



# Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 25-Mar-2020 | Report No: PIDC28924



**BASIC INFORMATION**

**A. Basic Project Data**

Country China	Project ID P173461	Parent Project ID (if any)	Project Name Environmentally Sustainable Development of the Iron and Steel Industry (P173461)
Region EAST ASIA AND PACIFIC	Estimated Appraisal Date Jun 07, 2021	Estimated Board Date Jul 30, 2021	Practice Area (Lead) Environment, Natural Resources & the Blue Economy
Financing Instrument Investment Project Financing	Borrower(s) People's Republic of China	Implementing Agency Foreign Environmental Cooperation Office of the Ministry of Ecology and Environment (FECO)	GEF Focal Area Persistent Organic Pollutants

**Proposed Development Objective(s)**

The project development objective is to demonstrate and promote best available techniques and best environmental practices that will reduce and avoid unintentionally produced persistent organic pollutants in the Chinese iron and steel industry in a sustainable way.

**PROJECT FINANCING DATA (US\$, Millions)**

**SUMMARY**

<b>Total Project Cost</b>	200.00
<b>Total Financing</b>	200.00
<b>of which IBRD/IDA</b>	0.00
<b>Financing Gap</b>	0.00

**DETAILS**

**Non-World Bank Group Financing**

Counterpart Funding	175.00
Borrower/Recipient	1.00



Local Govts. (Prov., District, City) of Borrowing Country	6.50
Local Beneficiaries	167.50
Trust Funds	25.00
Global Environment Facility (GEF)	25.00

Environmental and Social Risk Classification

Moderate

Concept Review Decision

Track I-The review did authorize the preparation to continue

## B. Introduction and Context

### Country Context

1. The recent China Systematic Country Diagnostic (SCD) highlights the country’s rapid growth that resulted in a significant poverty decline. Rapid growth was made possible by a wide range of reforms, which transformed the state-dominated, planned, rural, and closed economy to a more market-based, urbanized, and open economy. China’s success enabled more than 850 million people to escape poverty. This rapid growth however has been accompanied by significant challenges with pollution, deterioration of the environment, and greenhouse gas emission. Pollution has a sizable impact on health, natural resources and ecosystems , and has caused direct losses to agriculture and industry.
2. The SCD further notes that the scale and complexity of China’s environmental problems require a shift towards “green growth”, where economic growth is decoupled from resource use, carbon emissions, and deterioration of the environment. China, the world’s largest global greenhouse gas (GHG) emitter, faces these challenges through ambitious targets in its Nationally Determined Contribution (NDC) to cut CO<sub>2</sub> emissions per unit of GDP by 60 to 65 percent from 2005 level by 2030. In this context, the on-going 13th Five Year Plan (FYP) for 2016–20 offers clear signs that the government seeks a transition to green growth with lower GHG emissions. The iron and steel sector, which is responsible for 13.7% of total national energy demand and nearly 30% of energy consumption of manufacturing industries, accounts for a disproportionate share of the total industry-related CO<sub>2</sub> emissions and is specifically addressed in the FYP with a number of targets and measures to decrease the sector’s energy consumption and reduce emissions of pollutants.

### Sectoral and Institutional Context

3. The international community has singled out persistent organic pollutants (POPs), from the many hazardous and toxic chemicals of concern, for global action due to their nature as ubiquitous global contaminants. POPs are toxic chemicals that adversely affect human health and the environment around the world. “Because they can be transported by wind and water, most POPs generated in one country can and do affect people and wildlife far from where they are used and released. They persist for long periods of time in the environment and can accumulate and pass from one species to the next through the food chain” , where they can lead to serious health effects, including certain cancers, birth defects, and dysfunctional immune and reproductive systems . The Stockholm Convention on POPs (SC) lists a number of priority POPs for urgent action, including unintentionally produced POPs (UPOPs) such as dioxins and furans .



China ratified the SC in 2004, and is therefore required to take actions to reduce UPOPs releases from anthropogenic sources, and specifically to promote the use of best available techniques (BAT) and best environmental practices (BEP) for the source categories listed by the SC, including iron ore sintering and electric arc furnaces (EAFs) in the iron and steel industry .

4. The National Implementation Plan (NIP) submitted by China to the Conference of the Parties to the SC lists the iron and steel sector as a key industrial sector to be controlled for dioxins reduction . Since ratifying the Convention, China has taken a number of measures to implement its NIP, including through domestic means and with the support of the international community with financing from the Global Environment Facility (GEF) that has facilitated projects to reduce dioxins from a number of sectors, including medical waste, municipal solid waste and pulp and paper-making. The iron and steel sector has not been addressed until now, and remains the single most important anthropogenic source of dioxins in the Chinese industry to be targeted for comprehensive reduction, through policy and regulatory development and pilot demonstration of most suitable approaches. Two processes are considered to have the largest contribution to UPOPs emission from the iron and steel industry, iron ore sintering and secondary steel production in electric arc furnaces (EAF), and would be particularly targeted.

5. Due to the sheer size of the industry, the global environmental benefits expected to accrue from the proposed project are very large. China is both the largest producer and consumer of iron and steel in the world. Global crude steel production in 2018 was 1.88 billion tons, of which over 50%, 0.93 billion tons, were produced in China. The total releases of PCDD/Fs in exhaust gas from iron ore sinter plants in 2016 was estimated at approximately 1,522 g toxic equivalents (TEQ) , and at 363 g TEQ from EAFs. The estimated impact at the end of the project is a globally significant reduction of an estimated 318 g TEQ of annual releases of dioxins, with further reduction after project closure expected through sector and nation-wide replication.

6. With the central and local governments paying ever more attention to air pollution prevention and control, the steel industry is facing more stringent environmental standards and demands for industrial green transformation. The Ministry of Ecology and Environment (MEE) has issued a series of updated emission limits for the iron and steel industry. A series of regulations have been implemented since October 1, 2012 and all have fully come into force since January 1, 2015. Stricter emission limits have been set for both conventional pollutants, such as SO<sub>2</sub>, NO<sub>x</sub> and particulate matter (PM), and POPs, including PCDD/Fs. PCDD/Fs emissions have been limited to 1 ng TEQ/m<sup>3</sup> for existing facilities and 0.5 ng TEQ/m<sup>3</sup> for new facilities, for both sinter plants and electric arc furnaces, but not as strict as expected from the Stockholm Convention, or found in advanced economies . Stricter, “ultra-low”, emission standards are being promoted in parts of the country in the context of the “Blue Sky Campaign” against air pollution that offer an opportunity for continued improvement of many aspects of environmental performance, but these do not include a limit value for dioxins.

7. The size and technical capacities are different among the approximately 400 enterprises in China with smelting abilities. While some enterprises have implemented advanced energy efficiency and pollution control measures, the vast majority of the industry is struggling to meet the recent more stringent standards. There are a number of barriers to the reduction of UPOPs emissions in the iron and steel sector, including: limited awareness in the industry and with authorities responsible for environmental enforcement of SC obligations; limited technical knowledge regarding the appropriate techniques and practices for UPOPs control in the iron and steel sector; cost and opportunity cost of additional pollution control devices and practices, lack of understanding of possible co-benefits and savings from improved management practices; lack of knowledge regarding emissions of other UPOPs, and lack of understanding of the impact of BAT/BEP on these emissions; limited capacity of regulatory agencies to promote and enforce regulations



and standards; and limited national monitoring network and industry UPOPs emissions data.

8. In parallel to these pollution control efforts, due to its high impact on CO<sub>2</sub> emission, the sector is targeted by the national carbon emissions trading scheme (ETS) that is being progressively implemented by China, and will be the second priority sector to be included in the ETS following the power sector. This poses another set of challenges and opportunities since – while technological improvements can often lead to both energy efficiency improvements and pollution release reduction – the operation of end-of-pipe pollution control devices typically cost energy. The project will seek to maximize synergies between UPOPs, conventional pollutants, and GHGs reduction, and to find the most cost-effective balance between these requirements.

9. While there have been important improvements in air quality in recent years, in Beijing and surrounding metropolis in particular (the “JingJinJi” area), not all parts of the country, and not all environments, have seen the same improvements. Industrial contribution to air, but also to soil and water pollution, remains a concern. Moreover, heavy industries in general are also a significant, and thus far relatively unprioritized, source of CO<sub>2</sub> emissions. There are opportunities therefore to build on this proposed project’s experience to support the development of a national program to promote and incentivize an integrated approach for pollution and POPs reduction and greenhouse gas abatement from a broader set of key industrial sectors.

#### Relationship to CPF

10. The proposed project is aligned with the World Bank Group Country Partnership Framework (CPF) for China for the period FY20-FY25 recently discussed by the Board, in particular its Engagement Area 2 “Promoting Greener Growth, Objective 2.2 “Reducing Air, Soil, Water, and Marine Plastic Pollution”. The project is well aligned with the World Bank’s comparative advantage and consistent with the commitments in the WBG Capital Package Policy Proposal of April 2018 with its focus on the delivery of global environmental public goods and country-wide environment reform and institution building. The project is also aligned with China’s 13th FYP objective to control emissions from key industrial pollution sectors.

11. In particular the project addresses the following key aspects of the CPF:

- Promoting Greener Development (Engagement Area Two). Through support to institutional strengthening for environmental authorities at the central and local levels; promotion of enhanced regulations and enforcement; and piloting of POPs reduction techniques and practices in synergy with conventional PM and pollutant reduction and climate mitigation efforts.
- Sharing the Benefits of Growth (Engagement Area Three). There is a wealth of evidence that the poor are disproportionately affected by environmental pollution.
- Addressing Global Public Goods (CPF Selectivity Criteria). Through reduction of persistent and toxic pollutants with global impact far from source of emission – the iron and steel sector is the largest industrial source of dioxins in the world; supporting China to meet its obligations under Multilateral Environment Agreements.
- Fostering the Private Sector (CPF Selectivity Criteria). The project is centered on catalyzing industry investment for pollution reduction while minimizing GHG emissions; for catalytic impact well beyond project activities.
- Strategic Piloting of Approaches to Address Key Development Priorities (CPF Selectivity Criteria). The iron and steel industry faces a number of sustainability challenges, including its high carbon intensity, source of particulate matter and other air pollutants, and largest industrial source of dioxins. The project will promote



synergistic approaches to managing and balancing these challenges through standard setting, piloting, and setting the basis for long-term sustainability and offering a model for other developing countries as they seek to modernize their industry.

- Policies and Institutions for Sustainable IBRD Graduation (CPF Selectivity Criteria). There is currently no standard in force in China to comply with international dioxins reduction commitments. The MEE's recent reorganization and allocation of new mandates and responsibilities present a challenge, but also a strong opportunity to promote synergistic pollution control and GHG mitigation in a cost-effective and sustainable way. The project will build on government's efforts to promote ultra-low emission standards; support the development of rapid methods for dioxins monitoring; support the integration of local and provincial environment regulatory and enforcement efforts with central government; and help set the basis, including institutional arrangements, for a broader program for industrial pollution management for long-term catalytic and sustained impact.

12. The proposed project is also fully aligned with the GEF-7 Chemicals and Waste strategy, and its program 1 on "Industrial Chemicals" that targets, inter alia, "chemicals emitted from processes", and supports the "introduction and use of best available techniques and best environmental practices to minimize and ultimately eliminate releases of unintentionally produced POPs [...] from major source categories [...] including [...] various metallurgical processes". The intervention is also fully responsive to guidance from the SC Conference of the Parties, and its recently adopted program of work around unintentional POPs.

### C. Proposed Development Objective(s)

The project development objective is to demonstrate and promote best available techniques and best environmental practices that will reduce and avoid unintentionally produced persistent organic pollutants in the Chinese iron and steel industry in a sustainable way.

#### Key Results

- BAT/BEP demonstrated in pilots for iron ore sintering and electric arc furnace (target two sinter plants and one EAF plus TA support to facilitate replication)
- Broad sector adoption of BAT/BEP for dioxin reduction
- Policies, regulations, standards and operational guidelines developed
- Enhanced monitoring techniques and capacity

### D. Concept Description

14. **Theory of Change.** The iron and steel industry at present must meet the national emission standard that includes a limit value of 0.5 ng/m<sup>3</sup> for dioxins, less stringent than the <0.2 ng/m<sup>3</sup> expected by the Stockholm Convention, and do not therefore reflect BAT/BEP. "Ultra-low" emission standards are being promoted by the GoC, for conventional pollutants, in the most sensitive areas affecting approximately 10% of the production capacity, with the goal to ramp up this effort country-wide to 80% of the production capacity by 2025. These ultra-low standards, however, do not take into account dioxins emissions. The project builds on the opportunity offered by the on-going push towards expansion of the ultra-low standard to demonstrate what complementary measures the industry should implement to achieve BAT/BEP while maximizing co-benefits with PM and other pollutants reduction, and balancing GHG reduction imperatives.



15. The project is designed to address the identified barriers to adoption of BAT/BEP in the industry through demonstration of BAT/BEP in pilot enterprises, to meet the  $<0.2$  ng TEQ/m<sup>3</sup> standard for PCDD/Fs expected by the SC for sintering plants, and technical assistance to promote replication, including development of specific operational guidelines for the industry, assessment of feasibility and development of stricter emission standard for dioxins, training, improved monitoring and enhanced enforcement. An integrated approach will be followed to optimize the existing control systems in the demonstration enterprises, so that UPOPs are considered alongside PM, NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub> and mercury.

16. The following outlines the key components to be supported by the project, to be further defined and elaborated during project preparation:

#### *Component 1. BAT/BEP Demonstration*

(Outcome. Reduction of PCDD/Fs through promotion of BAT/BEP in iron and steel sector)

This component will target specific enterprises to promote BAT and BEP in the iron and steel industry as the key method to reduce UPOPs. All enterprise-based activities, whether investment or technical assistance support, will support the upgrade and improvement of existing facilities' pollution control equipment, with no increase or other impact on enterprises' production capacity or footprint. Resource Efficiency and Cleaner Production (RECP) audits will be conducted in selected enterprises to assist in the identification of technologies for pollutant reduction, enhanced process efficiency for reduced energy consumption, and optimized material flow for plant productivity, and to promote awareness of staff and management on target pollutants. The demonstration plants will be expected to achieve the  $<0.2$  ng TEQ/m<sup>3</sup> standard for PCDD/Fs for sintering plants and  $<0.1$  ng TEQ/m<sup>3</sup> for EAF.

Pilot demonstrations will be conducted in two sinter plants, and one EAF. Transparent criteria for selection will be developed during project preparation in collaboration with the Iron and Steel association (ISA), with at least one pilot expected to be identified by appraisal. Comparative life-cycle assessments of new/alternative technologies will first be undertaken tailored to the particular circumstances of the demonstration enterprises, and taking into account synergies and trade-offs with other air quality and climate mitigation objectives, to identify the most feasible approaches/ measures/ technologies for improved smelter processing. Anticipated costs will be evaluated as one of the basis for optimization. The pilot facilities will implement BAT and BEP as outlined in the BAT/BEP guidelines adopted by the Stockholm Convention (2007; rev 2019), and in line with the World Bank Group Environmental Health and Safety guidelines. The project will finance technical support (consulting services) for the identification and design of the appropriate mix of BAT/BEP measures, and will provide investment support to the enterprises (goods and civil works) to implement BAT/BEP upgrade through sub-projects based on sub-grant agreements between FECO and an individual enterprise. In line with the Stockholm Convention guidelines, BAT/BEP measures are expected to include a combination of feed material selection and preparation; better management of sinter operations for more stable and consistent conditions; recirculation of off-gases; selective catalytic reduction; activated carbon adsorption and other secondary measures.

After the adoption of BAT/BEP, performance will be evaluated to confirm compliance with expected reduction targets, and as the basis for development of authoritative guidelines. The demonstrations will involve evaluation of the technologies for cost-effectiveness, record and dissemination of the results, and training and workshops to share lessons learned.

In order to facilitate the pace of industry-wide adoption of BAT/BEP for dioxin control, the project will support promotion through technical assistance of the identified BAT/BEP in a number of additional iron ore sinter plants and EAF lines (support to approximately twenty lines is envisaged, to be further assessed during project preparation), to be



identified and selected during implementation based on criteria to be defined during project preparation. This will also lead to more comprehensive and accurate estimates of UPOPs and other conventional pollutants emissions, including analysis of exposure and risk groups, and include the assessment of UPOPs pollution at some of the demonstration plants. Activities supported in the twenty enterprises will be of a technical assistance/consulting services nature, and would be designed to help the enterprises identify and plan for future implementation of BAT/BEP measures using their own funds. The project would support the following type of activities which will be further defined during project preparation: RECP audits; evaluation of appropriate measures and technologies; preparation and evaluation of feasibility study; preparation of environmental/social management plan, preparation of construction project safety pre-assessment; civil work design and working drawing design and review.

### *Component 2. Strengthening of Institutions, Policies and Regulations*

(Outcome. Strengthened framework for sustainable UPOPs reduction in the iron and steel industry)

This component will support activities to strengthen the institutional capacities of central and local governments for guiding the iron and steel industry towards reduced UPOPs and other target pollutants. Multiple outcomes are expected to be achieved through strengthened communication and coordination among ministries in POPs management and pollution control; strengthened coordination with stakeholders; and publication of project results and monitoring data to increase public awareness.

The project will in particular support government capacities aimed at meeting Stockholm Convention requirements to reduce UPOPs emissions by strengthening and enforcing regulations, including: assessment and drafting of updated emission standards for adoption; development or revision of technical standards such as technical specifications for application and issuance of pollutant permits; revision to documents that guide industry and technology, such as the “Industrial restructuring catalogue” and “Market access negative list”; support the development of rapid and cost effective PCDD/Fs monitoring methods and improvement of emissions control systems for continuous assessment of the effectiveness of BAT/BEP; enhanced monitoring capacity at national and local level through provision of technical training and upgrade of monitoring equipment; and improved information management system to facilitate the establishment of a national UPOPs inventory.

In order to support the long-term sustainability of project outcomes, technical assistance will be provided to build on the project’s experience to design a national program targeting heavy industries for integrated pollution reduction with comprehensive consideration of POPs, GHGs and conventional pollutants. This could include an assessment of priority sectors and regions, and identification of financing needs and means applicable across provinces to meet enforceable standards.

### *Component 3. Monitoring and Evaluation*

(Outcome. Project regularly monitored and results independently evaluated)

This component will support independent assessment of UPOPs emissions from enterprises, and independent verification of dioxins reduction and other environmental performance achieved at the pilot demonstration enterprises. Dioxins sampling and analysis will be carried out by accredited laboratories. The component will also support regular monitoring of the quality and pace of implementation of project activities, outputs and outcomes, including through inter-agency review through the SC national steering group, as well as implementation of the project’s environmental and social framework, and reporting to the World Bank and the GEF, as well as a mid-term and terminal evaluations following World Bank and GEF guidance.

### *Component 4: Project management*

(Outcome. Project activities implemented in a timely manner and on budget, in line with World Bank fiduciary



standards)

This component will support costs associated with day-to-day project management and implementation including procurement, financial management, and environmental and social safeguards functions to be carried out by FECO. The Project will also finance incremental costs in relation to coordination and collaboration with other government agencies, non-government agencies, and the industry and private sector.

## E. Economic Analysis

### Approach

17. The main benefits to be expected from the project are the environment and health benefits that accrue from the reduction of dioxins emissions from iron and steel making, and therefore reduced exposure to dioxins of biota and people. The policy goal and associated classes of actions have already been agreed and mandated at international and national policy-making levels through the adoption of the Stockholm Convention with its objective of dioxins reduction for protection of health and the environment, and the BAT/BEP guidance adopted by the Conference of the Parties to the Convention which offers a framework to do so. This reduces the utility of cost-benefit analysis for a specific project such as this. Moreover, there are methodological difficulties in attempting a cost-benefit analysis of dioxins exposure reduction as the scientific basis for assessing and monetizing the benefits of dioxins reduction is weak in line of the still misunderstood dose-response relationship between dioxins exposure and adverse health effects.

18. The analytical approach therefore relies on cost-effectiveness, and benchmarking. The project design inherently follows a least cost approach to dioxins reduction – as it is at the heart of the project to demonstrate how to most effectively reduce dioxins while meeting ultra-low emission standards for conventional pollutants, and while balancing other environmental imperatives.

### Incremental reasoning

19. *Global benefits.* POPs travel long distances, affecting human health and ecosystems even at locations far away from the site where they were initially released into the environment. China being the largest producer of iron and steel in the world is also the largest source of UPOPs emissions in the world. The project therefore will make a significant contribution to the global environment.

20. The project is expected to lead to reduction of annual emissions of dioxins of approximately 318 g TEQ, including approximately 12.9 g TEQ through investments in two sintering lines and one EAF for BAT/BEP demonstration, and approximately 79.1 g TEQ through technical assistance promoted replication. A total reduction of approximately 1,590 g TEQ can be expected when the whole sector will have implemented BAT/BEP, after project closure. The project will also demonstrate how these technologies can have with multiple benefits in controlling pollutants besides UPOPs, for integrated control of conventional pollutants such as PM, NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub> as well as mercury and UPOPs. Moreover, the reduction of energy-consumption and emission of greenhouse gases are important targets to achieve circular economy benefits and sustainable development, and the project will audit the emission of greenhouse gases while implementing the demonstration technologies. Any opportunities for energy savings and GHG reductions as well for further reduction of conventional pollutants will be quantified through the analysis and documentation of the pilots, and presented with estimates of their economic benefits.

21. *Baseline.* In April 2019, MEE and other ministries jointly issued the “*Opinions on Promoting the Implementation of Ultra-low Emissions in Steel Industry*”. The government is now steadily pushing forward the transformation of ultra-low emissions in iron and steel industry. However, there is no requirement for UPOPs emission standards in the “*Opinions*”. While some synergistic co-benefits are possible, they cannot be guaranteed in the absence of specific



attention to UPOPs. Without the project, the development of a stricter emission standard for dioxins would not be a priority, and there would likely be no systematic effort to consider synergies between conventional pollutants reduction and dioxins.

22. *GEF Alternative.* The GEF incremental intervention takes opportunity of this push for ultra-low emission standards in the industry, to seek to maximize the UPOPs reduction that can follow, and optimize for cost-effectiveness any additional UPOPs control measures required. The provision with GEF support of enabling incentives is critical to overcome existing barriers and capacity deficit to monitor, measure, control and manage UPOPs in the Chinese iron and steel sector in an integrated manner.

23. *Innovation.* The innovativeness of this project mainly relies on the promotion of least-cost, applicable techniques dealing with UPOPs emissions, and on the integration of BAT/BEP for PCDD/Fs control with emission reduction of more conventional pollutants and energy-saving and greenhouse gases emission reduction. While these are linked, there are trade-offs that need to be assessed and minimized, balancing at times competing policy drivers, while synergies are optimized.

24. *Sustainability and potential for scaling up.* The project is specifically designed, through Component 2, to promote sustainability and scaling up during implementation and after project closure throughout the sector and throughout the country, with specific activities to promote and disseminate results and lessons learned, with national, provincial and local government, institutes and enterprises involved to ensure the dissemination of relevant information. The following elements offer a framework that will be in place so that the potential for scaling up of project-supported activities is high: (i) the project will demonstrate the effectiveness of BAT/BEP approaches to iron and steel production and control of UPOPs emission, offering detailed guidance and information on costs and expected emission reduction to others in the industry (ii) the project outcomes will include guidelines and standards for UPOPs emissions reduction in the sector, which will promote the widespread utilization of new technologies; (iii) the project will help design a national program to catalyze further industry investments in pollution control and POPs reduction; (iv) the project will support provincial and national capacity building; and (v) the project ensures the participation and co-operation of all key stakeholders, the industry, multiple levels of government, and the public, including local participation, from the beginning of project formulation and throughout its implementation.

25. The sustainability of project outcomes will also benefit from focusing on UPOPs emissions in the iron and steel industry, one of the most important industrial sectors in China, and because the project approach to UPOPs emission control, and indirectly other pollutants, is in line with national policies, especially the new air pollution control policies issued in 2013, making the project activities eligible for medium-term government financial support for air pollution mitigation measures.

26. *Rationale for public sector provisioning/financing.* The project is expected to directly mobilize significant industry investments in BAT/BEP for dioxins reduction through co-financing from the participating enterprises under Component 1, at a ratio of approximately ten to one. This will be complemented by future industry-wide investments to achieve BAT/BEP as the ultra-low emission standard continue to be implemented, together with the dioxins reduction measures identified and promoted by the project. This relatively low public support will ensure that the experience from the demonstration projects can be fully documented and shared, and will therefore accelerate sector-wide transformation.

27. *Value added of the Bank's support.* The project is requested by MEE and MOF. It builds on a strong and early World Bank program to support China with implementation of the Stockholm Convention, including through



implementation of GEF funded projects, and a growing program related to waste and pollution management. The Bank has supported China through its trust fund resources to build up its capacity in developing its NIP and preparing GEF POPs projects since 2002, supporting the implementation of six projects so far. Also key is the considerable experience of the World Bank over the last two decades in working with China to implement sector plans for ODS phase out. The project’s BAT/BEP demonstration component, which will require significant investment, is in line with the World Bank’s comparative advantage on investment interventions as an implementing agency of the GEF, and the World Bank is uniquely placed among all GEF agencies to offer the mix of investment, policy making, and capacity-building support that will be necessary for the project to achieve its development objectives and for its sustainability, and to bring to bear knowledge and international good practices for multi-pollutant control.

28. The project is set in the framework of the World Bank’s engagement on pollution in China, and will be part of a broad and programmatic effort on pollution with MEE and other stakeholders, ensuring that this GEF supported project not only benefits Stockholm Convention implementation, but also supports the strategic objective of long-term sustainability. The World Bank’s expertise and comparative advantage will come to bear as the project will help set the foundation for a long-term program to facilitate heavy industries’ investments in pollution and GHG emissions reduction.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

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**APPROVAL**

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