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	P174267	
Project Name	China Plastic Waste Reduction Project		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Urban, Resilience and Land	Investment Project Financing	4/21/2021	6/24/2021
Borrower(s)	Implementing Agency(ies)		
People's Republic of China	National Development and Reform Commission		

Proposed Development Objective(s)

To strengthen national and sub-national policies, institutions and operations towards reduced plastics pollution from municipal solid waste.

Financing (in USD Million)	Amount
Total Project Cost	600.00

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]

The project will be structured along four components. As part of a national policy component (Component 1), the project envisages to engage in a policy dialogue with China's National Development and Reform Committee (NDRC) and the Ministry of Ecology and Environment (MEE) and assist further policy action based on international experience for plastic waste reduction, plastic recycling and recyclability, improved monitoring and information sharing. The project will also support the development of regulatory mechanisms by MEE, such as planning guidelines on data collection and management, performance indicators, 'pollution hot spot' management, information protocols, and performance systems linked to actual waste volumes produced and handled. A sub-national institution strengthening component (Component 2) will provide capacity building for reducing plastic waste generation and leakage at the

local level. It will focus on inter-jurisdictional planning, effective and efficient technologies, and recycling market incubation. A system improvement component (Component 3) will support investments in selected provinces to improve plastic waste management and material recycling, such as: (a) in rural MSW and agricultural plastic waste collection, treatment and disposal, including through enhanced citizen information and involvement; (b) showcasing waste separation at source systems and recycling approaches in large urban metropolitan areas; and (c) recycling parks (see activity 3B). A project management, monitoring and evaluation component (Component 4) will enable close coordination between national and local institutions to support implementation of the range of activities.

D. Environmental and Social Overview

D.1. Detailed project location(s) and salient physical characteristics relevant to the E&S assessment [geographic, environmental, social]

The framework approach will be adopted in the project development. The proposed project will be implemented country-wide with the component 1 focused on policy development and implementation by the National Development and Reform Commission (NDRC). The components 2-4 will be implemented in up to three provinces/cities preferably located close to river basins and coastal areas.

The physical activities that might be supported by the Project, through component 3, financed either by the Bank or by private partners, are designed to promote and establish the municipal waste collection, transportation, recycling, treatment and disposal facilities, e.g. landfills, incineration facilities, recycling parks, etc. by mainstreaming the plastic waste reduction from solid waste management in urban and rural areas . Through component 1, the proposed project will provide technical assistance, including support NRDC and MEE to further develop existing policy directions and support the development of regulatory mechanisms to reduce the production and use of some types of plastics and to improve the waste recycling, and institutional reform and capacity buildings. It will also support preparation of technical guidelines, planning guidelines, standards and protocols as well support establishment of National Waste Information Data Platform. TA under component 2 would provide capacity building for local institutions in participating provinces and cities for reducing plastic waste generation and leakages. These may include, for example, rural waste system improvements; urban waste reduction; effective and efficient technologies in collecting, sorting and recycling; recycling market incubation; or a combination of these. Component 4 will support project management, monitoring and evaluation.

The provinces/cities will be selected during project preparation based on a series of criteria in the preparation stage and the final geographical scope of the project may be larger than the coastal provinces. However, the focus of the environmental baseline is expected to be on the coastal provinces which are highly likely to meet these selection criteria. These selection criteria are (i) provinces that have experience plastic pollution from rural household solid and agricultural plastic waste and are interested in establishing pollution control systems and want to promote recycling; and/or (ii) provinces or cities with well-established municipal waste management systems, willing to innovate in plastic waste minimization and recycling. In Chinese mainland, the eleven coastal provinces/municipality from north to south are Liaoning, Hebei, Tianjin, Shandong, Jiangsu, Shanghai, Zhejiang, Fujian, Guangdong, Guangxi and Hainan. Generally, these provinces are not only economically prosperous, but also rich in biodiversity. Most of the provinces are influenced by the subtropical monsoon climate which brings abundant rainfall. In addition, these provinces are within large river basins, such as the Liao River, the Huai River, the Yellow River, the Yangtze River, Minjiang River and Pearl River, etc. The numerous rivers, lakes, wetland and forests have made up abundant bio-systems in these provinces, most of which are well protected in the forms of natural reserves and national parks. For example, there

are 81 wetland reserves, 16 wetlands of international importance, and 24 national wetland parks in these coastal provinces.

Given the long history of human development in these provinces, there are tremendous number of physical cultural heritages in the urban and rural areas. Since 1961, Chinese government started to identify and protect the physical cultural heritages with high cultural value. So far, the inventory of the legally protected cultural heritages at levels above county has been established across China. For example, there are totally 1,401 sites protected at the national level in these coastal provinces.

D. 2. Borrower's Institutional Capacity

At the national level, the key counterpart is the National Development and Reform Commission (NDRC). A national Project Management Office (PMO) will be established with overall project planning, coordination and monitoring responsibilities. The national PMO will also be the key implementing agency for Component 1. Besides, provincial or city level PMO offices will be established in each participating province/city and a Project Implementation Unit (PIU) at the local level (rural counties). The provincial/city PMOs will be the implementing agencies for Components 2 and 3. The implementation of Component 4 will be split between the national and provincial/city PMOs.

Generally, project management capacity varies from strong at the national and provincial levels to relatively weak at the local level (e.g., county and district). Some of the provinces/cities have acquired extensive experience with the World Bank's safeguards policies through the implementation of World Bank projects in solid waste management. Borrowers at provincial and national level have very strong technical capacity including EIA, design, rich experiences in the construction and operation of the proposed investment, have a series of technical guidance or specification on the proposed infrastructure such as landfill, incineration, clean up or remediation of legacy sites etc. In general, borrowers have the technical capacity to implement the project to meet the objectives of the ESSs, including good international industry practice (GIIP). PMOs will have dedicated environmental and social staff. Although this project will be the first for potential participating provinces/cities to prepare and implement under the new Environmental and Social Framework (ESF), the capacity of the provinces and at the local level and as regards implementation and enforcement will be strengthened through the TA which is designed to support the technical and institutional development and reform. Once the entities are identified, the E&S capacity will be further assessed., and the demands for institutional capacity building for E&S risk management will be identified.

Each PMO/PIU will develop a timebound capacity enhancement plan in their ESMFs and document key measures and actions in their ESCPs. The capacity enhancement plan will also include measures to enhance the awareness and capacity of relevant PIUs on the ground for implementing the ESF. The PMOs/PIUs shall commit in the ESCP to allocating adequate resources and ensuring proper technical expertise to support the application of relevant environmental and social standards (ESSs) in the project. During the preparation, the World Bank team will provide ESF training to relevant PMOs/PIUs.

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

A. Environmental and Social Risk Classification (ESRC)	High
Environmental Risk Rating	High

The project is expected, overall, to generate positive environmental outcomes in terms of improvement of people's health and safety, reduction of plastic wastes load into the environment and ecosystems, saving of energy and raw materials, and reduction of wastes generation.

Although the project will bring positive benefits, the project is complex, to the extent large, and high in spatial extent as it supports several schemes and targets directly several provinces, and through TA has national impact. It is also supporting infrastructure that can through operation phase have potentially significant risk to the environment (example incinerators), and capacity for operation varies. Project will involve significant stakeholder engagement capacity as might need to tackle NIMBY. TA activities potentially have downstream impact, which stems from magnitude of irreversible and reversible E&S risks and impacts that will be generated during the implementation of the various plans which will be the products/outcomes of TA. The above, suggest that the project environmental risk is high.

The physical investments would range from small collection points/chamber at villages and communities, and medium/large transfer stations in districts or towns, to large facilities for storage, recycling, treatment and disposal of wastes, e.g. landfills (both municipal and hazardous waste landfills) and incinerators. Given the type of the physical investments, most of the physical investments are unlikely to be located in environmentally sensitive areas. Majority of investments will be developed in urban and sub-urban surroundings (modified habitats), however some large greenfield investments might be in the proximity of natural habitats as are typically located in mountainous/hilly areas outside cities.

The non-physical activities, e.g. Component 1, 2 and 4, are TAs that support the development of the policies, protocols, guidelines, and technical assistance proposals and capacity building. Implementation of the policies on ground will have downstream impact and may cause potential environmental issues which are closely associated with physical investments. These downstream environmental issues would be considered in the development of the policies, guidelines and protocols, to ensure that the relevant ESSs of the ESF are complied with. Some TAs will produce outcomes on technical recommendations to improve the design of the Component 3. Thus, the potential impacts of the TAs will be tackled through the Component 3.

The activities are likely to generate a wide range of significant adverse risks and impacts on human populations and the environment. If not properly controlled and managed, these impacts would cause long-term/permanent and irreversible impacts on human population and environment. The potential environmental risk and impacts of primary concern are largely related to the operation of the facilities and infrastructures, e.g. landfills (both municipal landfills and hazardous waste landfills), incineration facilities, clean-up/remediation of contaminated sites. Management of these risks and impacts may require complicated technologies and good engineering design.

The coastal provinces have rich experience in implementing projects financed by the Bank using the safeguard policies. The track record of environmental management of the projects by these provinces is satisfactory. Generally, borrowers have the technical capacity to implement the project to meet the objectives of the ESSs, including good international industry practice (GIIP). Although the ESF is quite new to them, it is expected that these provinces will make and keep their strong commitment to allocating adequate resources to the environmental management and implement the capacity enhancement plan, particularly given that most of these provinces are economically developed.

Social Risk Rating Substantial

The project will bring substantial benefits to relevant communities and broader society by improving waste management services and reducing solid (plastic) waste leakage to the environment and waterways. The overall footprint of waste collection, storage, and transfer facilities would be moderate, whist large for disposal related activities (e.g., recycling parks). Component 1 would have national wide downstream social implications through formulating and enforcing policy action to manage plastic waste. There would be human settlements and residential areas close to specific investment activities. The project requires early and continuous stakeholder engagement strategies. The social risks and impacts are mainly related to ESS1, ESS2, ESS4, ESS5, and ESS10.

The project investment components will involve land acquisition and resettlement for the construction of relevant physical facilities. Land acquisition would be expanded to cover the impacts in safety buffer zones. Land acquisition of a recycling park or a landfill will affect hundreds of people, while the land acquisition for waste storage and transfer stations and other facilities may affect fewer persons. The project may have potential livelihoods impacts on private waste handlers/ pickers, requiring bringing in experiences (including private sectors) to ensure the adverse impacts don't fall disproportionately on them. The project will accumulatively involve many direct workers, contracted workers, and primary supply workers. Most of the introduced workers would be responsible for waste collection and waste sorting, usually coming from local areas. Significant labor risks would be related to workplace OHS issues if it is not well managed. The initial review does not identify particular concerns related to child labor, forced labor, or GBV risks. The project will bring significant risks to community health and safety (both real and perceived) because of increased traffic volumes, inappropriate handling of hazardous wastes, disproportionate health impacts on affected communities by large treatment facilities. Various stakeholders will have an interest in and influence on solid plastic waste management projects. Especially, a magnitude of subprojects (especially landfills, recycling parks) located close to local communities may rise to a limited degree of social conflict, harm, human security risks associated with perceptions of community endangerment and non-receipt of benefits (not-in-my-backyard phenomenon). This can be mitigated through the enforcement of appropriate stakeholder engagement via adopting ESS10. The relevance of ESS7 will be further assessed when the project participating provinces/cities are determined during preparation. The team will further review the social implications of proposed TA activities during preparation when there is more detailed information on project designs.

Although some of the PMOs have implemented World Bank projects with tracked positive performance, it will be the first time for the participating provinces/cities to apply ESF requirements. The borrower's internal management structure concerning solid plastic waste management is complex, calling for coordination among different agencies to manage E&S risks properly. Therefore, a more targeted awareness campaign and robust commitment will be required to bridge the capacity gaps.

Most of the social impacts and risks by physical investment activities are predictable, temporary, and medium in magnitude. The overall social risk is deemed Substantial primarily related to medium magnitude of resettlement impacts, limited degree of conflicts over sitting particular large solid (plastic) waste infrastructure, and downstream social implications of TAs. Early and effective stakeholder engagement will help refine the project designs and formulate proactive measures to reduce significant social risks. The team will further review the social risks during project preparation.

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 environmental and social (E&S) due diligence was conducted primarily based on a desk review of the draft project concept note and the E&S assessment documents of similar projects.

The potential environmental impacts of primary concern are related to operation of landfills (both municipal landfill and hazardous waste landfill), incineration facilities, facilities deriving fuel from refuse, and clean-up/remediation of contaminated sites. If not controlled properly, they could potentially generate a wide range of significant adverse risks and impacts on human populations and the environment: flue gases containing heavy metals and dioxins from waste incineration facilities may cause severe health risk to human populations; the leachate from the landfills could pollute surface water and ground water, threatening the health of human populations and eco-system; the bio-gas from landfills can cause fire and explosion, threatening the safety of workers and communities nearby; exposure to hazardous contaminants during the clean-up of contaminated sites may pose threats to health and safety of workers and local residents; leakage of hazardous/toxic wastes contained in storage facilities and landfills would cause significant threat to the safety and health of people; fire and explosion risk in the process of producing and storage of the fuel (normally methanol and diesel) in the facilities producing fuel from refuse. However, these potential impacts can be avoided, minimized or even mitigated by study of alternative site locations and adoption of the state-of-art technologies/good engineering design as a first step. In addition, this project will leverage private sector investments in large incineration facilities and recycling facilities which could be considered as the associated facilities. Due diligence review will be done for these associated facilities in subproject ESIA. The requirements for the due diligence review will be incorporated in the ESMFs.

The other impacts in operation stage typically include noise, dust, wastewater, solid waste and nuisance odor emitted from the facilities; traffic safety risk; disturbance to local communities; fire and explosion risk of bio-gas digestors; methane in landfill bio-gas is a major GHG; proliferation of flies, rodents and other disease-carrying vectors; heat and electro-magnetic impact from facilities that will generate electricity; the toxic materials, e.g. methanol, may do detriment to the health of workers. The potential environmental impacts at construction stage will involve general solid waste, wastewater, dust, noise and soil erosion; traffic safety to communities and workers; occupational health and safety such as height fall, physical damage in welding, etc.

The project's social scale varies a bit among various investment activities, ranging from minor/moderate to large (e.g., recycling parks). Implementing the national policy component and other TAs (under Component 1, 2 and 4) would have much broader social effects than physical investment activities. Based on preliminary screening, the significant social risks and impacts anticipated for the project are: (a) land acquisition and resettlement; (b) workplace OHS issues; (c) community exposure to safety and health risks (both real and perceived); (d) potential conflicts with communities who may not agree with the construction of solid waste treatment facilities (NIMBY objection); and (e) potential economic and livelihood impacts on solid waste handlers/pickers (formal and informal). The project would potentially cause disproportionate impacts on vulnerable groups (e.g., waste pickers, the poor households, ethnic minorities, migrant workers, etc.), for which the magnitude of impacts will be further assessed during preparation. The ESMFs will establish the baseline situations of waste handlers/pickers in the project area and formulate appropriate measures and actions (including at policy level) to ensure the project will include them as part of broader

beneficiaries. Other social risks such as child labor and forced labor, GBV issues, are deemed either negligible or low risk. Since the project participating provinces/cities have not yet been determined, impacts on ethnic minorities will be further identified during preparation. The World Bank team will further identify and review the social risks during preparation, and assess whether the borrowers are capable of developing and implementing the project per relevant ESSs.

The framework approach will be adopted in the development of project. All of the physical activity locations will not be identified at the appraisal stage. Each province would propose different activities based on its own waste management planning. The national/provincial/city PMO should respectively prepare an ESMF and a stakeholder engagement plan (SEP) for its own activities. The project will prepare an integrated environmental and social commitment plan (ESCP), indicating actions and commitments that each provincial/city PMO will be responsible for. The E&S documents should be disclosed before appraisal locally and at the World Bank website to seek views of stakeholders.

The ESMFs include a study of E&S baselines, which include specific descriptions of each project province/city which will help screen and assess subproject impacts during the project implementation. The ESMFs includes an assessment of potential E&S impacts and also covers procedures for subproject exclusion, screening, categorization, E&S document preparation, stakeholder engagement, and review and approval, which follow the Bank's ESF and domestic requirements.

The ESMFs include PMO/PIU capacity assessment and capacity enhancement plan; monitoring and reporting requirements; stakeholder engagement plan and framework including project GRM; due diligence review requirements, particularly for associated facilities; the TORs for ESIA, ESMP, RAP, SIA, the template for labor management procedure (including labor GRM); a resettlement policy framework (RPF); an ethnic minority development framework (EMDF); an exclusion checklist that excludes any physical activities involving international waterways, critical habitats and legally protected physical cultural heritages; an E&S screening checklist including for TAs and associated facilities; and a set of ECOPs. In addition, the siting criteria for solid waste facilities will be established considering the WBG EHS guidelines for waste management facilities. Relevant Good International Industrial Practice (GIIP) and Environmental, Health and Safety Guidelines (EHSGs) of the World Bank Group will be identified and considered. The ESMFs will look into mechanisms to address facilities' operational risks. Those could be enhancement and quality control of the design of the facilities and ensuring the integration of the environmental measures into the design, project management mechanisms that could include trial periods, and other.

During project implementation, the specific locations and features of the physical activities will be determined. Thus, a subproject specific Environmental and Social Impact Assessments (ESIA) and Environmental and Social Management Plans (ESMP) will be prepared per the ESMF. The E&S documents will be disclosed locally and on the World Bank website before the approval of specific subprojects.

For any TA activities, the borrower should incorporate reference to relevant ESSs in the TORs to ensure that activities and outputs are consistent with the requirements of ESF. Drafting policies and regulations will consider broader social risks and formulate proportionate mitigation measures at the policy level. In addition, environmental and social experts will be hired by the national PMO to support the development of the TAs. The project lawyer and/or LEGEN should be consulted when advising government in developing regulatory instruments.

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

Although China has a comprehensive E&S Framework, its use for the project is not recommended due to the limited experience of the implementing agencies in implementing and applying ESF and its associated environmental and social standards. Also, a comprehensive assessment of the borrower framework has not been completed.

ESS10 Stakeholder Engagement and Information Disclosure

Sustainable solid (plastic) waste management requires stakeholder engagement to succeed. Enabling proactive and meaningful stakeholder engagement is believed to be effective to resolve complex social issues (e.g., NIMBY objection) and obtain the public's support for new waste management facilities. This project will have a wide range of stakeholders, including all parties and individuals participating in or having interest in the plastic-related activities, from solid waste generation, collection, transportation, to treatment and disposal.

At this concept stage, it is identified that project affected parties would include people affected by resettlement, local communities located within the area of influence of subprojects, solid waste handlers/ pickers (formal and informal), workers operating solid wastes facilities, and vulnerable groups. The vulnerable groups, in this project case, would refer to waste pickers, the poor households, ethnic minorities (if any), migrant workers, among others, who may be more vulnerable to or may have different concerns about the project E&S risks and impacts, and require different or separate forms of engagement. Other interested parties would include the general public, the participating provinces (the PMOs/PIUs), construction contractors, primary suppliers of subprojects, NGOs, relevant government authorities for approval of subprojects, etc. 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 project affected parties and core vulnerable groups. The project design, the project ESCP, provincial ESMFs, and provincial SEPs shall set out differentiated measures so that adverse impacts do not fall disproportionately on vulnerable groups, and vulnerable groups are not disadvantaged in sharing the project benefits. 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 for the project.

Considering that subprojects will be known in the early stage of implementation, the SEP will take the format of a framework approach. Before Appraisal, the central/provincial/city PMOs shall prepare a Stakeholder Engagement Plan (SEP) consistent with the requirements of ESS10 for its own proposed activities. The provincial SEPs provide guidance for the Borrower on initial engagement with stakeholders, consultation and disclosure of the ESMFs, and establishment of functioning grievance redress mechanisms (GRMs). The provincial SEPs should also include a stakeholder engagement framework (SEF). The SEF will outline 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. During the implementation, the stakeholder engagement framework should be transformed into as subproject specific SEP during subproject preparation.

The borrower will strengthen the PMO/PIU's capacity for managing public consultation and information disclosure through implementing a capacity building program. The PMOs shall designate specific focal points to be responsible for the implementation and monitoring of stakeholder engagement activities and compliance with ESS10. The PMOs/PIUs shall provide adequate resources to ensure the GRMs are functioning.

Both the borrower and the Bank will disclose the project ESCP, provincial ESMFs, provincial SEPs as early as possible before Appraisal and 120 days in advance of Board date.

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 because the project will involve direct workers, contracted workers and primary supply workers. Direct workers are identified as staff of PMOs/PIUs, and the workers directly employed or engaged by the borrower to work specifically in connection with the operation of solid wastes facilities. Where government civil servants are working in connection with the project, whether full-time or part-time, they will remain subject to terms and conditions of their existing public sector employment agreement, unless there has been an effective legal transfer of their employment to the project. Contracted workers refer to people employed or engaged by contractors for constructing the solid plastic wastes related facilities. Primary supply workers are people employed or engaged by those suppliers (e.g., public waste collection system) who, on an ongoing basis, directly provide goods and materials essential for the core functions of relevant solid plastic wastes facilities invested by the Bank. According to the project design, the project will not engage community workers. The number and types of workers that may be employed or engaged will be identified on a case-by-case when specific subprojects are known during implementations.

China has comprehensive regulations on labor and working conditions, which are generally in alignment with the scope and elements of ESS2. China's labor authorities at all levels are increasing supervision to ensure strict labor law enforcement, require sound and fair treatment of all types of workers, and prevent child labor and forced labor. China Labor Law defines 16 years old as the minimum working age and sets out clear provisions to prevent harms and hazards to juvenile workers (16-18 years old). In China, solid waste facilities are usually fenced to prevent access by waste-pickers. The risks of child labor and forced labor in formal solid waste facilities are deemed minor, 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. The project will create many new job positions and is unlikely to result in worker layoff.

As some project activities will cause significant risk on occupational health and safety associated with: 1) the storage , transportation, treatment and disposal of hazardous wastes under the clean-up of contaminated sites; 2) the production, storage and transportation of hazardous materials, e.g. methanol and diesel, under the activities deriving refuse to fuel; and 3) the waste incineration facilities emitting flue gas with heavy metals and dioxins, the occupational health and safety management measures should be developed in line with the Section D of the ESS 2 and taking into account relevant GIIPs and subject to the consultation with relevant experts and government agencies, such as the Labor Bureau. Risks on occupational health and safety will be further assessed during preparation of the ESIA.

The screening checklist should cover the potential E&S issues in ESS2, including impacts on workers' layoff, severe occupational health and safety risks, forced labor and child labor, juvenile workers (above minimum age and under 18), etc. Child labor (below 16 years old) and forced labor should not be used in connection with the project. To comply with both ESS2 and China's labor law, juvenile workers should not be employed or engaged in connection with the project in a manner that is likely to be hazardous, or interfere with the child's health or physical, mental, spiritual, moral or social development. The provincial ESMFs should also develop a template for labor management procedure (LMP), which could be fine-tuned to a subproject or site specific LMP during implementation.

Before subproject appraisal, all subprojects should establish and maintain (through the project lifecycle) a site specific LMP proportionate to the E&S risks and impacts and consistent with the requirements of ESS2. The site specific LMPs should streamline procedural arrangement for incident/accident reporting, investigation and emergency preparedness, and include training programs to improve the workers' awareness. The subprojects will require that the selected contractors should be obliged to performed OHS risk assessment for the defined scope of work, and develop/implement/maintain OHS management plans consistent with the local legislation and ESF. Especially for major infrastructure activities, the LMPs will enhance the arrangement of contractor work camp management (including GBV remedy measures). Before subproject appraisal, it should put in place separate functioning grievance mechanisms for project workers.

OHS issues related to operation of facilities will be tackled through various facilities operation plans and protocols, emergency plans, etc.

ESS3 Resource Efficiency and Pollution Prevention and Management

ESS3 is considered relevant. Operation of some project activities will use (but also produce) large amounts of energy, e.g. waste incineration. Energy efficiency will be evaluated in the subproject ESIA and energy efficiency improvement measures will be integrated into the subproject ESMP. Construction and operation of the project is not expected to use large volumes of water. In addition, this project will neither consume large amount of raw materials, nor use or procure pesticides. Conversely, this project will reduce the consumption of raw materials and energy through enhancing recycling and promoting circular economy.

The project will reduce the pollution loads, especially waste plastics, into the environment and promote energy and material saving. At the same time, the project may produce significant adverse environmental impacts. During operation, landfill would produce leachate that may pollute surface water and ground water, the nuisance odor that may pollute the ambient air, the bio-gas that may cause fire and explosion as well ; clean-up of contaminated site may lead to storage and treatment of hazardous/toxic wastes or even the construction and operation of hazardous/toxic waste landfills; operation of incineration facilities may discharge flue gas containing heavy metals and dioxins and produce fly ash which is hazardous waste; and the facilities deriving waste to fuel would produce methanol and diesel which are hazardous to the health and safety of workers. However, with good technical design and E&S mitigation measures, the probability of such accidents would be reduced significantly compared to the baseline. The environmental risk and impacts of these activities will be further assessed in the subproject specific ESIA. The risk and impact management measures, and emergency preparedness plan, will be developed in line with the EHSGs and the GIIP under the ESMP. The measures for controlling and managing these impacts would be

technically complex. Development of specific operation plans, e.g. leachate management plan, landfill operation and closure plan, hazardous waste/materials management plan, should be made by taking into consideration of the GIIP and the ESHGs and be an integral part of the ESIA and ESMP.

In addition, the facilities deriving waste to fuels will use very small amount of concentrated sulfuric acid as the catalyst in the esterification process. A GHG emission estimate, including the bio-gas from landfills, for this project will be carried out.

ESS4 Community Health and Safety

ESS4 is relevant because the project will bring severe health and safety issues to communities in the area of influence of the project. The construction and operation of relevant facilities, among others, landfills, incineration facilities, recycling parks, would cumulatively introduce a large number of labors to the project areas and consequently expose health and safety concerns to local communities. However, the introduced workers for waste collection and waste sorting would come from local areas. The construction and operation of a recycling park may, at most, involve a few hundreds of workers, given that machinery equipment is widely used to replace manual labor. Transporting construction material and equipment during construction and solid wastes and products during operation would increase potential traffic volumes on the roads, causing road safety risks to road users and local communities. More significantly, NIMBY (not-in-my-backyard) objection can be a frequent response by the local community to oppose site siting of a large solid waste treatment facility or transfer stations, for instance by stopping project vehicles from passing through the community roads. It will pose consequent challenges for project site selection and land acquisition and require appropriate engagement strategies to obtain “social license” for project facilities. Considering waste pickers may present in urban and small-town areas to collect plastics and other wastes, potential health impacts on waste pickers will be further analyzed when the project provinces and cities are confirmed.

The major risk on health and safety of communities might be associated with the operation of landfill and incineration facilities, and storage and treatment of hazardous waste and materials. The leachate from the landfill when not properly collected and treated may pollute the drinking water source for the communities; the bio-gas from landfills will cause fire and explosion if not properly collected and treated, threatening the safety of communities nearby; leakage of the hazardous waste and materials, and fallout of heavy metals and dioxins from incineration facilities may damage the health and safety of local residents. In addition, the strong nuisance odor from the transfer stations and landfills may cause impact on the health of residents nearby. However, with good technical design and E&S mitigation measures the probability of such accidents relevant for the community health and safety would be reduced significantly.

The exclusion list and screening checklist, to be included in the ESMFs, should be set up to cover the potential E&S issues for ESS4, e.g. road safety, community exposure to health issues, labor influx risks (including gender-based violence), safety issues of handling hazardous wastes, etc. The environmental risk and impact on communities will be further assessed in the subproject specific ESIA to avoid or minimize or mitigate the impacts on communities. A subproject specific ESMP will consist of the set of mitigation, monitoring, and institutional measures to be taken during project construction and operation. Specifically, a traffic management plan will be developed as an integral part of the ESMP. The traffic management plan should contain the selection of transport route, emergency preparedness plan if transporting hazardous waste and materials. It should also be prepared for operation phase if

large quantities of waste will be moved. For large infrastructure activities, a labor camp management plan with disease prevention and control and code of conducts will be developed in line with the GIIP under the ESMFs (as an ECOP) and ESMP.

ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

The project investment components will involve land acquisition and/or involuntary resettlement because of the construction of relevant physical facilities. Land acquisition and resettlement will mainly happen at sites of new construction of plastic-related solid waste infrastructure, such as, transfer and storage stations, landfills, solid waste treatment plants, incineration plants, recycling parks, etc. The location choice usually faces challenges due to NIMBY objection, which brings extra complexity to resettlement implementation. In some cases, land acquisition or restriction on land use would be enlarged to cover the impacts in safety butter zones. Generally, the magnitude of land acquisition and resettlement would be minor/moderate (for a transfer station) to large (for a recycling-park). For example, a transfer station could avoid physical displacement while exploring project designs and for which the land acquisition may affect dozens (but less than one hundred) people. A recycling park would economically and/or physically displace hundreds of people (but may not be thousands). Based on similar project experiences, an ordinary landfill in Beijing would have a footprint of ~23 ha and affect about 300 people. While in Shanghai, one incinerator would take ~8 ha land, with 100 people affected. Usually, the resettlement impact for the same kind of facility would be less significant in smaller cities than in large and metropolitan ones. The project investment would also invest in upgrading activities at existing sites. A social due diligence review should be carried out to assess the compliance status of existing land and past resettlement and identify any complaints and outstanding issues to be remedied. Resettlement risks and impacts will be further assessed when a subproject location is known.

During preparation, the ESMFs will assess the magnitude of resettlement in a quantifiable way when more information on the project proposals is available. As part of the ESMFs, the subproject screening checklist should consist of elements to identify the application of a due diligence review for past resettlement or the resettlement planning for new land acquisition. A resettlement policy framework (RPF) will be prepared before Project Appraisal, because site-specific investment activities could not be located during the preparation stage. The RPF will also include provisions on due diligence review of existing land and past resettlement occurring prior to specific subprojects for both World Bank-financed activities and the associated facilities. During the project implementation, the borrower will prepare a Resettlement Plan in a way consistent with ESS5 for site-specific investment activities with land acquisition and resettlement. The due diligence should review prior resettlement within a timeframe of approximately three years of specific subprojects but will consider the context of specific subprojects and significance of the prior resettlement case by case.

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

The specific locations of the physical activities are unknown until the implementation of the project. Given that the project is designed to collect and treat/dispose of the municipal waste from residential areas, most of the facilities would be located in developed areas. However, the landfills would be constructed in mountainous areas, which may be located in the vicinity of natural habitats. Further assessment of impact on habitats will be carried out during the preparation of the site-specific ESIA. An exclusion criterion will be developed and included in the ESMFs to avoid

impacts on natural habitats and critical habitats. In addition, this project will neither introduce alien species nor purchase and use natural products.

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

Overall, the project interventions will bring significant environmental and social benefits to the communities. The project will select subprojects country-wide according to transparent criteria, which will be established during preparation. The preliminary project design envisages implementation in three provinces/cities preferably located close to river basins and coastal areas. For example, along the coast, there is one ethnic minority region (Guangxi), and the other ten coastal provinces are generally Han dominated but have few ethnic minority autonomous sub-divisions (e.g., cities, counties).

Although the participating provinces and cities are not yet determined, ESS7 is expected to be relevant to the project considering potential sensitive locations of particular projects. During the preparation process, the Bank team and the borrower will embrace a proactive approach to screen the relevance of ESS7 when the project provinces and cities are determined. If the relevance is confirmed due to minority groups present in or are collectively attached in project areas in the preparation, an ethnic minority development framework (EMDF) will be prepared as part of the ESMFs. The ESMFs will also consist of related elements on ethnic minorities in the E&S screening checklist. Both the provincial SEPs 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 when the project provinces and cities is determined during the project preparation. During implementation, In case ESS7 applies to a site-specific subproject, the EMDF will guide the preparation of an Ethnic Minority Development Plan (EMDP) to elaborate engagement processes and mitigation of adverse risks and impacts. Free, Prior and Informed Consent (FPIC) is required when the Para 24 of ESS7 is relevant.

ESS8 Cultural Heritage

With significant infrastructure activities, it is clear that ESS8 is relevant. Construction of solid (plastic) waste infrastructure would potentially affect some movable or immovable objects, sites, or structures that may have cultural, religious, historical significance recognized and valued in urban and rural settings. The project interventions will not be likely to be in or in the vicinity of legally protected tangible cultural heritages, and it will not involve intangible heritage for commercial purposes. Since the project provinces or cities are unknown at this concept stage, it is also unclear whether the project would have material impacts on any intangible cultural heritages.

The Bank team will further review the cultural significance of potential project areas when more information is available during the preparation. The ESMFs will identify the chances of the project's impacts on tangible and intangible cultural heritage and analyze the needs to protect cultural heritages in a proportionate way. The project's exclusion criteria should include provisions to screen out any material impact on cultural heritage that China's Cultural Heritage Protection Law and the Implementation Regulation prohibit. The E&S screening checklist of the ESMFs should consist of elements of tangible and intangible cultural heritage. The provincial ESMFs will also set out

the steps to be taken by the borrower, and other stakeholders in case of potential chance-find associated with civil works.

During the implementation, all subprojects will be screened for impacts on cultural heritage when site-specific locations are known. If this is the case, site-specific ESIAs will assess any potential risks the proposed subproject might produce to cultural heritages, and tailor a site-specific cultural heritage management plan or measures. If a subproject has significant potential risks and impacts on cultural heritage, the borrower will engage cultural heritage experts to assist in identifying, assessing, and protecting cultural heritage. In any case, the subproject ESMP will include a chance-find procedure.

ESS9 Financial Intermediaries

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

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

This project may involve private sector, but the ESF of the World Bank will be used.

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

Actions to be completed prior to Bank Board Approval:

The borrower to develop and agree with the World Bank on an integrated ESCP at the appraisal;
The national PMO and each province to develop an ESMF at the appraisal respectively for the activities it will implement (including an exclusion list, the E&S screening checklist, the TORs for ESIA and ESMP, a RPF, an EMDF, template for LMP, etc.) consistent with ESS1;
The national PMO and each province to develop a SEP at the appraisal for the activities it will implement (including GRM and a stakeholder engagement framework for subprojects) consistent with the ESS10;
The borrower and the World Bank to disclose the project ESCP, provincial ESMFs, and provincial SEPs before Appraisal and 120 days in advance of Board date; and
The Bank to distribute an executive summary of environmental assessment (in English) to the executive directors.

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

The borrower subprojects to update and Implement the ESCP, SEPs and GRM;

The borrower subprojects to implement the ESMFs;
The borrower makes and keeps commitment to implementing the institutional capacity enhancement plan;
Subprojects to develop appropriate environmental and social assessment documents consistent with their respective ESMFs and apply relevant ESSs;
Subprojects to develop appropriate E&S documents (i.e., ESIA, ESMP, LMP, RAP, EMDP, SEP, etc.) consistent with their respective ESMFs and apply relevant ESSs;
Subprojects to develop, implement and maintain the LMPs consistent with ESS2 and China's labor law;
Subprojects to establish a subproject level GRM and workers' GRM;
The borrower to implement institutional capacity enhancement plan;
The borrower to consider the E&S in the TORs for the TAs and Component 1 according to the ESF;
The borrower 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; and
The borrowers to submit annual Environmental and Social Monitoring Report.

C. Timing

Tentative target date for preparing the Appraisal Stage ESRS 21-Apr-2021

IV. CONTACT POINTS

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Borrower/Client/Recipient

Borrower: People's Republic of China

Implementing Agency(ies)

Implementing Agency: National Development and Reform Commission

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VI. APPROVAL

Task Team Leader(s):	Frank Van Woerden, Kremena Ionkova
Practice Manager (ENR/Social)	Susan Shen Recommended on 25-Jun-2020 at 08:43:47 EDT
Safeguards Advisor ESSA	Peter Leonard (SAESSA) Cleared on 25-Jun-2020 at 15:17:4 EDT