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Concept Environmental and Social Review Summary

Concept Stage

(ESRS Concept Stage)

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BASIC INFORMATION

A. Basic Project Data

Country	Region	Project ID	Parent Project ID (if any)
China	EAST ASIA AND PACIFIC	P173461	
Project Name	Environmentally Sustainable Development of the Iron and Steel Industry		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Environment, Natural Resources & the Blue Economy	Investment Project Financing	6/7/2021	7/30/2021
Borrower(s)	Implementing Agency(ies)		
People's Republic of China	Foreign Environmental Cooperation Office of the Ministry of Ecology and Environment (FECO)		

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.

Financing (in USD Million)	Amount
Total Project Cost	200.00

B. Is the project being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project [including overview of Country, Sectoral & Institutional Contexts and Relationship to CPF]

China’s rapid growth and significant poverty decline has been accompanied by challenges with pollution, deterioration of the environment, and greenhouse gas emission. The iron and steel sector accounts for a disproportionate share of the total industry-related CO2 emissions, and has also been targeted by the GoC as a significant source of emission of conventional pollutants. The sector is also the largest industrial source of

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unintentionally produced persistent organic pollutants (UPOPs) such as dioxins and furans. Persistent organic pollutants (POPs) are toxic chemicals that adversely affect human health and the environment around the world, and can lead to serious health effects, including certain cancers, birth defects, and dysfunctional immune and reproductive systems. The Stockholm convention (SC) was adopted by governments to protect human health and the environment from POPs. Under the SC, China is required to take actions to reduce UPOPs releases, and specifically to promote the use of best available techniques (BAT) and best environmental practices (BEP) for certain industrial sources, including iron ore sintering and electric arc furnaces (EAFs) in the iron and steel industry.

This project is therefore proposed with the objective to demonstrate and promote BAT and BEP that will reduce and avoid unintentionally produced persistent organic pollutants in the Chinese iron and steel industry in a sustainable way. The project will be implemented by the Foreign Environmental Cooperation Center of the Ministry of Ecology and Environment that leads the implementation of the SC, in partnership with the China Iron and Steel Association. It will build on the opportunity offered by the government's push for the industry to adopt "ultra-low" emission standards (that would not normally take into account UPOPs), to demonstrate what complementary measures the industry should implement to achieve BAT/BEP while maximizing co-benefits with particulate matter and other pollutants reduction, and balancing greenhouse gas reduction imperatives. This is fully aligned with the World Bank Group Country Partnership Framework for China for the period FY20-FY25 recently adopted by the Board, in particular objective 2.2: Reducing Air, Soil, Water, and Marine Plastic Pollution, with its focus on the delivery of global environmental public goods and country-wide environment reform and institutions building.

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D. Environmental and Social Overview

D.1. Project location(s) and salient characteristics relevant to the ES assessment [geographic, environmental, social]

The project will bring overall environment and health benefits that accrue from the reduction of dioxins emissions from iron and steel making through investment in specific pilots, and further from the sector through influencing the adoption of BAT/BEP. The project will also finance technical support for the identification and design of the appropriate BAT/BEP measures, UPOPs emission monitoring and monitoring of related UPOPs containing waste, as well as strengthening the institutions and policy and regulatory framework to enhance sustainability and replication.

None of the pilots supported by this project has been determined but the investment will take place in industrial and developed areas. Sizes and technical capacities are differentiated among all 400 enterprises in China with smelting abilities. Some of the advanced enterprises have world-class energy-saving and pollution treatment, but the majority of the industry is struggling with meeting the more rigid national standards. The criteria to select the enterprises that participate in the project will be crafted to allow the exclusion of those that do not have good E&S records. Criteria will be further elaborated and refined during project preparation and would include the demonstration of good environmental management systems and performance and of good labor management performance; with no major labor or environmental violations, or major OHS incidents over the past 3 years.

A typical iron and steel enterprise that would participate in the project covers several square kilometers, each of its sinter/EAF lines covers a few hundred thousand square meters, and the pollution control facility of each sinter/EAF covers a few thousand to a few ten thousand square meters. There are about ten thousand workers in the whole factory, including tens to a few hundred direct workers for one sinter/EAF line. The typical enterprise has existed for decades, and are far from sensitive E&S receptors such as areas of biodiversity value, water source protection zones,

heritage sites and other areas of high value. The baseline legacy pollution on and around the sites would be significant, including heavy air emissions, large volume of solid waste, high level of noise and various effluent streams.

The E&S contexts differ among subprojects that will be selected nationwide. China's iron and steel industry have always been "heavy in the northern and light in the southern". Northern China and Northeastern China established the most important iron and steel production base by virtue of rich iron ore reserves and coal resources. With the huge demand for regional development and advantages of ports and docks, Eastern China has become the 2nd largest steel industry cluster in China. Due to its proximity to Eastern China, Central China has gradually developed its steel industry. However, the iron and steel production in Southern China, Southwestern and Northwestern are relatively low.

China’s landscapes vary significantly over its vast area: extensive and densely populated alluvial plains in the east, broad grasslands in the northern Mongolian plateau, hills and low mountain ranges in the south and the deltas of China’s two major rivers (Yellow River and Yangtze River) in the central-east region. The climate and natural conditions in China also differ from region to region. In terms of socio-economic conditions, China’s central and eastern provinces are generally more advanced and are more densely populated compared with the northern and western provinces. Most of the central and eastern provinces are Han Chinese dominated, whilst northern and western provinces have a comparably higher population of ethnic minority groups.

As one pilot at least would be identified by appraisal, the E&S context of the project will be further reviewed during project preparation and implementation subject to the availability of further information.

D. 2. Borrower’s Institutional Capacity

The Foreign Environmental Cooperation Center (FECO), under the Ministry of Ecology and Environment, will serve as the overall national implementing agency for the project. FECO will house a designated project management office (PMO). China’s Iron and Steel Industry Association will provide technical advice to FECO and is responsible for outreach to its members. FECO has over 20 years’ experience in organizing the implementation of multilateral environmental agreements and bilateral assistance. FECO has a good track record regarding the management and supervision of the E&S issues in their projects. The project teams have acquired extensive experience with the World Bank’s safeguards policies through the implementation of over a dozen of World Bank projects supported by the GEF and the Multilateral Fund of the Montreal Protocol. The leaders of FECO project teams were familiar with the framework approach to screen, assess, mitigate, and monitoring and supervision of subprojects to assure their alignment with the safeguards policies of international financial institutions.

Nevertheless, this project is the first implemented by FECO to be prepared and implemented under the new Environmental and Social Policy (ESF). The staff still has limited knowledge of the ESF requirements particularly concerning occupational health and safety (OHS). Through Bank implementation support, FECO is expected to readily strengthen its capacity to manage the project implementation consistent with the ESF. FECO will develop a timebound capacity building plan in the ESMF and document key measures and actions in the ESCP. The capacity building plan will also include measures to enhance the awareness and capacity of relevant enterprises for implementing the ESF. FECO will designate a full-time staff for E&S coordination. FECO is committed to allocating adequate resources and ensuring proper technical expertise, both in-house and external experts, to support the application of relevant environmental and social standards (ESSs) in the project.

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II. SCREENING OF POTENTIAL ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC)

Moderate

Environmental Risk Rating Moderate

The project will bring global environmental and health benefits that accrue from the reduction of dioxins emissions from specific iron and steel pilots, and further from the sector through influencing the adoption of BAT/BEP, and therefore reduce the exposure to dioxins of biota and people. The project will also demonstrate how these technologies can have multiple benefits in controlling conventional pollutants such as PM, NOx, SO2 and CO2, as well as mercury alongside dioxins.

This project will not increase production capacity or footprint. The enterprise-based activities will lead to upgrade and improvement of existing facilities' pollution control equipment in industrial and developed areas, which are likely to be away from environmentally sensitive areas. The effects of the project on areas of high value or sensitivity are therefore low.

Civil works to upgrade pollution control facilities will be conducted. Considering the small scale of civil works carried out in large existing industrial sites, the construction related risk and impact, including the dust, noise, solid waste and wastewater, are site specific, short term and readily managed through the environment mitigation hierarchy. The original/baseline environmental impacts from the existing facilities, including air emissions (PM, NOx, SO2, CO2 and PCDD/Fs), industrial solid wastes and hazardous wastes, wastewater, noise, and occupational health and safety hazards (e.g. physical hazards, heat and hot liquids, dust and gases, chemicals, electricity, noise, fire and explosions), will remain but would be reduced in magnitude. The project will only invest in facilities that already meet the applicable China national (GB) standard for pollutant emissions in the iron and steel industry, and will reduce the emissions of dioxins to the levels expected from the Stockholm Convention on persistent organic pollutants through the implementation of proven BAT/BEP mitigation measures that can be designed readily and reliably adopted by the participating enterprises. As a result of the demonstration, pollutants emission will be reduced significantly. The OHS risks causally linked to the project is deemed moderate and can be managed better than average due to the existing OHS procedures and capacity on site. Hence, the expected environmental impacts of project implementation are positive with a large magnitude, while risks and adverse impacts are moderate, temporary and localized. The environmental risk is thus rated, in an integrated manner, as moderate.

As described in section I.D.2. above, FECO, the implementing agency for the project, has extensive experience with E&S issues through the implementation of a large number of World Bank project, but has no specific experience with the ESF. The environmental risk related to the capacity of the borrower therefore is moderate.

Iron and steel is the last priority sector for dioxins reduction in China's National Implementation Plan (NIP) that needs to be addressed, and is currently the largest industrial source of dioxin releases. The project will provide support to address guidelines, regulations, capacity building at national and local government levels and to design a national program targeting heavy industries for integrated pollution reduction with comprehensive consideration of POPs, greenhouse gases (GHGs) and conventional pollutants through TA activities. In addition, to support China's Blue Sky Defense Campaign, China government has promulgated and enforced more and more policies and regulations to

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improve the environmental management and performance of iron and steel industry, and associated E&S risks are deemed moderate under existing legal framework. Further assessment of project-related environmental risks, including assessment of institutions and policy and regulatory framework applicable to the project sector of relevance to the ESSs will be conducted during preparation as part of optimization of project design.

Social Risk Rating Moderate

All enterprise-based activities will lead to the upgrade and improvement of existing facilities' pollution control equipment in selective sinter plants and EAF lines. The project will not increase the footprint of the enterprises, nor will it lead to additional land acquisition and resettlement. As compared with the workforces of the whole iron and steel plants, each subproject would involve a relatively small number of direct workers (50-400), most of whom are the existing staff. The installation and testing of environmental facilities may involve contracted workers. According to the project design, the operation of the project would result in moderate occupational health and safety (OHS) risks, which could be mitigated with available standard measures. The initial review does not identify particular concerns related to layoff of workers, child labor, forced labor, or GBV in the project. Ethnic minorities have a low probability of presence in the project area. Potential impacts on ethnic minorities would primarily be associated with the effects on the health and safety of ethnic workers and community health and safety. Core vulnerable groups would be certain types of workers (e.g., the ethnic minorities, migrant workers, etc.) who are more vulnerable to OHS impact and risk. Generally, the project social impacts are site-specific, medium in magnitude, and can be readily managed by applying a mitigation hierarchy. The social effects can be avoided, minimized, or reduced through adopting strict criteria for subproject selection and enforcing a culturally appropriate stakeholder engagement.

FECO has track experience for successfully implementing World Bank projects. Although FECO is among the first to apply ESF requirements in China, their extensive experience in handling safeguards policies and tailored capacity training (e.g., on OHS and stakeholder engagement) are expected to facilitate the process of adapting to the ESF. By recognizing these potential risks, a more targeted awareness campaign, more effective stakeholder communications and a better labor management system will be incorporated into the project design and operation to reduce OHS risk and to secure worker's health and safety. The overall social risk is deemed moderate, which will be further reviewed and revised when further information becomes available during project preparation.

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B. Environment and Social Standards (ESSs) that Apply to the Activities Being Considered

B.1. General Assessment

ESS1 Assessment and Management of Environmental and Social Risks and Impacts

Overview of the relevance of the Standard for the Project:

Initial E&S due diligence was conducted based on (i) information collected from FECO; (ii) desktop review of the environmental and OHS assessment reports of typical sinter projects; (iii) initial consultation with some sector experts; (iv) FECO's demonstrated E&S performance records under World Bank projects; and (v) interviews with FECO. Considering the Covid-19 outbreak risk, no site visit to potential plants was arranged, which will happen during project preparation.

The initial environmental screening suggest that the project will result in beneficial operating performance improvements by reducing release of dioxins and multiple benefits in controlling conventional pollutants such as PM, NOx, SO2, CO2 and mercury through investments in specific plants for BAT/BEP demonstration, promoted replication

through technical assistance, and further influence on the industry. 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. The sub-projects will see most investment at the level of upgrading pollution control facilities, and would also involve limited investment or TA directly affecting the operation of the sinter line or EAF itself which are therefore considered part of the project. In some cases (if applicable) feed material selection and preparation may be part of a sub-project and necessary utilities may be associated facilities, but this should be reassessed during the EA process case by case.

Considering small civil works involved for upgrading of existing pollution control facilities in a large existing industrial sit, there will be moderate environmental impacts and risks from the construction activities of the project. The operation of the pilot is expected to reduce pollutant emissions (including dioxins and conventional pollutants) compared with the current baseline. Other impacts such as the generation of industrial solid wastes and hazardous wastes, wastewater, noise, and OHS hazards will be similar to the ongoing activities the steel complexes, and their management will be improved through BAT/BEP adoption. The likelihood of presence of areas of high value or sensitivity near the project area is low as specific pilots will be selected at existing facilities that are typically located in industrial and developed areas. The overall environmental risk is rated moderate. Further assessment of project-related environmental risks will be conducted along with the optimization of project design of relevance to the ESSs, during preparation.

The project interventions will take place on existing industrial land owned or used by the participating enterprises, which would not involve additional land acquisition or resettlement. The social risk associated with land taking is considered low unless subproject screening and audit identify legacy land acquisition and resettlement issues, in which case the enterprise would be excluded from the project. Although the location of subprojects is unknown at this stage, ethnic minorities are deemed a low probability of presence in the project area considering geographical distribution of the iron and steel industry. Potential impacts on ethnic minorities would primarily be associated with the effects on the health and safety of ethnic workers and community health and safety, which can be mitigated through formulating a strict criteria for subproject selection and enforcing a culturally appropriate stakeholder engagement. The initial review identifies that the project may involve direct workers, contracted workers, and primary supply workers. The initial review under ESS2 suggests that the project would have moderate risks associated with labor and working conditions, subject to further assessment when a specific subproject is known. The World Bank team will further identify and review the social impacts and risks during project preparation, and assess whether FECO and the enterprises are capable of developing and implementing the project per relevant ESSs.

Based on the current project design, the project cannot confirm all subprojects before Appraisal. An Environmental and Social Management Framework (ESMF) is proposed as the E&S management instrument to cover all the project's supported activities and any associated facilities in compliance with both domestic regulations and the World Bank's ESF. Associated facilities will be identified and assessed on a case-by-case basis during subproject selection and preparation. The ESMF, as defined in ESS1, should set out the principles, rules, guidelines, and procedures to assess the environmental and social risks and impacts. In the case of this project, the ESMF should include: (a) an analysis of potential impacts that may occur and mitigation measures that might be expected to be used, considering the findings of World Bank due diligence review, and level of law enforcement and overall E&S performances in iron and steel industry; (b) a gap analysis of relevant China's E&S regulatory framework and the ESSs; (c) E&S management

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procedures for subproject screening, E&S audit , assessment, approval, implementation, supervision and M&E; (d) the E&S related eligibility criteria or exclusion list for subproject selection; (e) a review of existing institutional capacity on E&S management and arrangements for staffing, capacity building and budget; and (f) a plan for stakeholder engagement and grievance mechanisms. The ESMF should also include appropriate guidance on E&S audit of existing facilities to be funded by the project, as well as tools for subproject E&S assessment and management (e.g., template for environmental and social management plan, template for labor management procedure, SEP framework, etc.).

For any TA activities under the project, FECO should incorporate reference to relevant ESSs in the TORs to ensure that activities and outputs are consistent with the requirements of ESF.

During preparation, FECO should, at the overall project level, develop an ESMF, a stakeholder engagement plan (SEP), and an environmental and social commitment plan (ESCP) consistent with the requirements of ESF. The E&S documents should be disclosed as early as possible before appraisal locally and at the World Bank website to seek views of stakeholders.

Once a potential subproject is known, FECO should carry out subproject screening to determine its eligibility for financing. All subprojects should conduct an E&S audit to review the appropriateness of operational environmental and social management plans for the pilot facilities to meet the requirements of relevant ESSs and China's regulations, and recommend improvements as needed. The participating enterprises will develop appropriate E&S documents proportionate to the risks and impacts of the particular subproject, consistent with the ESMF, and including E&S management plans for both construction phase and operational phase. The E&S documents will provide sufficient detail to inform stakeholder engagement and the World Bank decision making. FECO and the enterprises will submit to the World Bank and disclose the E&S documents as specified in the ESCP.

Areas where "Use of Borrower Framework" is being considered:

The applicability of relevant E&S legal framework in China needs to be further reviewed in comparison to ESS2 and ESS3 in the ESF during the ESMF preparation. Particularly, the project will support government capacities aimed at meeting Stockholm Convention requirements to reduce UPOPs emissions by strengthening and enforcing regulations, including: assessment and drafting of update of emission standards for adoption; development or revision of technical standards such as technical specifications for application and issuance of pollutant permit; 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 efficient 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 by the provision of technical training and upgrade of monitoring equipment; and improved information management system to facilitate the establishment of a national UPOPs inventory.

ESS10 Stakeholder Engagement and Information Disclosure

At this stage, it is identified that the project affected parties would include subproject workers, local communities located within the area of influence of subprojects, and vulnerable groups. The vulnerable groups, in this project case, mainly refer to certain types of workers, individuals or groups (e.g. the ethnic minorities, migrant workers, etc.) who may be more vulnerable to or may have different concerns about OHS impacts, and require different or separate forms of engagement. Other interested parties would include FECO (the PMO), the participating enterprises,

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construction contractors, primary suppliers and vendors of subprojects, sector specialists (including China Iron and Steel Association), relevant government authorities for approval of subprojects, etc. Namely, the responsible government bureaus would include, but not limited to Ecological and Environmental Protection Bureau, Fire-fighting Brigade, Emergency Management Bureau (for work safety), Labor Bureau, Bureau of Natural Resources, and Ethnic Minority and Religious Bureau (for confirming the presence of ethnic minorities in subproject areas).

Stakeholders should be further identified and analyzed during preparation, with particular attention to core vulnerable groups. An adequate level of detail will be included in the stakeholder analysis so as to determine the level and way of engagement that is appropriate in the project.

Before Appraisal, FECO should prepare an overall project Stakeholder Engagement Plan (SEP) consistent with the requirements of ESS10, to ensure effective and ongoing engagement and consultation throughout the project lifecycle. FECO, as the project PMO, should put in place a functioning grievance redress mechanism (GRM) to respond to grievances and public inquiries and to ensure concerns are recorded, addressed, and responded to in a timely manner. As elaborated under ESS2 and ESS7, the SEP and GRM should ensure culturally appropriate communications are integrated into the design, implementation and monitoring of the project's health and safety measures.

The overall project SEP should include a stakeholder engagement framework, outlining general principles and a collaborative strategy to identify stakeholders and plan for an engagement process per ESS10 that will be implemented once a subproject's location is known. The stakeholder engagement framework should be transformed into a subproject specific SEP during subproject preparation.

Before Appraisal, the ESMF, ESCP, overall project SEP and any E&S documents of subprojects (that can be selected during preparation) should be disclosed locally and at the website of the World Bank.

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B.2. Specific Risks and Impacts

A brief description of the potential environmental and social risks and impacts relevant to the Project.

ESS2 Labor and Working Conditions

ESS2 is deemed relevant to the project considering the types of workers employed or engaged in the project. Based on the project design, the project promotes the adoption of BAT/BEP in the iron and steel industry to reduce UPOPs by selective sinter plants and EAF lines. The project investment will lead to upgrade and improve existing facilities' pollution control equipment. Direct workers are identified as people employed or engaged directly by the participating enterprises to work specifically in connection with the operation of the pollution control facilities, sinter plants, EAF lines, as well as in some cases with feed material selection and preparation and necessary utilities. Contracted workers refer to people employed or engaged by contractors for installing pollution control facilities. Primary supply workers are people employed or engaged by those suppliers who, on an ongoing basis, directly provide goods and materials essential for the core functions of the pollution control facilities. Community workers are unlikely to be involved considering the project focuses on steel industry-related activities.

The project investments are generally technology and capital-intensive. A pilot subproject may involve dozens (50-60) but less than a few hundred (~400) of direct workers, who are mainly existing workforce in relevant sintering and EAF

lines. The project investment focuses on the upgrading of environmental pollution facilities, which would have limited impact on workers' headcount at the relevant sinter plants and EAF lines. The project is unlikely therefore to result in workers' layoff. A few specialists may be newly employed or engaged in operating the new technologies installed under the project. Civil works focus on installation and testing of facilities, which would last 6-8 months and involve around 100 workers. The relevance of primary supplier workers is pending identification until the subproject's design is known. In general, the project workers are considered relatively small in number as compared with the workforces employed or engaged for the whole steel and iron plant, which would range into the thousands. The number and types of workers that may be involved in the subprojects will be identified on a case-by-case basis in the context of the environmental and social assessment documentation for each pilot enterprise.

China has comprehensive regulations on labor and working conditions, which are generally in alignment with the scope of ESS2. China's labor authorities at all levels are increasing supervision of factories, in particular key industries, to ensure labor law enforcement, require sound and fair treatment of all types of workers and prevent child labor and forced labor. In China, iron and steel factories (both state-owned and private-owned) are usually local pillar industry, and dozens (especially the large or very large) are publicly listed. A steel enterprise normally maintains a written labor management system to manage terms and conditions of employment. Sector-wide, risks of child labor and forced labor in formal iron and steel plants are deemed negligible, according to preliminary desktop review and cross-check against ILO's Decent Work Country Program. Running the World Bank Sexual Exploitation and Abuse and Sexual Harassment Risk Assessment Tool shows GBV is of low risk in this project.

OHS issues are common to the operation of sinter plants and EAF lines. Typical OHS risks factors in a sinter plant would include moving equipment, noise and vibration, high temperature, fire and explosion, fugitive dust, particulate matter, carbon monoxide, psychosocial hazards, electrical hazards, etc. The project however would have less potential for harming worker health and safety. Although China's Catalogue of Occupational Disease Hazard Factors (2012) classifies the overall workplace OHS risk in iron and steel mills as high, the OHS risks at sintering and EAF lines would be less complex and hazardous than other processes such as coking. Moreover, strict law enforcement contributes to improving environmental and social performances in the sector, including labor and working conditions, and reducing the probability of severe health and safety incidents (e.g., physical harm, occupational diseases). The OHS experts that were consulted noted that the impacts on worker's health and safety at sinter plants were known and that there were ready mechanisms available to reduce such impact. As part of the subproject eligibility criteria, the project will target selective enterprises with labor management practices as demonstrated by an OHS certified management system and with no major violations or OHS incidents in the past three years. This project will promote the adoption of BAT and BEP in the iron and steel industry, which would generally minimize workplace pollutant concentrations and subsequently reduce respiratory hazards. Mitigation of other OHS risks can also benefit from the application of ESS2 and World Bank Group Environmental Health and Safety guidelines, as well as enhanced monitoring and supervision to be conducted under the project. With this project design, the project OHS risks would be predicable, site-specific, likely to be moderate in magnitude and can be mitigated predictably.

Risks related to labor and working conditions of all types of workers are subject to further assessment during preparation, which will inform the formulation of ESMF, including the E&S screening checklist, TOR of labor audit of existing facilities, and the labor management procedure.

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A screening checklist, to be included in the ESMF, should cover the potential E&S issues for ESS2, e.g., impacts on workers' layoff, significant risk of severe occupational health and safety issues, forced labor and child labor, juvenile workers (above minimum age and under 18), etc. The ESMF should include terms of references for reviewing the performances of labor and working conditions at existing facilities. The labor review aims to determine the nature and extent of concerns associated with labor and working conditions at existing facilities, justify mitigation measures, estimate the cost of actions, and recommend a schedule for implementing them. During subproject preparation, the labor review should be carried out by a qualified individual or institute. For certain projects, the labor review may be a stand-alone audit or form part of an integrated environmental and social audit. The ESMF should also develop a template for labor management procedure, which could be fine-tuned to fit the specific circumstances of a subproject after completing the labor review. The views of the representative workers and workers organization will be sought in a culturally appropriate way to enhance labor management procedure and design of OHS measures.

All subprojects should establish and maintain a labor management procedure proportionate to the E&S risks and impacts and consistent with the requirements of ESS2. Before subproject appraisal, it should put in place separate functioning grievance mechanisms for project workers. The subprojects will require that the selected contractors should be obliged to performed OHS risk assessment for the defined scope of work, review established site-specific OHS management plans for the pilot facilities and develop/implement/maintain OHS management plans consistent with the local legislation and ESF.

ESS3 Resource Efficiency and Pollution Prevention and Management

Iron and steel manufacturing facilities are inherently heavy polluting and energy intensive. However, the implementation of this project will not increase the pollutants emission or discharge but result in pollutant reduction and, as multiple benefits, energy-saving and greenhouse gases emission reduction by BAT/BEP demonstration through specific pilots and further promoted replication and influence on the industry to adopt BAT/BEP. It is estimated that the water consumption might be neutral with the upgrade of the pollution control devices. During the project implementation, clean production opportunities with reference to Good International Industry Practice will be sought to enhance energy efficiency and to reduce energy consumption. Additional residuals including slag waste from filtering out UPOPs in the demonstration may be generated, and this will be further assessed and mitigation measures will be proposed during the EA process. The small-scale civil works and operation of the demonstration pilots will bring some impact and pressure on the environment, including consumption of resources (e.g., energy and water), management of hazardous materials, generation of air emissions (e.g., PM, NOx, SO2, CO2 and PCDD/Fs– reduced from the baseline conditions at the plant), hazardous and conventional waste, noise, wastewater and OHS hazards. These impacts will be assessed for the pilot facilities during the EA process, including the estimate of gross GHG emissions resulting from the pilots. Adequate mitigation measures and environment monitoring plans as part of the EA instruments for the pilot facilities will be also developed. The project comes at a time when more and more policies are focusing on air pollution emission control. Ministry of Ecology and Environment (MEE) of China has issued a series of updated emission limits for the iron and steel industry. A series of regulations has 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 SO2, NOx, and for POPs, including PCDD/Fs. PCDD/Fs emissions have been limited to 1 ng TEQ/m3 for existing facilities and 0.5 ng TEQ/m3 for new facilities, for both sinter plants and electric arc furnaces, but are not yet as tight as the ones expected from Stockholm Convention (SC). In April 2019, MEE and other ministries jointly issued "the Opinions on Promoting the Implementation of Ultra-low Emissions in Steel

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Industry". The government is now steadily pushing forward the transformation of ultra-low emissions in iron and steel industry, but this does not set further limits for dioxins control. The project will provide technical assistance to address guidelines, regulations, capacity building and a national program to enhance the replication and sustainability.

During preparation, relevant domestic regulations and their enforcement will be reviewed against the requirements of ESS3 and the World Bank's applicable Environmental, Health and Safety Guidelines to confirm the adequacy of existing system for pollutant control in iron and steel industry in China. The World Banks' EHS Guidelines for Integrated Steel Mills will be referred to and the pilots are expected to meet the standards therein, including for PCDD/Fs. Necessary actions may be proposed in the ESCP at the appraisal stage if any major gap is identified. Since the E&S performance of the selected enterprises are deemed critical in the management of potential E&S risks and impacts in the sector, due diligence will be conducted during project preparation to review the overall E&S performance of the potential participants. In addition, to facilitate the pace of industry-wide adoption of BAT/BEP for dioxins and conventional pollutants control and reducing energy consumption, the project would support the following type of technical assistance/consulting services 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, the TORs of which should reflect the requirements of ESS3.

ESS4 Community Health and Safety

The pilots will possibly be located adjacent to residential areas. Given the small size of civil works, only a limited number of additional workers will be introduced to the site for construction during a short period. Thus, the project-resulted disturbance to local communities will be very limited during construction phase. The operation of the pilots will not increase the impacts to local communities as the investment will focus on upgrading and improving existing facilities' pollution control equipment. The impacts to local communities during operation will be similar with those prior to the implementation of the pilot but the emission of pollutants such as dioxins and conventional pollutants will be reduced. The original impacts from the operation of the existing facilities, that are not caused or increased by the project, will remain and include traffic safety due to transportation of large quantity of goods including raw material and products, potential soil and water contamination due to improper storage and disposal of industrial waste, noise nuisance, fire and explosion hazard related to the fuel and burning system. Following current practice in China, safety assessment, firefighting review and environmental impact assessment will be conducted for all the demonstration activities before implementation to ensure the integration of all the necessary safety measures into the project design. During preparation, relevant domestic practice will be reviewed against the requirements of ESS4 and the World Bank's applicable Environmental, Health and Safety Guidelines to confirm the adequacy of existing system in China. Necessary actions may be proposed in the ESCP at the appraisal stage if any major gap is identified.

ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

The project interventions will take place on existing industrial land owned or used by the participating enterprises, which will not involve additional land acquisition or resettlement. The E&S screening checklist should include provisions to identify resettlement risks in connection with existing land and past resettlement occurring before specific subprojects. The project's ESMF should set out terms of references for the resettlement due diligence review.

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During preparation, FECO and the participating enterprises should conduct screening to identify the application of the resettlement due diligence review. The participating enterprises should conduct a due diligence review to assess the compliance status of existing land and past resettlement, identify any complaints and outstanding issues, and justify the measures, cost and schedule to mitigate the areas of concern. The due diligence should review prior resettlement within a time frame of three years prior to a particular subproject, but will also consider the context of a specific subproject and significance of any previous resettlement on a case-by-case basis. The relevance of ESS5 to specific subprojects will be further reviewed during subproject E&S screening.

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

Based on current project design, the pilots this project will finance will be only existing facilities in industrial and developed areas, which are likely to be away from environmentally sensitive areas. In addition, all subprojects will be screened against exclusion criteria to eliminate any activities situated in nature reserve, critical natural habitat or scenic site. Relevance of ESS6 will be further reviewed during subprojects preparation.

ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

The project will select subprojects country-wide according to transparent criteria, which will be established during project preparation. China's steel industry is concentrated in the northeast and east coastal provinces, which are largely Han Chinese dominated areas. Of the ethnic minority autonomous regions in west China, some including Inner Mongolia, Ningxia also have large steel production bases. At this concept stage, the subproject list is not available, and therefore the possibility that ethnic minorities may be present in any of the subproject areas cannot be excluded. Based on a preliminary review, the ethnic minorities can either be the project workers or present in the local communities within the area of influence of the project. The impacts on ethnic minorities (if any) would be associated with workplace labor and working conditions (considered under ESS2) and community health and safety (considered under ESS4).

At the current concept stage, ESS7 is expected to be relevant to the project considering potential sensitive locations of certain subprojects and the design of culturally appropriate stakeholder engagement strategies. FECO will include related elements on ethnic minorities in the E&S screening checklist. Both the overall project SEP and the subproject stakeholder engagement framework should include culturally appropriate ways and strategies to assure meaningful consultation with the ethnic minorities throughout the project lifecycle, to contribute to the project design and facilitate the E&S risks mitigation. Applicability of ESS7 will be further assessed through subproject selection during preparation.

ESS8 Cultural Heritage

The project interventions will take place in existing enterprises on existing industrial land, which are unlikely to be located within or even in the vicinity of known cultural heritage sites. The project similarly is unlikely to involve risks related to intangible cultural heritage. The project's exclusion criteria should include provisions to screen out any subprojects that may impact legally protected or customarily recognized cultural heritage(s). The E&S screening checklist should include elements on cultural heritage. The project's ESMF should also establish a procedure to

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manage potential chance finds associated with civil works. The relevance of ESS 8 to specific subprojects will be further assessed when the location can be confirmed.

ESS9 Financial Intermediaries

This project will not involve financial intermediation, and the ESS9 is therefore not relevant.

B.3 Other Relevant Project Risks

At this concept stage, there are no other specific environmental and social risks of relevance to the project.

C. Legal Operational Policies that Apply

OP 7.50 Projects on International Waterways	No
OP 7.60 Projects in Disputed Areas	No

III. WORLD BANK ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

A. Is a common approach being considered? No

Financing Partners

The GEF trust fund will provide a grant to FECO that will be passed on to selected enterprises through sub-grant agreements or contracts. The participating enterprises are required to provide counterpart funds as necessary to implement the project interventions. At this concept stage, there are no financing partners envisaged.

B. Proposed Measures, Actions and Timing (Borrower's commitments)

Actions to be completed prior to Bank Board Approval:

FECO to develop and agree with the World Bank an ESCP;
FECO to develop an ESMF consistent with ESS1;
FECO to develop a timebound E&S capacity building plan;
FECO to develop an overall SEP (including stakeholder engagement framework for subprojects) consistent with ESS10;
FECO to establish a functioning GRM to complete the SEP;
FECO to disclose the ESMF, ESCP, and SEP (including GRM) as early as possible and before Appraisal;
For the pilot demonstrations that can be determined before Appraisal, the subproject owner(s) to develop appropriate environmental and social documents consistent with the ESMF and ESSs, and disclose them before Appraisal.

Possible issues to be addressed in the Borrower Environmental and Social Commitment Plan (ESCP):

FECO and subprojects to implement E&S capacity building plan;
FECO to carry out E&S risk screening for potential subprojects;

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Subprojects to develop appropriate environmental and social assessment documents consistent with the ESMF and apply relevant ESSs;
Subprojects to develop, implement and maintain the LMP consistent with ESS2 and China's labor law;
Subprojects to establish a subproject level GRM and workers' GRM;
FECO and subprojects to implement SEP and GRMs;
FECO to report to the World Bank and agree on measures and actions if a subproject risk profiles increase significantly at any stage during the lifecycle of the project;
FECO to submit annual Environmental and Social Monitoring Report.

C. Timing

Tentative target date for preparing the Appraisal Stage ESRS 15-Apr-2021

IV. CONTACT POINTS

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Borrower/Client/Recipient

Borrower: People's Republic of China

Implementing Agency(ies)

Implementing Agency: Foreign Environmental Cooperation Office of the Ministry of Ecology and Environment (FECO)

V. FOR MORE INFORMATION CONTACT

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VI. APPROVAL

Task Team Leader(s):	Laurent Granier
Practice Manager (ENR/Social)	Susan S. Shen Recommended on 09-Apr-2020 at 23:34:20 EDT
Safeguards Advisor ESSA	Peter Leonard (SAESSA) Cleared on 10-Apr-2020 at 09:44:54 EDT

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