consumption of mercury containing coal (0.15-0.20 µg/g) have made China the world's largest mercury producer, consumer and emitter. According to the UNEP Global Mercury Assessment Report (2013), China accounted for about 75% of emissions from the East and Southeast Asia regions and about one third of the global total mercury emissions. China's mercury emissions and releases have local, regional and global impacts in the long run.

Sectoral and Institutional Context

China still mines primary mercury for the production of mercury added products and polyvinyl chloride (PVC) manufacturing. There is little information on the import and export of mercury and mercury containing products, and on the status of mercury from decommissioned chlor-alkali facilities. Currently, China has over 500 manufacturers producing and using a large range and amount of mercury-added products such as batteries (4 billion units in 2012), lamps (5 billion units in 2012), medical thermometers (80 million units in 2012) and sphygmomanometers (2.7 million units), barometers, hygrometers, manometers, dental amalgam and cosmetics. Preliminary baseline information for such manufacturing is still being collected through the GEF Mercury Initial Assessment (MIA) project on which the proposed project would build. At the policy level, China has yet to develop a full set of national policies to phase out mercury-added products as required by the Convention and to promote the use of alternatives.

Regarding manufacturing processes using mercury or mercury compounds, China uses mainly mercury-based carbide (as a catalyst) production technology to produce PVC. In 2012, 94 such companies produced about 10 million tons of PVC with a consumption of 800 tons of mercury, potentially releasing hundreds of tons of mercury containing wastes, including spent catalyst, activated carbon, and other wastes. China is now preparing a demonstration project with GEF support and led by UNIDO to thoroughly investigate and address this sector. China on the other hand has no ongoing production of chlor-alkali, acetaldehyde, sodium or potassium methylate and ethylate polyurethane using mercury and mercury compounds as raw materials or catalysts.

In terms of mercury releases, China covers all 59 sources under the 11 categories under the UNEP Toolkit for Identification and Quantification of Mercury Releases. Among all sources, coal-burning industrial boilers are China's largest anthropogenic source of mercury air emissions, accounting for over 33% of China's anthropogenic mercury emissions. It is estimated that most air pollution control equipment of the country's nearly 550,000 industrial boilers cannot capture or remove mercury effectively. Second to heating boilers, coal-burning power plants account for about 19% of mercury emissions while consuming about 42% of the nation's total coal consumption estimated at 1.33 billion tons in 2007. Other atmospheric mercury emission sources include non-ferrous metal smelting, cement production, and iron and steel production. At the policy level, China has not yet listed mercury as one of priority pollutants in its air pollution control policies. Sources of mercury releases into water bodies include non-ferrous metal smelting and rolling processing, chemical materials and chemical products manufacturing, electrical machinery and equipment manufacturing, furniture manufacturing and ferrous metal smelting and rolling processing industry. However, specific information on such releases is yet to be collected.

China's mercury wastes are generated from mercury mining, mercury added products and processes

using mercury, and anthropogenic emission sources such as non-ferrous metal production. Unregulated generation and disposal of such wastes have contaminated China's precious land resources. Limited data show that mercury concentrations of some contaminated sites range from several to more than 1000 ppm. High levels of soil mercury concentration may lead to mercury accumulation in vegetables, crops and fish, posing risks to the environment and human health. There is no data on the quantity of mercury wastes and contaminated sites as well as their pollution characteristics and associated environmental and health risks.

Recognizing mercury's health and environmental impacts, the Chinese Government included mercury pollution control as one of the highest priorities in its 12th Five-Year Plan for Prevention and Control of Heavy Metal Pollution (2011-2015; approved in February 2011). The plan called for the development of a heavy metal pollution prevention system, an emergency response system, and an environmental and health risk assessment system. It is noted, however, that the Plan covers two major sectors only - non-ferrous metal metallurgy and vinyl chloride monomer (VCM). Although a national coordination mechanism has been established under the Plan, the mechanism has yet to include all agencies related to the implementation of the Mercury Convention. Moreover, to meet Convention obligations, additional capacity building efforts on topics such as life cycle management, policy improvement and enforcement, improvement of national coordination, proper monitoring and reporting, and awareness raising are urgently needed.

As lead ministry coordinating China's response to the Minamata Convention, the Ministry of Environmental Protection is implementing a number of activities with bilateral support: Sino-Norwegian cooperation on Capacity Building to Reduce Mercury Pollution in China - Case Study in Guizhou; and Sino-Italian cooperation on Capacity Building on Atmospheric Mercury Releases Control from Coal Combustion and Management in China; and with GEF support: the Minamata Convention Initial Assessment project with the objective to help China carry out policy and strategic discussions in support of China's ratification of the Convention (expected to be completed by June 30th, 2016); a Pilot Project on the Development of a Mercury Inventory to be completed December 2015 with the objective of developing a sector specific inventory in two key industries (coal-fired power plants and PVC) with provincial focus (Hunan and Guizhou); and a Project on Reduction of Mercury Emissions and Promotion of Sound Chemicals Management in Zinc Smelting Operations to pilot BAT/BEP to reduce mercury emissions in the non-ferrous metal smelting sector. FECO/MEP is also preparing a GEF funded VCM project to reduce mercury consumption and release from VCM production. The proposed project will coordinate in order to avoid overlap, and exchange findings and results to facilitate synergies with these activities.

Incremental reasoning and global environmental benefits. As a signatory to the Minamata Convention, China faces tremendous barriers to address its mercury issues. Key barriers include: 1) the lack of a systematic understanding of implications of mercury issues regulated by the Convention, and gaps in existing domestic regulations; 2) the lack of an institutional structure and needed institutional capacity to prepare and implement a national plan on mercury; 3) the lack of a national strategy with well-defined financing and implementation arrangements in compliance with the Convention's requirements 4) the lack of awareness and capacity of key stakeholders from various sectors on priority compliance actions.

China is eligible for financing support under the Convention through the GEF to accelerate its efforts to control mercury pollution. As noted, China has only started managing mercury issues as part of heavy metal pollution control. Such efforts so far have been limited to identifying and

preventing pollution risks and responding to pollution emergencies. These efforts and the pilot international projects mentioned above are fragmented and lack an overall strategic framework. GEF support will help elevate the importance of mercury issues in China and leverage much-needed resources and support from the government, the private sector and the public to take concrete actions to address mercury pollution issues with a holistic approach. This support is consistent with the objective of the convention and will accelerate China's efforts to reduce the mining of primary mercury, minimize the use of primary mercury, reduce the production of mercury-added products and thus wastes, and avoid the releases of mercury and mercury wastes to the environment.

The project contributes directly to the implementation of the Minamata Convention in China and globally. The Implementation Plan developed under the project will empower China, the number one producer, consumer and releaser of mercury, to tackle global mercury pollution issues in a strategic and holistic manner. Capacity building activities related to mercury management and monitoring will help China jump-start environmentally sound management of mercury.

Relationship to CAS

The higher level objective is to help the Chinese government to manage the production, use and disposal of mercury and mercury related products to reduce public exposure to mercury related pollution. The proposed project is consistent with Strategic Theme One: "Supporting Greener Growth of the China" – World Bank Country Partnership Strategy for FY 2013-2016. Under this theme, the project would support Outcome 1.6: Demonstrating Pollution Management Measures, which would be achieved among others by supporting efforts to reduce hazardous waste. The project will also contribute to the World Bank Group's goals of ending extreme poverty by 2030 and boosting shared prosperity through formulating and implementing a National Plan that when implemented will lead to improved health conditions by reduced exposure to mercury related pollution and increased access to reliable and accurate environmental information. The project fully supports the Bank's Environment and Natural Resources Global Practice's pollution management business line. It will help reduce the mining of primary mercury, minimize the use of primary mercury, reduce the production of mercury-added products and thus wastes, and avoid the releases of mercury and mercury wastes to the environment.

II. Proposed Development Objective(s)

Proposed Global Environmental Objective(s) (From PCN)

The proposed project development objective is to improve China's capacity to address its mercury issues in priority sectors under the Minamata Convention on Mercury.

Key Results (From PCN)

- Reliable and supplemental baseline of mercury data established for national strategy formulation;
- Enhanced management capacity of mercury production, recycling supply, uses, import and export, and disposal;
- National mercury monitoring capacity developed and can inform decision making

III. Preliminary Description

Concept Description

The proposed project will have three components: Component 1: Development of National Strategy for Minamata Convention implementation; Component 2: Capacity Building for Mercury

Management and Monitoring; and Component 3: Project Management.

Component 1: Development of National Strategy for Minamata Convention implementation. This component will support: (a) the development of an institutional set up for the preparation and implementation of the National Strategy (NS); and (b) supplemental inventory exercises to develop a reliable baseline for (i) production and trade (including import and export) of primary and recycled mercury; (ii) import and export of mercury-added products; (iii) four key sources of mercury emission - cement, waste incineration, boilers, and coal-fired power plants; and (iv) mercury wastes and contaminated sites, including mining areas; (c) Strategy Development. The inventory results of this project, as well as from the Mercury Initial Assessment (MIA) Project and the UNEP-led GEF Pilot Project on the Development of Mercury Inventory in China, analyses of national policy and regulations, and broader consultations with domestic and international stakeholders will feed into the development of China's Mercury National Strategy. Under the strategy, sector specific priorities will be identified for short-, medium- and long-term interventions, based on cost benefit analyses of various interventions and taking into account potential co-benefits and multi-pollutant control approaches. Based on the result of gap analysis under the MIA Project, policy revisions needed will be proposed for key sectors. The completed strategy will be submitted for government approval during project implementation. Along with preparation of this strategy, media campaigns will be organized to improve the public and stakeholders' awareness on mercury issues and mobilize their participation and support to the development and implementation of the national strategy.

Component 2: Capacity Building for Mercury Management and Monitoring. This component will help improve China's capacity for implementation of the National Strategy through the following activities: (a) development of a National Mercury Information Reporting and Management System with data on mercury production, trade (including import and export), use, recycling, releases and disposal; (b) development of a monitoring and certification system for national, provincial and municipal laboratories, and strengthening capacity of pilot laboratories; (c) assessment of potential environmental health risks of non-operational and operational mercury mines and take institutional control measures at priority sites if identified and deemed necessary (such as set up fencing and warning signs, and carry out public awareness building activities in the surrounding areas); (d) assessment of technical, financial, social, environmental and institutional feasibility of mercury recycling in non-VCM priority sectors; and (e) collection and dissemination of project implementation information and lessons. Site level assessment will identify affected population, including less prosperous communities. Given the project's limited development objective and grant resources, the project will not support any investment activities related to clean-up of any contaminated sites.

Component 3: Project Management. This component will support the MEP to manage proper implementation of this project.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04		x	
Forests OP/BP 4.36		x	

Pest Management OP 4.09		x	
Physical Cultural Resources OP/BP 4.11		x	
Indigenous Peoples OP/BP 4.10	x		
Involuntary Resettlement OP/BP 4.12	x		
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

V. Financing (in USD Million)

Total Project Cost:	16.00	Total Bank Financing:	0.00
Financing Gap:	0.00		
Financing Source		Amount	
Borrower		8.00	
Global Environment Facility (GEF)		8.00	
Total		16.00	

VI. Contact point

World Bank

Contact: Jiang Ru
 Title: Senior Environmental Specialist
 Tel: 473-8677
 Email: jru@worldbank.org

Contact: Ms. Anisi
 Title: Operations Officer
 Tel: 473-5502
 Email: awan@worldbank.org

Borrower/Client/Recipient

Name: PEOPLE'S REPUBLIC OF CHINA
 Contact: Wensong Guo
 Title: Director
 Tel: 86 10 68551174
 Email: guo.wensong@gmail.com

Implementing Agencies

Name: Ministry of Environmental Protection, Foreign Economic Cooperation Office
 Contact: Lifeng Yu
 Title: Deputy Director General
 Tel: (86-10) 8226-8807
 Email: yu.lifeng@mepfeco.org.cn

VII. For more information contact:

The InfoShop
 The World Bank

1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 458-4500
Fax: (202) 522-1500
Web: <http://www.worldbank.org/infoshop>