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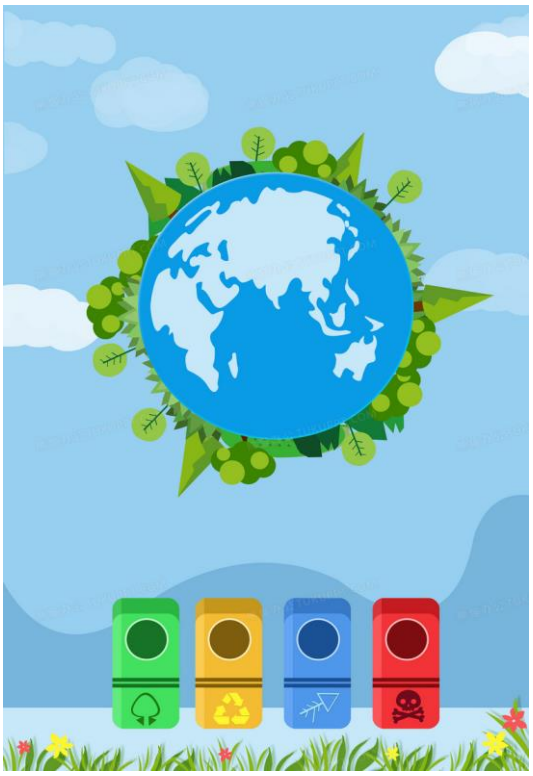

World Bank-financed Ningbo Municipal Solid Waste Smart Sorting, Collection and Recycling Project

China Plastic Waste Reduction Project (P174267) – Ningbo SIA Report (Batch 2)

Ningbo PMO
July 20, 2022

Executive Summary

The Ningbo Municipal Solid Waste Smart Sorting, Collection and Recycling Project (hereinafter, the "Project") is a subproject of the China Plastic Waste Reduction Project (P174267), which consists of policy work and institutional strengthening, physical investment in smart solid waste management and plastic recycling systems, and project management and capacity building. At the preparation stage, Ningbo PMO conducted an SIA on Batch 1 subprojects which do not involving major civil works (Batch 1 subprojects[1]).

According to the project implementation plan, Batch 2 subprojects include: 1) WWTP of the Ningbo resource recycling base; 2) centralized plastic waste sorting and processing plant; 3) bulky and decoration waste disposal plant; and 4) four recyclables sorting centers.

Methods such as literature review, FGD, key informant interview and questionnaire survey are employed for this SIA. During the SIA development, the social team visited the project areas in Ningbo, held 15 FGDs with local residents, persons affected by LAR, project workers, government agencies concerned, project owners, and related enterprises, and conducted 70 men-times of key informant interviews to learn the stakeholders' attitudes, needs, and suggestions on the Project.

The social team has screened Batch 2 subprojects for social risks and impacts according to the ESSs in the ESF, and the ESMF approved by the Bank, and found that Batch 2 subprojects not located in minority communities, and no minority community is collectively attached to the project area, and therefore the ESS7 does not apply; the Project is not a financial intermediary, so ESS9 does not apply; the Project does not involve any cultural relics, and therefore the ESS8 shall not apply. The applicable ESSs are ESS1, ESS2, ESS4, ESS5 and ESS10. Associated social risks include LAR risks, labor and working condition risks, stakeholder engagement risks, and NIMBY risks. To mitigate such risks, a social action plan, labor management plans (LMPs) and a stakeholder engagement plan (SEP) have been developed.

Identified potential social risks include:

1. LAR risks: Among Batch 2 subprojects, only the centralized plastic waste sorting and processing plant involves LAR. A total 85.8 mu of collective woodland in Xuanpei and Bailiangqiao Villages, Dongqiao Town of Haishu District will be acquired for this subproject, affecting no local residents. The land for the other subprojects is state-owned construction land, where the WWTP will be constructed on the existing site, involving no LAR. The social audit has found the following outstanding issues: (i) Some structures and equipment in the bulky and decoration waste disposal plant have been compensated for but not relocated, and the PIU has not obtained the right to use state-owned land; and (ii) The four recyclables sorting centers are located on state-owned construction land, but the land use plan will be adjusted for sanitation authorities, and the PIU has not obtained the right to use state-owned land. Therefore, the Project's LAR risks are "substantial".

2. Community health and safety risks: In Batch 2 subprojects, project activities are mostly concerning solid waste treatment, which is somewhat environmentally sensitive and

[1] Including construction of an urban smart waste management system, integration of the Ningbo domestic waste management platform with the existing recycling network "Dabashou", and output-based incentive mechanism

involving lot of civil works. Potential adverse impacts of construction on nearby communities mainly include environmental impacts, traffic congestion and safety impacts. At the operation stage, plastic, bulky and decoration waste may pose noise, flying dust, waste spillage, traffic accidents and other relevant risks to nearby communities during transport. The WWTP of the Ningbo resource recycling base, centralized plastic waste sorting and processing plant, and bulky and decoration waste disposal plant are located in the Ningbo resource recycling base, and their construction sites are over 1km away from sensitive communities; the 4 recyclables sorting centers are also far away from communities and small in scale, with minor disturbances to communities and the environment. Trucks will run through provincial and special highways, and avoid communities, schools, towns, hospitals and other social sensitive sites. The Project's community health and safety risks are "moderate".

3. **Labor and working condition risks**: Project workers include direct workers of the PMO and PIUs, contract workers and primary suppliers' workers. Labor risks at the construction stage mainly include hazardous operations, machinery operation risks, mechanical construction noise, emergencies, safety accidents, health and infection risks, salary and benefit risks, etc. Labor risks at the operation stage mainly include OHS risks, toxic and harmful gases, emergencies, infection risks, salary and benefit risks, etc. The Project is located in the economically developed areas of Ningbo, where enterprises operate lawfully, workers have a strong sense of rights protection, and a sound enterprise employment management and supervision system is in place. The Project's labor and working conditions risks are "moderate".

4. **Stakeholder engagement risks**: Inadequate stakeholder engagement may affect the realization of the project objectives, especially the NIMBY effect during the site selection of polluting facilities, which should be fully consulted with nearby communities. In addition, old people and women in nearby communities may be affected more seriously by the spreading of harmful substances during waste transfer, sorting and treatment. Since the Project involves large civil works, LAR may affect livelihoods of low-income population. Since an extensive community participation mechanism was established in the previous municipal solid waste management project in Ningbo (P123323), and the SIA received extensive support from all stakeholders, the Project's inadequate stakeholder engagement risks are "moderate".

5. **NIMBY Risks**: NIMBY is a cross-cutting issue, where nearby residents have concerns about impacts of waste collection, transfer and treatment facilities on their health, environment and local development, and may file complaint or even resist construction, thereby leading to community conflicts. It can be seen from an analysis of the above risks that subsequent LAR and construction activities of the centralized plastic waste sorting and processing plant, truck operations, and the persistent negative attitude of local residents to waste disposal facilities may lead to NIMBY risks. The Ningbo resource recycling base is an important outcome of the World Bank-financed Ningbo Municipal Solid Waste Minimization and Recycling Project (P123323) which was closed in 2020. Ningbo Municipal Government has gained rich experience in improving the local living environment, and strengthening pollution supervision and control in conjunction with new countryside building. Therefore, NIMBY risks are "moderate".

Social risk mitigating measures include:

For the five types of social risks, a social management plan (SMP) has been prepared in consultation with the project owners to minimize negative impacts.

1. LAR risks: ① LA for the centralized plastic waste sorting and processing plant has not begun, and Ningbo PMO and PIU should consult land use with the agencies concerned, prepare an RAP according to ESS5 and the ESMF, and apply for land use and supply with the competent authorities as soon as possible; ②land for the bulky and decoration waste disposal plant has been acquired, and Ningbo PMO and PIU should complete the land use procedure as soon as possible. Some structures and equipment on the site have been compensated for but not relocated. Ningbo PMO and PIUs should clear and relocate such structures and equipment in coordination with the agencies concerned to ensure land supply; and③ land for the sorting centers does not comply with the master land utilization plan /sanitation facility land use plan, the PIU should strengthen communication with the competent authorities to ensure that the land complies with the relevant plan, and obtain the long-term right to use state-owned land before construction (or equipment installation).

2. Community health and safety risks: The PIU should improve the construction plan and make rational construction arrangements to minimize impacts on community; keep high-noise equipment, main discharge ports, etc. away from nearby sensitive sites; strengthen international supervision and management to avoid pollutant leakage; take measures to manage trucks and drivers, and develop and enforce management requirements, such as pre-job training, threshold setting and sign setup, to reduce traffic accidents; establish a formal community communication mechanism to strengthen community communication, and respond to community concerns timely; appoint a qualified social management consulting agency to monitor and evaluate social management measures regularly, and make improvement based on suggestions.

3. Labor and working condition risks: Establish an appropriate LMP and implement as per Appendix 2; detect workplace occupational hazards regularly, and take measures based on results; strengthen OHS training and workers' safety awareness, conduct emergency drills regularly, and guide workers to use PPE properly; conduct occupational health checkups annually; conduct a fire safety emergency drill annually; further improve the GRM for workers (including direct and contracted workers), handle feedback and grievances of workers, and keep written records; appoint a qualified social management consulting agency to monitor and evaluate labor risks regularly, and make improvement based on suggestions.

4. Inadequate stakeholder engagement risks: The PIUs should act on the SEP and GRM, disclose them to the public, and provide sufficient resources to ensure their effective implementation; ensure that nearby communities participate in project design, construction and operation, where the participation rate should not be less than 70%, with particular attention paid to vulnerable groups' needs; take full advantage of online platforms, and set up an online disclosure and discussion module for stakeholders to share project information; the PIUs should assign someone to handle the GRM for nearby residents, and disclose grievance contact information to nearby communities before project implementation; The PIUs should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation). Environmental monitoring data should be disclosed to stakeholders timely.

5. **NIMBY risks**: The PIUs should disclose project information by means of official website, on-site billboard and community bulletin board within one month before construction, assign someone to handle the GRM for nearby residents, and disclose grievance contact information to nearby communities before project implementation. The PIUs should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation). Environmental monitoring data should be disclosed to stakeholders timely.

An SMP has been prepared on the basis of stakeholder engagement to minimize negative impacts and maximize social benefits, as detailed in Table 7-1. For the measures outlined in the SMP, monitoring indicators have been designed. Ningbo PMO will assign full-time staff to collect and compile information on social management, track the implementation and social performance of the subprojects regularly, and give advice for improvement. In addition, Ningbo PMO will appoint a third-party agency to perform independent M&E during project implementation.

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Acronyms and Abbreviations

E&S	Environmental and Social
EIA	Environmental Impact Assessment
ESF	Environmental and Social Framework
ESCP	Environmental and Social Commitment Plan
ESMF	Environmental and Social Management Framework
EHSG	World Bank's Environment, Health and Safety Guidelines
ESS	Environmental and Social Standard
GIIP	Good International Industrial Practice
GAP	Gender Action Plan
GRM	Grievance Redress Mechanism
LMP	Labor Management Procedure
M&E	Monitoring and Evaluation
NDWSGC	Ningbo Municipal Solid Waste Separation Guidance Center
NMII	Ningbo Municipal Public Utilities Investment Co., Ltd.
OHS	Occupational Health and Safety
PIU	Project Implementation Unit
PMO	Project Management Office
PLG	Project Leading Group
PPE	Personal Protection Equipment
SAP	Social Action Plan
SIA	Social Impact Assessment
SEP	Stakeholder Engagement Plan
TA	Technical Assistance
ToRs	Terms of References
USD	US Dollar
WBG	World Bank Group
WWTP	Wastewater Treatment Plant

1 Introduction

1.1 Background

China and the World Bank are working closely to implement the lately approved China Plastic Waste Reduction Project (P174267), which aims to strengthen national and sub-national policies, institutions and operations towards reduced plastics pollution from municipal solid waste streams. In Ningbo– one of the demonstration cities of the new project, the Ningbo Municipal Solid Waste Smart Sorting, Collection and Recycling Project (hereinafter, the "Project") will be implemented, as part of the overall new project.

The gross investment in the Project is 1.616 billion yuan (about US$241 million), of which the Bank loan is US$150 million. The Project has a construction period of 5 years, and will be implemented from 2021. The Project will be implemented in 6 urban districts (Yinzhou, Haishu, Zhenhai, Beilun, Jiangbei and Fenghua), High-tech Development Zone (demonstration area) and the Dongqian Lake area (demonstration area). See Figure 1-1.

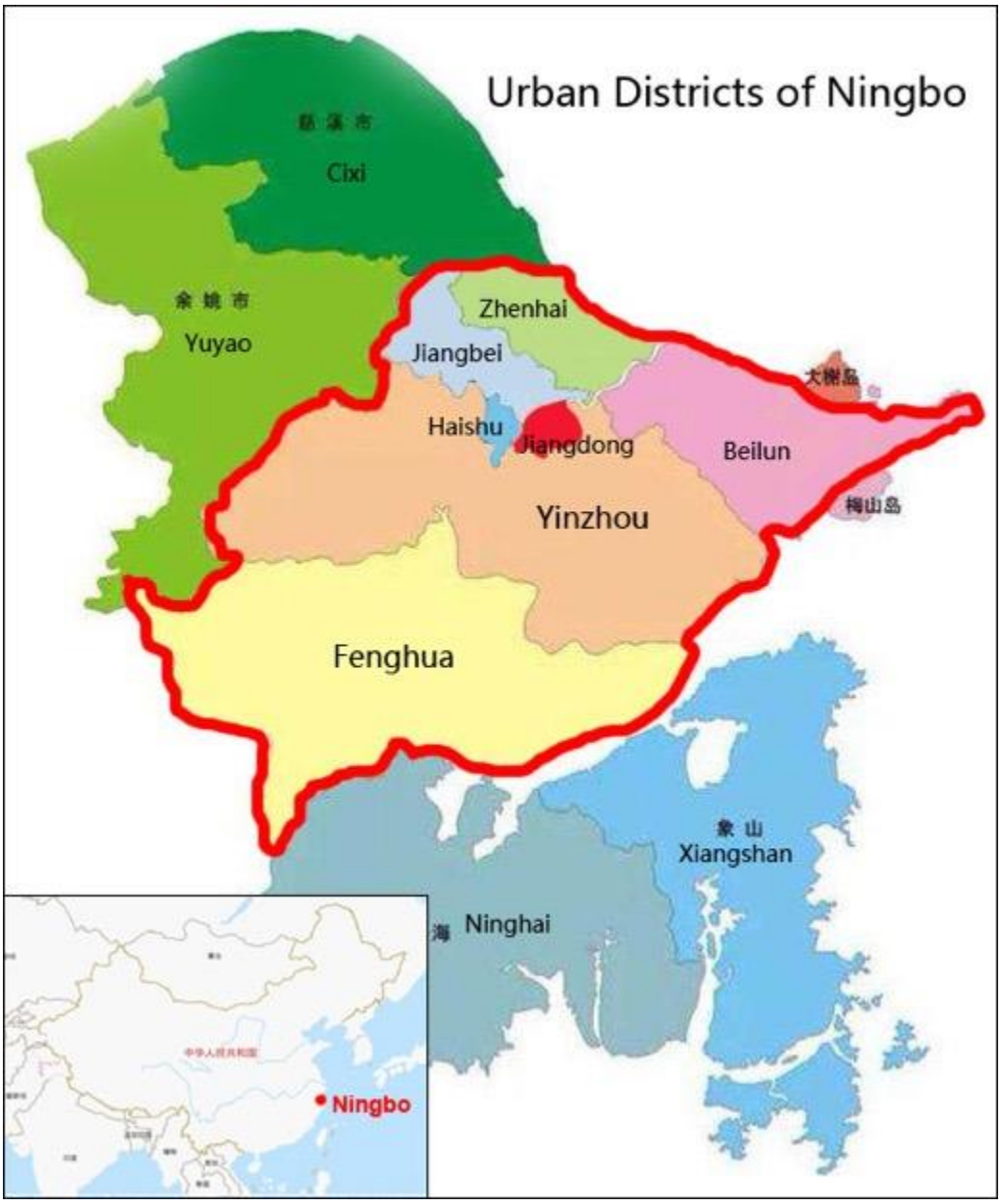


Figure 1-1 Map of the Project Area

The Project will support the establishment of a smart municipal solid waste separation, collection, treatment and recycling system in Ningbo that starts from smart waste separation and collection at drop-off and ends by less waste to disposal and more waste recycled and reused. The project will help Ningbo achieve its 2025 targets to increasing the proportion of precise waste separation to 80%, the recycling rate of municipal waste to 60%, and recycled plastic waste to 20% as of all recyclables.

The Project has three components: (1) policy work and institutional strengthening; (2) investment in smart solid waste management and plastic recycling system, hardware and operation; and (3) project management and capacity building. According to the implementation arrangements, the Project will be implemented in batches, as detailed in Table 1-1.

Table 1-1 Proposed Project Activities

Component			Scope of construction	PIU	Batch
1. Policy work and mechanism strengthening	1.1 Output-based reward		Soft Component	Ningbo Municipal Solid Waste Separation Guidance Center	1
	1.2 Technical assistance	1.2.1 Study on plastic pollution reduction action plan for Ningbo			1
		1.2.2 Study on evaluation methods for plastic pollution reduction effects of Ningbo			1
		1.2.3 Study on improvement of municipal solid waste collection policies of Ningbo			1
		1.2.4 Study on implementation rules for waste separation regulations of Ningbo			1
		1.2.5 Study on regulation measures for utilities (waste) sector			1
		1.2.6 Public data security study based on smart all-category waste cabins			1
2. Smart municipal solid waste management and plastic waste recycling	2.1 Waste sorting, collection and transfer system	2.1.1 Construction of a smart management system for domestic waste in the urban area	Deploying not less than 4,000 smart collection terminals over three years, covering about 2,200 residential communities, schools, government buildings, enterprises and institutions, commercial complexes, farmer's markets and other public places in the entire project implementation area; procurement of 230 recyclables transportation trucks and 600 kitchen waste transportation trucks	Dabashou Company	1
		2.1.2 Integration of Ningbo's existing waste management system and waste recycling network	Soft Component	Dabashou Company	1
		2.1.3 Recyclables sorting center	Construction of 9 sorting and transfer centers covering to sort out recyclables of paper, plastic, textiles, metals, glass, etc.;	Dabashou Company	2 and 3

Component			Scope of construction	PIU	Batch
		2.1.4 Home appliances dismantling center and integrated management system	Construction of a home appliances dismantling center, with a floor area of 30 mu and a building area of 13,000 m^2 (including dismantling line)	Dabashou Company	3
	2.2 WWTP of Ningbo resource recycling base		Reconstructed and expanded from an existing leachate treatment plan, including demolishing the existing management room and two-stage A/O wastewater treatment system, constructing a regulating tank, two MBR complexes, a car washing center, a management room, enclosing walls, roads and landscaping, and purchasing and installing equipment After completion, the plant's daily wastewater treatment capacity will be 2,500 m^3/d (1,800 m^3/d from new construction and 700 m^3/d from reconstruction).	Qingyuan Company	2
	2.3 Centralized plastic waste sorting and processing plant		With a planned land area of 85.5 mu, a building area of 60,000 m^2 and an annual plastic treatment capacity of 40,000 tons	Haijing Company	2
	2.4 Bulky and decoration waste disposal plant		With a planned land area of 39,451 m^2, a building area of 22,150 m^2 and an annual treatment capacity of 300,000 tons of decoration waste; also constructing a 45,000-ton bulky waste treatment line, an 82,000-ton RDF treatment line and a 18 million-brick regeneration line	Meijing Company	2
3. Project management and capacity building	3.1 Technical upgrading of digital waste sorting management platform		Soft Component	Ningbo Municipal Solid Waste Separation Guidance Center	1
	3.2 Study on publicity evaluation plan for smart waste separation in residential communities				1
	3.3 Planning of waste sorting publicity activities				1
	3.4 Print production, training and seminars on waste separation				1

Source: Feasibility Study Report of the Project (final)

In the preparation stage, since the details (including site, scale, technical solution, etc.) for some subprojects were still unclear, the E&S documents of the Project are prepared and assessed as follows:

- Prepare E&S framework documents for the whole Project, including ESMF, SEF and ESCP;
- Prepare detailed E&S management documents for any identified subproject, including SIA report, LMP, SEP, RAP (if required), etc.

According to the above principles and methods, Ningbo PMO prepared the E&S management documents (including ESMF, ESCP and SEF) for the Project at the preparation stage (2020-2021), and a detailed SIA report for Batch 1 subprojects. These documents were approved by the Bank in February 2021.

Batch 1 subprojects consist mainly of activities that do not involve major construction, including:

- 1 Policy work and mechanism strengthening;
- 2.1.1 Construction of a smart management system for domestic waste in the urban area; and
- 2.1.2 Integration of existing municipal solid waste management platform with the waste recycling network.

Ningbo PMO and PIUs have identified Batch 2 subprojects, including:

- 2.2 WWTP of the Ningbo resource recycling base;
- 2.3 Centralized plastic waste sorting and processing plant
- 2.4 Bulky and decoration waste disposal plant; and
- 2.1.3 Four recyclables sorting centers

See Table 1-2 for waste collection and transfer system for Batch 2 subprojects

Table 1-2 Separated waste collection and transfer system for Batch 2 subprojects

Subproject	Collected by	Transfer mode
Recyclables sorting centers	Smart all-category waste cabins under the integration of Ningbo's existing municipal solid waste management platform with the waste recycling network	Recyclable truck and enclosed waste truck (with hooked arm)
WWTP of the Ningbo resource recycling base	Kaicheng Kitchen Waste Plant, Shouchuang Kitchen Waste Plant, centralized plastic waste sorting and processing plant (Batch 2 subprojects), and Haishu landfill	Municipal sewer network (offsite sewer lines)
Centralized plastic waste sorting and processing plant	Recyclable sorting center, bulky and decoration waste disposal plant	Truck
Bulky and decoration waste disposal plant	Recyclable sorting center	Truck

Ningbo PMO and PIUs conducted a social impact assessment (SIA) on Batch 2 subprojects according to the ESCP and ESMF of the Project.

In addition, the WWTP of Ningbo resource recycling base will treat wastewater from the Haishu District landfill, Ningbo food waste disposal plant and Ningbo kitchen waste disposal plant, so these wastewater generating facilities and the offsite sewer lines are defined as

associated facilities. Among the 4 recyclables sorting centers, the Jiangshan recyclables sorting center in Yinzhou District and Gulin recyclables sorting center in Haishu District will be reconstructed from existing facilities. During the SIA on Batch 2 subprojects, a social audit was conducted on the above associated and existing facilities. On this basis, the potential social impacts and risks of Batch 2 subprojects were assessed systematically, and the project design optimized and mitigation measures proposed based on the mitigation hierarchy in the Bank's ESF.

This SIA report is for Batch 2 subprojects. See the Social Audit Report for the social audit process, findings and suggestions on the associated and existing facilities of Batch 2 subprojects.

1.2 Purpose of SIA

The purpose of the SIA is to analyze and evaluate the potential social impacts and risks of the proposed subprojects in the whole project lifecycle (including preparation, construction and operation) according to the Bank's ESF. As discussed above, during the SIA, a social audit was conducted on the associated and existing facilities of Batch 2 subprojects to systematically assess the Project's social impacts and risks (including labor and working conditions, LAR, community health and safety, and stakeholder engagement, etc.) to learn the current situation and level of social management of the associated and existing facilities, and lay a foundation for the SIA. The main objectives of the SIA are:

- Evaluating potential social impacts and risks in the future construction and operation of the proposed subprojects according to the applicable regulations of China and relevant ESSs based on the social audit and social screening results, including:
  - Assessment and Management of Environmental Risks and Impacts (ESS1);
  - Labor and Working Conditions (ESS2);
  - Community Health and Safety (ESS4);
  - Land Acquisition, Restriction on Land Use and Involuntary Resettlement (ESS5);
  - Stakeholder Engagement and Information Disclosure (ESS10).
- Developing and implementing an SEP (including GRM), and proposing measures to optimize the project design and mitigate impacts / risks based on their opinions and suggestions through meaningful consultation with all stakeholders;
- Learning nearby communities' attitudes to the proposed subprojects, and concerns to provide a basis for analyzing potential social risks and impacts, and developing more effective mitigation measures;
- Proposing suggestions to mitigate social impacts and risks to ensure that the proposed subprojects meet the requirements of the applicable ESSs and Chinese regulations;
- Fully consulting with the owners on risk mitigation measures and optimization suggestions, and scheduling such measures;
- Developing an SMP, and making clear institutional, staffing, funding, monitoring and reporting arrangements.

1.3 Scope

Batch 2 subprojects aim to improve the municipal solid waste separation, collection, transfer, recycling and disposal capacity of Ningbo City comprehensively, and hence reduce plastic leakage to the environment from municipal waste streams.

This SIA covers Batch 2 subprojects, including: 1) centralized plastic waste sorting and processing plant; 2) bulky and decoration waste disposal plant; 3) WWTP; and 4) four recyclables sorting centers, including:

- Reconstructed and expanded from an existing leachate treatment plan, including demolishing the existing management room and two-stage A/O wastewater treatment system, constructing a regulating tank, two MBR complexes, a car washing center, a management room, enclosing walls, roads and landscaping, and purchasing and installing equipment;
- Construction of a centralized plastic waste sorting and processing plant with a building area of 60,000m^2;
- Construction of a bulky and decoration waste disposal plant with a building area of 22,150m^2, a 45,000-ton bulky waste treatment line, an 82,000-ton RDF treatment line and an 18 million-brick regeneration line; and
- Construction of 4 recyclables sorting centers in a grid management pattern

The SIA is focused on the sites of the subprojects, and sensitive communities potentially affected at the construction and operation stages, and potentially affected along recyclables transfer routes at the operation stage. The bulky and decoration waste disposal plant, WWTP, and centralized plastic waste sorting and processing plant are located in the Ningbo resource recycling base, the nearby social sensitive sites mainly include Peixuan, Bailiangqiao, Huijiang, Yushantou and Sanli Villages in Dongqiao Town, and Yunfeng Village in Yinjiang Town, Haishu District, and other social sensitive objects include Tangguo'ao, Jiangkou Sub-district, etc., which are 1.0-3.0km away from the base; the recyclables sorting centers are mostly located in the outskirts, far away from residential areas, mostly surrounded by wasteland or industrial parks, with the nearest village being about 500m away. The SIA will cover these nearby villages to analyze the potential impacts of the subprojects on nearby residents.

The SIA screens and assesses potential impacts and risks that may arise at the preparation, construction and operation stages of Batch 2 subprojects, proposes mitigation measures, prepares relevant documents, conducts stakeholder engagement, and also analyzes and evaluates the primary suppliers of the to-be constructed facilities of Batch 2 subprojects.

1.4 Methods

During July-September 2021, the social team conducted a participatory SIA survey in the project areas with the assistance of the Project Leading Group (PLG).

1) Determine the relevance of the ESSs, identify relevant social impacts and risks, and conduct scoping based on the social audit on the existing facilities and completed LA activities, and the social screening on the proposed activities.
2) Analyze China's existing regulatory framework and the relevance of the ESSs, propose mitigation measures, and conduct a baseline survey pertinently based on the identified social impacts and risks.

3) Evaluate potential significant social risks and impacts that are related to the proposed subprojects, with focus on significant risks and impacts, propose measures to optimize the project design and mitigate impacts / risks, and prepare the SMP on this basis.
4) Stakeholder engagement will run through the whole SIA process, and the implementation and M&E of social measures after project approval.

The SIA methods are as follows:

1) **Literature review**: including: (i)documents containing basic project information, such as the project proposal and feasibility study report; (ii) relevant approvals, including the boundary map, land allocation decision, LA compensation documents, etc.; (iii) social audit report; and (iv) other social documents and records.
2) **Fieldwork**: During the SIA, the social team visited the project areas, held 10 FGDs with local residents, persons affected by LAR, project workers, government agencies concerned, project owners, and other related enterprises, and conducted 70 men-times of key informant interviews (including Ningbo PMO, PIUs, government agencies concerned, sub-district offices, community committees, recyclable sorters, recyclable truck drivers, persons affected by LAR, and nearby residents) to learn stakeholders' attitudes, needs and suggestions on the Project.

1.5 Limitations

- Currently, the PIUs have just been established, their functions are being improved, and there is little information on labor management and capacity building.
- The SIA was conducted during COVID-19 pandemic prevention and control period, and the restrictions on travel and inter-person interactions have much limited the face-to-face communications with relevant communities. That may have inevitably affected the depth and breadth of the SIA.

1.6 Report Structure

This report has 8 chapters:

- Chapter 1 summarizes the background of the Project, and the objectives, methods and scope of the SIA.
- Chapter 2 introduces the Batch 2 subprojects, describes the location, service range, activities, employment, land use, and E&S sensitive sites of each subproject.
- Chapter 3 compares China's applicable laws and regulations with the ESSs, and analyzes the policies applicable to the Project.
- Chapter 4 analyzes Ningbo City's socioeconomic profile, and baseline social information related to the proposed subprojects;
- Chapter 5 identifies and analyzes stakeholders, conducts information disclosure and public participation, and proposes an SEP for the Batch 2 subprojects.
- Chapter 6 identifies social impacts and risks, proposes corresponding mitigation measures, and gives advice on project design optimization and tolerance for vulnerable groups.
- Chapter 7 proposes a social action plan for the risk mitigation and benefit enhancement measures identified in Chapter 6.

- Chapter 8 describes the Project's institutional arrangements, capacity building, M&E, and budget.
- Attachments: including the LMP, public participation records, etc.

2 Project Description

2.1 Summary

Batch 2 subprojects 4 major physical development activities: 1) WWTP of Ningbo resource recycling base; 2) centralized plastic waste sorting and processing plant; 3) bulky and decoration waste disposal plant; and 4) 4 recyclables sorting centers.

See Table 2-1 and Figure 2-1.

Table 2-1 Basic Information of the Batch 2 Subprojects

No.	Subproject	Land use	Investment (0,000 yuan)	PIU	Labor	Nearby sensitive sites
1	WWTP	Reconstructed and expanded within the existing leachate processing plant, with a floor area of 67 mu	18056	Qingyuan Company	Direct workers: 36; Contract workers: 335; Primary suppliers' workers: 40	They are located in Ningbo resource recycling base, the nearby social sensitive sites mainly include Peixuan, Bailiangqiao, Huijiang, Yushantou and Sanli Villages in Dongqiao Town, and Yunfeng Village in Yinjiang Town, Haishu District, and other social sensitive objects include Tangguo'ao, Jiangkou Sub-district, etc., which are 1.0-3.0km away from the base.
2	Centralized plastic waste sorting and processing plant	Located in the Ningbo resource recycling base in Haishu District, with a floor area of about 85.8 mu	37914	Haijing Company	Direct workers: 170-195; Contract workers: 340; Primary suppliers' workers: 120	
3	Bulky and decoration waste disposal plant	Located in the Ningbo resource recycling base in Haishu District, with a planned land area of 59.2 mu	16927	Meijing Company	Direct workers: 25; Contract workers: 215;	
4	4 recyclables sorting centers	Among the 4 sorting centers, the one in Zhenhai District occupies 9 mu of land, that in Beilun District occupies 9 mu, that in Yinzhou District occupies 6.97 mu and that in Haishu District occupies 15 mu, all being state-owned land.	64780	Dabashou Company	Direct workers: 28; Contract workers: 180; Primary suppliers' workers: 3	far away from residential areas, mostly surrounded by wasteland or industrial parks, with the nearest village being about 500m away
Total			137704			

Source: Feasibility Study Report of the Ningbo Project (final)

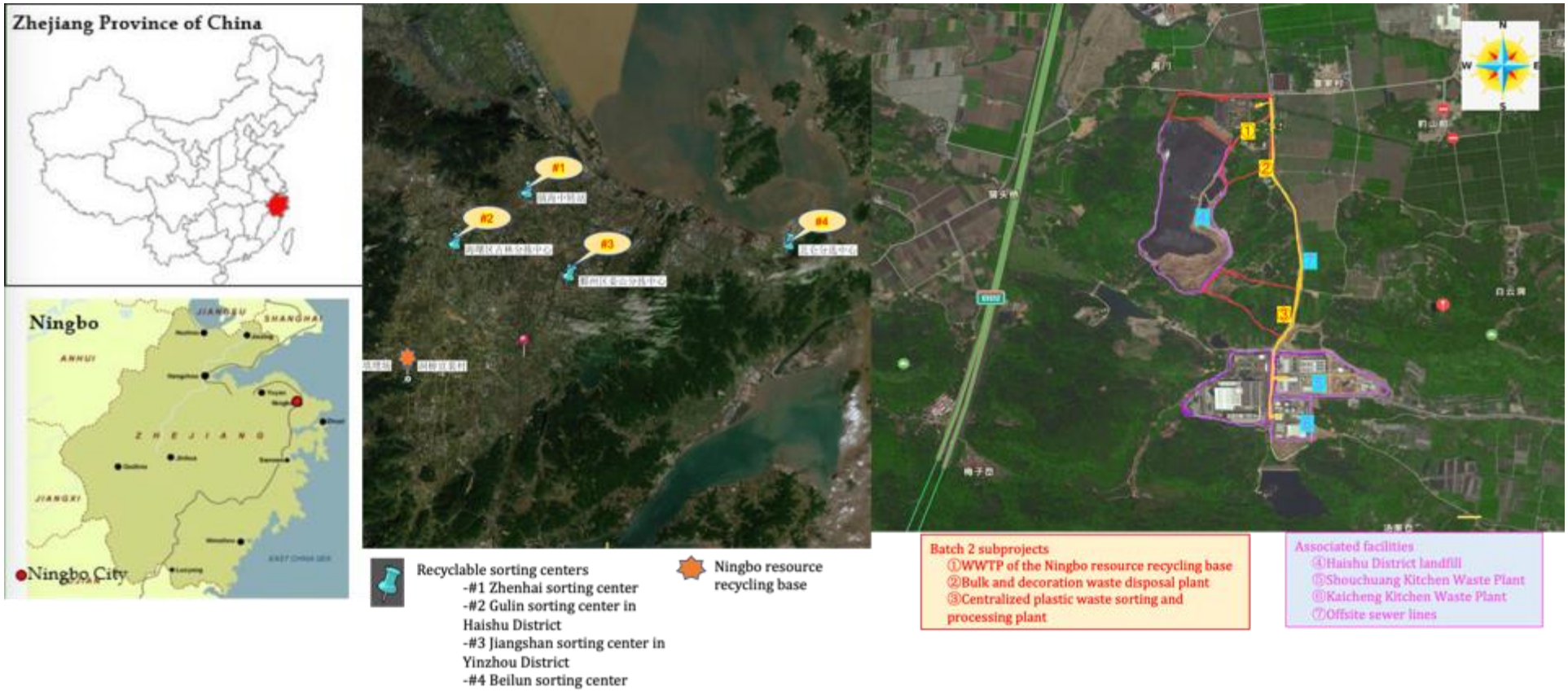


Figure 2-1 Location Map of the Subprojects

2.1.1 WWTP of Ningbo resource recycling base

The WWTP of Ningbo resource recycling base is located in the existing leachate treatment station in the Ningbo resource recycling base in Dongqiao Town, Haishu District.

After completion, the WWTP's daily wastewater treatment capacity will be 2,500 m^3/d (1,800 m^3/d from new construction and 700 m^3/d from reconstruction)

The WWTP will be reconstructed and expanded on an existing leachate treatment plant, including demolishing the existing management room and two-stage A/O wastewater treatment system, constructing a regulating tank, two MBR complexes, a car washing center, a management room, enclosing walls, roads and landscaping, and purchasing and installing equipment.

Figure 2-2 Layout Plan of the WWTP

This subproject includes both construction and reconstruction.

1) Reconstruction of existing leachate treatment system

(1) With the gradual closure of the landfill, leachate output has been reduced gradually to less than 500m^3/d, so the 1# A/O system in the north remains unchanged, used to treat landfill leachate (500m^3/d). During reconstruction, a 2# 2# MBR complex (200m^3/d) will be rebuilt at the northwest corner to replace the 2# A/O system in the south to ensure uninterrupted wastewater treatment. The existing 2# A/O system will be demolished when the 2# MBR complex is put into normal operation. After that, the wastewater treatment system of the 2# MBR complex may be connected to the new wastewater treatment system.

(2) Reconstruct the existing ultrafiltration system;

(3) Reconstruct the existing leachate system to meet the emission standard in Table 2 of the Standard for Pollution Control of Landfills (GB16889-2008);

(4) After reconstruction, the 2# MBR complex and 1# A/O system will operate

independently.

2) *Construction of wastewater treatment system*

The new wastewater treatment system has a treatment capacity of 1,800 m^3/d, used to treat mixed wastewater except leachate. Treated water will meet the Class B standard in the Wastewater Quality Standards for Discharge to Municipal Sewers (GB/T31962-2015), and then be discharged into the municipal sewer network. The new wastewater treatment system and existing leachate system are two independent systems.

The new wastewater treatment system can be divided into a pretreatment system, a biochemical treatment system and an in-depth treatment system.

Wastewater from all sources is delivered to the pretreatment system via pipes, and biogas fluid will stay in conditioning tanks for 2-3 days before entering the pretreatment system. Pretreatment uses the grid + primary setting + oil separation + homogenization + floatation process, where leachate runs through a denitrification tank and a nitrification tank to decompose and remove organic matter, ammonia nitrogen and nitrate nitrogen. After slurry mixture in the biochemical system is separated by the ultrafiltration system, clear liquid will be sent to the BAF system for in-depth treatment before discharge.

The construction period of this subproject is from June 2022 to August 2023.

2.1.2 Centralized plastic waste sorting and processing plant

This plant is located in Ningbo resource recycling base in Dongqiao Town, Haishu District, with a planned land area of 57,229 m^2 (about 85.8 mu), where a raw material shop, a production shop, a product shop, an office, a power distribution room, a guard room, etc. will be built, with a building area of about 40,000 m^2 and a treatment capacity of 40,000 t/y.

Figure 2-3 Layout Plan of the Centralized Plastic Waste Sorting and Processing Plant

Two sorting lines and 4 production lines will be built in the production area, including a plastic bottle pre-sorting line, another plastic waste sorting line, a PET plastic cleaning and granulation line, HDPE (PP) cleaning and granulation line (including a high-quality HDPE (PP) cleaning and granulation line, and a low-quality HDPE (PP) cleaning and granulation line), film plastic cleaning and granulation line (including one for clean film plastics and one for dirty film plastics), and a home appliance plastic cleaning and granulation line, with a design treatment capacity of 40,000 t/y.

Plastics are mainly from recyclable plastic waste, plastic waste mixed in other wastes, plastic waste from dismantled home appliances, and that separated from decoration waste.

1) Efficient pre-sorting process

- Plastic bottle pre-sorting line: Mixed plastic bottles from waste cabins first enter the drum and bouncing sieves to separate metals, stones, impurities, etc., and then sorted manually for preliminary separation. It then enters two optical sorting devices to pick bottles of different materials, and is then sent to different bins after manual review
- Sorting line for other plastic waste: Mixed plastics after preliminary sorting first enter the drum and bouncing sieves to separate metals, stones, impurities, etc., and then sorted manually for preliminary separation. It then enters 3 optical sorting devices to pick plastics of different materials, and is then sent to different bins after manual review.

2) PET plastic cleaning and granulation process

PET plastics are first delivered to the vertical bale opening machine via the speed-adjustable chain scraper conveyor, then scattered by two mechanical shafts, and then run through the magnetic separator to remove metals. The label remover will rub each bottle to remove the label; plastics and PET bottles are separated through photoelectric sorting and manual review, and cleaned together. Finally, plastic sheets are sorted to further improve impurity, and sent to the granulator for granulation.

3) HDPE and PP cleaning and granulation process

- High-quality HDPE (PP) cleaning and granulation line: High-quality HDPE or PP plastics are first delivered to the vertical bale opening machine via the speed-adjustable chain scraper conveyor, then scattered by two mechanical shafts, and then run through the drum and bouncing sieves to remove sand, metals, stones and other impurities. They then go through optical sorting, manual sorting and magnetic separation to remove other plastics and metals. Leveled plastics are crushed, soaked and dehydrated to remove impurities, oil stations and other attachments. Plastics are finally sorted to further improve purity to the cosmetic or food grade.
- Low-quality HDPE (PP) cleaning and granulation line: Low-quality HDPE (PP) plastics are scattered, removed of metals and separated to remove impurities and oil stains, and then further sorted to improve purity to the industrial grade for granulation.

4) Home appliances dismantling plastic cleaning and granulation process

This line has a design capacity of 3 t/h. Home appliances dismantling plastics are scattered, removed of metals, separated and washed to remove impurities and oil stains, then further sorted to separate PS, PP and ABS plastics, and sent to the

granulator for granulation.

5) Film plastic cleaning and recycling line

There are two lines for clean and dirty film plastics each, with a design capacity of 1.5 t/h each, in which the clean film plastic line is for used LDPE, LLDPE, HDPE, PP woven bags / waste bags / shopping bags, etc. in daily life, and the dirty film plastic line is for industrial treatment.

- Clean film plastic cleaning and granulation line: Clean film plastics are charged evenly via the conveyor, removed of metals, crushed, cleaned repeatedly to remove mud, sand, stones, etc., then dried, and finally sent to the granulator.
- Dirty film plastic cleaning and granulation line: Dirty film plastics are charged evenly via the conveyor, removed of metals, preliminarily cleaned and separated, crushed, cleaned repeatedly to remove mud, sand, stones, etc., then dried, and finally sent to the granulator

The construction period of this subproject is from January 2023 to June 2024.

2.1.3 Bulky and decoration waste disposal plant

This subproject is located in Ningbo resource recycling base in Dongqiao Town, Haishu District, with a planned land area of 39,451 m^2, consisting of a raw material shop, a processing shop, a finished product shop, an office, a guard room, etc., with a building area of 22,150 m^2 and an annual treatment capacity of 300,000 tons of decoration waste, including a 45,000-ton bulky waste treatment line, an 82,000-ton RDF treatment line and an 18 million-brick regeneration line.

Figure 2-4 Layout Plan of the Centralized Plastic Waste Sorting and Processing Plant

The production processes include the decoration waste disposal process, bulky waste disposal process, brick making process, and RDF preparation process.

1) *Decoration waste disposal process*

The subject of construction waste disposal is decoration waste and existing waste[2], with separate raw material areas and charging ports, a shared crushing and sieving system, and a shared aggregate making system, with a design capacity of 1,000t/d.

(1) Feeding: Raw decoration waste is weighed in the plant, and then delivered to the chain scraper conveyor, by which two operators pick bulk waste, with the remainder entering the next operation.

(2) Sieving: The chain scraper conveyor feeds the material to the crush for crushing to below 250mm, and the crushed material is sent to the drum sieve to obtain 0~50mm and 50~100mm undersize materials, and a >100mm oversize material, which are sent to their respective sorting lines.

Optically sorted plastics are sent to the plastic storage area, timbers, rubbers, plastics, etc. are sent to the RDF storage area as RDF raw materials, and other materials are sent to the manual sorting station for purification, such as textile removal.

(3) Aggregate crushing and sieving: The purified material is removed of magnetic substances (iron mainly), and then sent to the crusher. The crushed material is sieved to obtain 0-15mm and 15-30mm aggregates, and the oversize material is crushed again for further sieving.

2) *Bulky waste disposal process*

Bulky waste is first crushed into small pieces, removed of metals, and then crushed into tiny pieces of less than 80mm and 50mm. A centralized dust removal system is used to ensure a dust-free environment. The flammable mixture after crushing will be burned for power generation.

3) *RDF preparation process*

Timbers, rubbers, plastics, etc. are sorted from bulky and decoration waste. Such materials are of low moisture content and a considerable calorific value, and can be further processed into a biomass fuel for an added value.

4) *Brick making process*

Aggregate of different grades are measured precisely, mixed into dry and hard concrete, and made into various bricks, such as hollow, solid, facing and floor bricks, and special concrete members for use in parks, airports, wharves and rivers.

The construction period of this subproject is from January 2023 to January 2024.

2.1.4 Four recyclables sorting centers

The sorting centers target recyclables, including plastic bottles, low-value dirty plastics, daily chemical plastic waste, waste paper, waste glass, waste metals, waste textiles, etc.

[2] Existing waste refers mainly to the part of construction waste transferred to a transfer station for piling without treatment.

Currently, the Jiangshan sorting center in Yinzhou District receives about 250 tons of recyclables, and the Gulin sorting center in Haishu District receives about 390 tons of recyclables monthly.

For the 4 recyclables sorting centers, a raw material shop, a production shop, a product shop, an office, a power distribution room, a guard room, etc. will be built up to the 3-star green building standard.

The layout plans of the sorting centers are generally consistent, being linear along the logistic flow, including the raw material, production and finished product areas.

After bulky waste is sorted out at the stockyard, recyclables are sent to the manual sorting platform, bagged and then held. High-value recyclables like plastics and cardboards will be baled in batches for subsequent transport and disposal.

The construction period of this subproject is from December 2022 to May 2024.

Table 2-2 Overview of the Batch 2 subprojects and associated facilities

No.	new	Existing facility	Associated facilities	Land use	Primary suppliers and workers (drivers)
1	WWTP of Ningbo resource recycling base	Reconstruction and expansion of the existing leachate treatment station in the Haishu landfill	- Haishu District landfill (closed down in August 2017, now being a backup landfill) - Ningbo food waste disposal plant (operating) - Ningbo kitchen waste disposal plant (operating) - Offsite sewer lines	The WWTP and associated facilities will be constructed on the existing site. LA has been completed.	To be purchased through bidding, mostly being drug suppliers
2	Centralized plastic waste sorting and processing plant	No existing facility	None	With a floor area of 85.8 mu The land is currently collective woodland that has not been acquired.	Plastics are from the proposed recyclable sorting centers mainly, so the primary supplier is Dabashou Company, which is one of the PIUs of the Project. Haijing Company will employ drivers itself or through a third party for transport.
3	Bulky and decoration waste disposal plant	No existing facility	None	LA completed	Bulky and decoration waste is from the smart platform under Batch 1 subprojects,

No.	new		Existing facility	Associated facilities	Land use	Primary suppliers and workers (drivers)
						and there is no primary supplier. Meijing Company will employ drivers itself or through a third party for transport.
4	4 Recyclables sorting centers	Zhenhai District	New construction, no existing facility	None	Land reserved by the government	Recyclables are from the smart community waste cabins under Batch 1 subprojects, and there is no primary supplier. Dabashou Company will employ drivers itself or through a third party for transport. Dabashou Company will offer trucks.
		Beilun District	New construction, no existing facility	None	Land reserved by the government	
		Jiangshan Town, Yinzhou District	Existing site, reconstructed from existing facility	None	Land reserved by the government, now leased	
		Gulin Town, Haishu District	Existing site, reconstructed from existing facility	None	Land reserved by the government, now leased	

Source: PMO and fieldwork

2.2 Basic Information of Associated Facilities

According to the definition in the Bank's ESF, Haishu District landfill, Ningbo food waste disposal plant (Phase 2), Ningbo kitchen waste disposal plant (Phase 2) and offsite sewer lines are identified as associated facilities of Batch 2 subprojects. Wastewater from above facilities will be delivered to the WWTP in Batch 2 subprojects for treatment.

According to the Bank's ESF, during the SIA, Ningbo PMO and PIUs conducted a social audit on the associated facilities of Batch 2 subprojects. See Table 2-2.

2.3 Social Audit Findings

During the SIA on Batch 2 subprojects, a social audit was conducted on the existing and associated facilities of Batch 2 subprojects. The main findings of the social audit are as follows:

Except the 4 recyclables sorting centers, Batch 2 subprojects and associated facilities are all located in Ningbo resource recycling base in Dongqiao Town, Haishu District, with a planned area of 2.58 km^2, and with no community within 1km around. Among Batch 2 subprojects, the existing facilities are the WWTP to be reconstructed, and two recyclables sorting centers (Jiangshan recyclable sorting center in Yinzhou District and Gulin recyclables sorting center in Haishu District). The existing facilities have no high social risk.

WWTP: It will be reconstructed on the existing site, and its LAR risks are "low". The company has entered into labor contracts with laborers, is free from child and forced labor, and has established an EHS department and an OHS system, including the construction and maintenance of occupational health protection facilities, PPE, occupational health monitoring and evaluation, publicity, worker health monitoring, etc. Based on the field survey and interviews, OHS risks are "low". However, the company's LMP has no specific requirement for contractor and primary supplier management.

Recyclables sorting centers: Based on the currently selected sites, the land used has been acquired and reserved by the government, but the land use plan needs to be adjusted due to nonconformity with the sanitation facility land plan, and the PIU has not received a certificate of land use right, so land use risks are "moderate"; since all recyclables are from smart waste separation cabins in communities, they are relatively clean. During waste sorting, worker occupational health risks are relatively minor, and the recyclable sorting centers have developed on-site operating regulations, and offer PPE for free to reduce occupational hazards. The PIU[3] has established a sound LMP, but the social team found during the survey that some workers did not wear PPE (face masks, gloves, etc.) as required at work, and temporary workers might have not entered into a labor contract. Sound traffic risk control measures have been taken for vehicles, such as GPS speed monitoring, speed limit, voice prompt and anti-fatigue, and waste collection and transfer routes are kept away from densely populated communities. Therefore, traffic and community safety risks are "low".

Bulky and decoration waste disposal plant: It will be built on land acquired and reserved by the government, but it was found during the survey that some attachments on site were to be cleared, and the PIU (Meijing Company) had not received a certificate of land use right, so its LAR risks are "moderate".

For the **associated facilities**, a certificate of the right to use state-owned land has been obtained for the Haishu District landfill, Kaicheng Kitchen Waste Plant, and Shouchuang Kitchen Waste Plant, so its LAR risks are "low". The company has entered into labor contracts with laborers, is free from child and forced labor, and has established an EHS department and an OHS system, including the construction and maintenance of occupational health protection facilities, PPE, occupational health monitoring and evaluation, publicity, worker health monitoring, etc. Based on the field survey and interviews, OHS risks are "low". However, the company's LMP has no specific requirement for contractor and primary supplier management.

The Kaicheng Kitchen Waste Plant and Shouchuang Kitchen Waste Plant have developed strict waste collection and transfer management measures, and use fully sealed vehicles for transport via fixed routes, with minor community disturbances.

The offsite sewer lines will be constructed by Qingyuan Company[4] using domestic counterpart funds, with a total length of about 2km. The offsite sewer lines will be constructed along Route B in the Ningbo resource recycling base, and there is no village or resident along the lines. The main social impact is temporary road occupation.

[3] It is also a PIU of Batch 1 subprojects.
[4] This company is the PIU of the WWTP in Batch 2 subprojects.

In addition, it is found that adequate information disclosure and public participation were conducted for the existing and associated facilities of Batch 2 subprojects during the EIA, social stability risk assessment, and LAR. However, compared to the Bank's ESF, the existing and associated facilities of Batch 2 subprojects need to be strengthened in community health and safety, communication, grievance redress, etc., such as disclosing E&S monitoring reports to the public regularly (especially water and air quality data), and responding to community concerns positively.

The social team has proposed the following suggestions on the basis of adequate communication with Ningbo PMO and PIUs to comply with both the domestic regulations and the Bank's ESF:

- Labor and working conditions: The PIUs and associated facility operators should improve the requirements for contracted and primary suppliers' workers in the Labor Management Procedure (LMP), and strengthen the protection of their rights and obligations according to ESS2.
- Community health and safety: The PIUs and associated facility operators should conduct E&S monitoring on Batch 2 subprojects, especially water and air quality, disclose monitoring data to nearby communities timely, and communicate with nearby communities regularly to handle their concerns (e.g., odor).
- LAR: Before the beginning of construction, the PIUs should obtain a certificate of the right to use state-owned land or approval.
- GRM: The PIUs and associated facility operators should improve the GRM, conduct information disclosure and public participation, and respond to community concerns positively according to ESS10 and the Stakeholder Engagement Plan (SEP) of the Project.

Appendix 3 summarizes the issues identified in this social audit and the corresponding suggestions. See the Social Audit Report for the Batch 2 subprojects for more information.

3 Social Baseline

3.1 Socioeconomic Profile of Ningbo City

Ningbo (also called Yong), is a sub-provincial level city in Zhejiang Province, a specifically designated city, an important seaport on the southeast coast of China approved by the State Council, and an economic center in the south wing of the Yangtze River Delta. As of 2019, the city has 6 districts, 2 counties, and 2 county-level cities under its jurisdiction, with a total area of 9,816 km^2.

In 2020, Ningbo's GDP was 1.24087 trillion yuan, up 3.3% year on year, in which the added value of primary industries was 33.84 billion yuan, that of secondary industries 569.39 billion yuan, and that of tertiary industries 637.64 billion yuan, with a ratio of 2.7:45.9:51.4.

By the end of 2020[5], Ningbo had a registered population of 6.137 million, including an urban registered population of 3.063 million, with a gender ratio of 110:100, a population growth rate of 7.12‰, and a natural population growth rate of 0.75‰. In 2020, the per capita disposable income of residents was 59,952 yuan, up 5.2% year on year, that of urban residents 68,008 yuan, up 4.8%, and that of rural residents 39,132 yuan, up 6.8%; the per capita nonproductive expenditure of residents was 34,455 yuan, up 1.5%, that of urban residents 38,702 yuan, up 1.1%, and that of rural residents 23,481 yuan, up 3.0%.

By the end of 2020, among the 9.404 million permanent residents of Ningbo, the migrant population was 2.457 million, and the total registered population was 6.137 million. The urbanization rate of Ningbo was 78%[6] The female population was 3.108 million, accounting for 50.6% of the registered population. The senior population (over 60 years old) was 1.56 million[7], accounting for 25.64% of the registered population. See Table 3-1.

Ningbo is a typical area where there are scattering ethnic minority households without concentrated communities. As of the end of 2020, the city has 53 ethnic minorities (no Uzbek and Loba), with a minority population of more than 537,000 (6.29% of total permanent population). Among this population, about 36,000 people are local registered residents (0.59% of total registered population), more than 501,000 are floating population. The Miao, Tujia, Buyi, Zhuang people are among the ethnic groups with most people. There is no ethnic minority area in Ningbo.

[5] Source: 2020 Statistical Bulletin on the National Economic and Social Development in Ningbo
[6] Source: 2019 Statistical Bulletin on the National Economic and Social Development in Ningbo
[7] Source: Ningbo Municipal Seniors Committee

Table 3-1 Socioeconomic Profile of the Project Area (2020)

Division	Sub-districts / townships	Communities	Residential areas	Resident population	Flowing population	Registered population	Female population	Minority population	Urbanization rate	MLS population	Per capita disposable income (yuan)
Unit	**/**	**/**	**/**	**0,000**	**0,000**	**0,000**	**0,000**	**/**	**%**	**/**	**yuan**
Zhejiang Province	/	/	/	5850	851	4999	2429.5	2217714	70	655000	52397
Ningbo City	100	612	2497	940.4	245.7	613.7	310.8	537000	78	59000	59952
Project area total	64	442	1763	505.42	138.7	304.7	151.4	19.94	70	10909	61151
Yinzhou District	20	156	630	160.9	49.8	95.5	49.0	48681	79.8	2595	73860
Haishu District	17	101	376	104.12	31.8	63.7	32.4	43013	84.2	2507	64838
Zhenhai District	6	44	194	51.0	17.5	27.0	12.8	19725	62.8	908	56346
Beilun District	10	49	291	82.9	21	43.5	20.7	42181	67.9	2048	62775
Jiangbei District	8	66	187	48.8	15	27.1	13.9	12893	80.2	1344	62123
Fenghua District	3	26	85	57.7	3.6	47.9	22.6	32973	45.6	1588	46964

Source: 2020 Statistical Bulletins on the National Economic and Social Development of Zhejiang Province and districts (data of High-tech Development Zone and the Dongqian Lake area included in that of Yinzhou District

3.2 Socioeconomic Profile of the Project Area

The proposed subprojects are located in Ningbo resource recycling base, and the social sensitive sites around the Project (environmental impacts and NIMBY effect mainly) mainly include Xuanpei, Bailiangqiao, Huijiang, Yushantou and Sanli Villages, Qiaodong Town, Haishu District. The Xuanpei Village Committee is 70m southeast of the Ningbo resource recycling base. It has not been relocated but is no longer in service. Therefore, the social sensitive site closest to the base is Bailiangqiao Village about 1km north of the base.

Figure 3-1 Distribution of Settlements around the Ningbo Resource Recycling Base

3.2.1 Dongqiao Town

Dongqiao Town[8] is located in southern Haishu District, with a land area of 35.39 km^2, governing 19 villages and one community, and a resident population of about 52,000.

The town generates more than half of the city's municipal waste, and has received many honors for waste disposal. In 2019 and 2020, the town's gross industrial output value exceeded 10 billion yuan. In Q1 2021, the town's fiscal revenue was 208 million yuan, up 28.5% year on year, general public budgetary revenue 107 million yuan, up 11.4%, and GDP 1.135 billion yuan, up 36.5%.

3.2.2 Affected Villages

1) Xuanpei Village

Xuanpei Village has 7 groups, and 535 households with 1,271 persons, and was merged from Xuanjia and Pei'ao Villages in 2004. It is a civilized, ecological, hygienic and beautiful village.

[8] Source: Qiaodong Town Government

To accelerate landfill construction, Xuanpei Village was moved to Dongxuan Garden in 2015 and 2018, and 6 groups (except Pei'ao) signed relocation agreements in June 2018.

Figure 3-2 Xuanpei Village (Left), Bailiangqiao Village (Right)

2) Bailiangqiao Village

Bailiangqiao Village was merged from Bailiang and Liangqiao Village. It has a registered population of 1,380 and a floating population of over 1,000. In recent years, Bailiangqiao Village has been affected by frequent LA. About 70% of the land acquired for the landfill is from Bailiangqiao Village, including 100 mu of land and 300 mu of forest, and 100 mu of land has been acquired for the Ningbo-Jinhua Expressway. Currently, the village has 2,200 mu of land, including about of 500 mu of hilly land. Cultivated land has been transferred to major cultivation households, and the proportion of agricultural income to household income is low.

Bailiangqiao Village has over 60 enterprises, including plastics, automobile parts, clothes, etc. The largest enterprise Liangqiao Rice Co., Ltd. has a workforce of over 100 and an annual turnover of 1 billion yuan. 7 or 8 enterprises have an annual turnover of over 30 million yuan.

3) Huijiang Village

Huijiang Village has 6 groups, a registered population of over 1,600, and a land area of 2,014 mu, including 1,244 mu of cultivated land, in which 34 mu of land and 409 mu of forest has been acquired. The main crops are paddy rice and watermelon.

Figure 3-3 Huijiang Village (Left), Yushantou Village (Right)

4) Yushantou Village

Yushantou Village is located in southwestern Qiaodong Town, and enjoys convenient traffic. The village has a registered population of 1,108, a floating population of over 1,000, 761 mu of cultivated land and 564 mu of forest. 60% of the village's land has been acquired, and the remaining cultivated land transferred to one major cultivation house for paddy rice cultivation. Per capita annual income is 25,900 yuan, in which agricultural income accounts for about 15%.

There are 62 enterprises in the village, dealing with machinery and food mainly. There are 3 industrial zones in the village, namely Changfeng, Maojia and Qiaoqian.

5) Sanli Village

Sanli Village is located in southern Qiaodong Town, merged from Sanjia and Lijiada Villages, and enjoys convenient traffic. The village has a population of 810, and 1,800 mu of cultivated land, which is transferred to one major cultivation household, and 1,500 mu of forest. There are over 30 enterprises in the village, with a total annual output value of over 100 million yuan.

Figure 3-4 Sanli Village

3.3 Current Situation of Waste Sorting

There are 4 recyclables sorting centers run by NBSMC Renewable Resources Technology Co., Ltd. in Ningbo. Seven recyclables sorting centers are to be constructed under the Project, including one demonstration, to dispose of recyclable waste of the whole city, and serve 120 residents in 8 districts covered by the Project.

The existing 4 sorting centers run by NBSMC Renewable Resources Technology Co., Ltd. are: Jiangshan sorting center (with a floor area of about 5,382 m^2), Zhenhai District sorting center (with a floor area of about 3,300 m^2), Beilun District sorting center (with a floor area of about 7,000 m^2), and Haishu District sorting center. Since these sorting centers do not involve cleaning, so no wastewater treatment equipment is provided. They only sort, pack, store, load and unload recyclables, and do not generate considerable wastewater, waste gases, odor and noise.

Table 3-2 Existing Recyclables Sorting Centers

No.	Name	Address	Sorting capacity (t)	Operating area (m^2)	Building area (m^2)	Existing land use
1	Jiangshan sorting center in Yinzhou District	South of Jingting Bus Stop in Jiangshan Town	36000	6000	3600	Land lease
2	Zhenhai District sorting center	No.131 Zhaolong Road	30000	3500	3000	Free use of old workshop
3	Beilun District sorting center	No.252 Hengpu Village, Xinqi Sub-district	60000	7000	6000	Free use of old workshop
4	Gulin sorting center in Haishu District	Guoxia Village, Gulin Town	38000	8500	3800	Land lease

Source: Ningbo PMO, PIUs and fieldwork summary

3.4 Current Situation of Municipal Solid Waste Collection and Transfer

Currently, kitchen waste in Ningbo still mix with plastic waste when it is transferred by trucks to the disposal plant for anaerobic composting. Anaerobic treated compost still contains a lot of microplastics, which may enter soil, sediments and freshwater with compost, thereby generating long-term negative impacts on ecosystems, and flowing into seas through groundwater or rivers.

Other types of waste are also mixed with a lot of plastic waste, and would be transferred to transfer stations, and then to the incineration plant after compression.

Recyclable waste includes waste paper, waste plastics, waste textiles, waste glass, etc. Such waste is transferred by vans to the recyclable sorting center simple manual sorting and compression, and then sold to terminal waste re-utilization enterprises.

Bulky waste is collected in a door-to-door manner through online appointment, and transferred by the sorting center by vans.

Due to insufficient dismantling capacity, bulky waste, decoration waste, waste household appliances cannot be recovered and disposed of effectively, so that plastics contained cannot be separated and treated effectively, and large quantities of recyclable plastics cannot be utilized effectively.

In the Project, waste of all kinds can be utilized effectively through all-category smart waste cabins deployed in communities. The cabins with AI first judge if kitchen and other waste dumped by residents contain plastics, give feedback to residents to improve waste sorting quality, and recover plastic bottles, low-value dirty plastics and daily chemical plastic waste through 3 dedicated recovery bins, thereby improving waste sorting accuracy effectively. In addition, the smart solid waste management system under the Project will dispatch recyclable trucks, transfer all types of (plastic bottles, low-value dirty plastics, daily chemical plastic waste, waste paper, waste glass, waste metals, waste textiles, etc.) from holding sites to the to-be constructed or reconstructed recyclable sorting centers for: (1) semi-automatic unloading; (2) transfer to different conveyor belts; (3) manual + automatic sorting on conveyor belts; (4) compression, packing and storage; and (5) preparation for sale (where plastic waste is transferred to the centralized plastic waste sorting and processing plant under the Project). In addition, the above system will realize the door-to-door recovery of waste household

appliances, bulky waste and decoration waste through appointment, where waste household appliances and bulky waste will be transferred by vans, and decoration waste will be transferred by dedicated recovery bins and hook arm trucks.

Waste household appliances will be dismantled at the dismantling center, and plastic waste disposed of at the centralized plastic waste sorting and processing plant under the Project, and other dismantled materials sold or delivered to waste utilization and hazardous waste disposal terminals. After bulky and decoration waste is sorted at the bulky and decoration waste disposal plant under the Project, separated plastic waste will be delivered to the centralized plastic waste sorting and processing plant under the Project to make recycled building aggregates, recycled bricks, RDF, etc.

3.5 Profile of the Ningbo Resource Recycling Base

Ningbo resource recycling base that broke ground in 2013 is located in southern Qiaodong Town, with a total planned area of 2.58 km^2, based on the former Ningbo solid waste disposal center. The base is responsible for the disposal and recycling of kitchen waste in the urban center, and other urban domestic waste in Haishu and Yinzhou Districts. Three projects in the base have been put into operation, which are the Haishu District waste-to-energy plant (design capacity 2,250t/d), Ningbo kitchen waste disposal plant (Phase 1) (total capacity 660t/d, 440t/d in Phase 1), and Ningbo food waste disposal plant (Phase 1) (total capacity 800t/d, 400t/d in Phase 1).

While improving the resource recycling industry in the core zone, a surrounding development zone is taking form. The Haishu District landfill (Phase 2), Ningbo kitchen waste disposal plant (Phase 2), and Ningbo food waste disposal plant (Phase 2) are planned. In addition, some high-level resource recycling projects are planned on hilly land around the landfill, and the space east of the kitchen waste disposal plant, such as waste-to-energy, construction waste recycling, low-value recycled resource decomposition and utilization, and waste plastic cleaning and reuse. The base will be able to dispose of, recycle and reuse various types of solid waste, such as domestic waste, construction waste, landscaping waste, bulky waste and sludge.

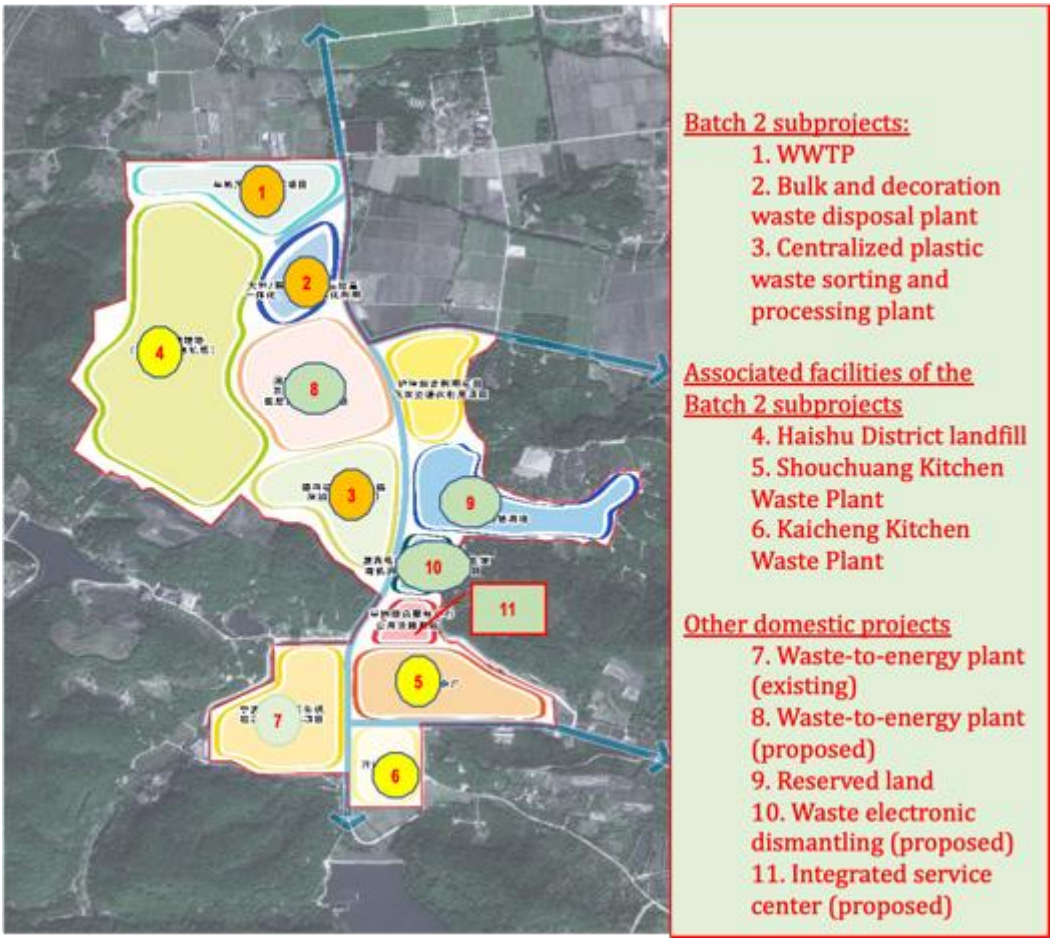


Figure 3-5 Plan of the Ningbo Resource Recycling Base

3.6 Practical Experience in NIMBY Risk Mitigation of the Ningbo Resource Recycling Base

Ningbo resource recycling base is an important achievement of the previous Bank waste management project in Ningbo[9], which has been selected as one of the Batch 2 PPP demonstration projects of the Ministry of Finance, a key provincial, municipal and district project, a provincial industrial tourism demonstration base, and a municipal popular science base, and received the Best Practice Award of the Circular Economy of China in 2017. The early-stage NIMBY risk mitigation experience of the base has been extended throughout the province by the provincial government as a typical case.

In March 2020, Dongqiao Waste-to-energy Project Social team was established under the Haishu District Resource Recycling Base Leading Group, responsible for policy processing, social stability, procedural coordination, etc., which improved the environmental awareness of the base in nearby sensitive communities, and laid a good foundation of social stability for Batch 2 subprojects.

For nearby residents' common concerns about long-term development, the municipal and district governments have explored compensation policies for interest balancing, and a long-

[9] During 2013-2020, the World Bank-financed Ningbo Municipal Solid Waste Minimization and Recycling Project (P123323) was implemented.

term ecological compensation mechanism for domestic waste input and output areas. For example, a domestic waste output district contributes to environmental improvement funds based on waste output, and such funds are disbursed to the input district for landscaping, infrastructure construction and maintenance, economic development, publicity and supervision, etc. around the waste treatment facility. In addition, the PIU will set aside a certain portion from the gross investment to create benefits for nearby residents.

4 Social Management Policy Framework

The implementation of the Project needs to comply with the requirements of the Bank's ESF, and also needs to comply with China's domestic laws and regulations in the field of E&S risk management. This chapter summarizes the applicable requirements of the Bank ESSs in the Project, and China's existing E&S management laws and regulations, technical specifications, and applicable standards that are most relevant to the Project, compares these with the Bank ESSs, and proposes remedies for gaps.

The social team has identified the relevance of the ESSs with Batch 2 subprojects:

- Batch 2 subprojects do not involve any minority community, so ESS7 shall not apply.
- The construction and operation of Batch 2 subprojects involve LAR risks, OHS risks, community health and safety risks, NIMBY risks, etc., which require extensive public support and participation, and a smooth GRM. Therefore, the applicable ESSs include ESS1 (Assessment and Management of Environmental Risks and Impacts), ESS4 (Community Health and Safety), ESS5 (Land Acquisition, Restriction on Land Use and Involuntary Resettlement), and ESS10 (Stakeholder Engagement and Information Disclosure). In addition, these subprojects involve direct workers, contract workers and primary suppliers' workers, so ESS2 (Labor and Working Conditions) is also relevant.

Table 4-1 Applicability of ESSs

ESS	WWTP	Centralized plastic waste sorting and processing plant	Bulky and decoration waste disposal plant	Recyclables sorting centers
ESS1	√	√	√	√
ESS2	√	√	√	√
ESS4	√	√	√	√
ESS5	√	√	√	√
ESS7	Not applicable			
ESS9	Not applicable			
ESS10	√	√	√	√

4.1 Introduction

4.1.1 Social Risk Management System

Appropriate social management systems have been established for investment projects in China. The social risk management system of a project requires that the project must aligned

with the basic interests of most people, and major decisions, major fixed asset investments and LA should be subject to social stability risk assessment.

A sound management body has been established for project social stability risk assessment in China. The owners should prepare or appoint a consulting agency to prepare the social stability risk assessment report; and the local government should review and evaluate such report. See Table 4-2.

Table 4-2 Legal Framework for Social Risk Management

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
1.	Interim Regulations on Major Administrative Decision-Making Procedures	2019	Major administrative decisions shall be made under the principle of democratic decision-making, opinions shall be fully solicited from all parties, and it shall be guaranteed that the people participate in decision-making through various channels and forms. If any major administrative policy may affect social stability and public security adversely, the undertaker or any other agency responsible for risk assessment shall assess the risk controllability of the draft decision.	The Bank requires that the borrower should conduct an E&S assessment according to ESS1 to evaluate, identify and minimize E&S risks and impacts at all stages.	Partly consistent Since China requires that a social stability risk assessment report be prepared for major projects, and the Bank requires that an SIA report be prepared, so an SIA report has been prepared.
2.	Social Stability Risk Assessment for Major Fixed Asset Investment Projects	2012	China requires that a social stability risk assessment be conducted around the legitimacy, rationality, feasibility and controllability of a project, and major decisions and surveys should cover all local stakeholders, and fully collect their opinions, including rational and irrational, realistic and potential needs. On the basis of a risk survey, risk factors potentially leading to social stability risks shall be analyzed in cases of stakeholder objection to propose mitigation measures.		

4.1.2 LAR

For LAR and compensation, etc., China has established a complete legal framework and policy system, including the Land Administration Law of the PRC (3rd amendment in 2019), and the Regulations on the Expropriation of Buildings on State-owned Land and Compensation (Decree No.590 of the State Council, 2011). Within this framework, local governments have promulgated local regulations and policies.

Table 4-3 Legal Framework for LAR

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
1	Land Administration Law of the PRC	2019	If land collectively owned by farmers is to be acquired for public interests, acquisition may be implemented according to law. If a people's government at or above the county level is to apply for land acquisition, it shall conduct a current status survey and a social stability risk assessment, and disclose the range and purpose of acquisition, current status, compensation rate, resettlement mode, social security, etc. in the township (town), village and village group for at least 30 days to collect comments from the affected rural collective economic organization and its members, village committee and other interested parties. If most members of the affected rural collective economic organization think that the land compensation and resettlement program does not conform to the laws and regulations, the people's government at or above the county level shall organize a public hearing, and modify the program according to the laws, regulations and public hearing. Owners or users of the land to be acquired shall, within the time limit specified in the announcement, go through compensation registration on the strength of the real estate ownership certificate. The people's government at or above the county level shall organize the department concerned to estimate the relevant costs and make them fully available, enter into compensation and resettlement agreements with the owners and users of the land to be acquired. The people's government at or above the county level shall apply for land acquisition only when the	ESS5 proposes to avoid or minimize involuntary resettlement. Timely compensation for loss of assets at replacement should be provided to ensure that livelihoods of displaced persons are improved or at least restored to pre-displacement levels. Affected persons who have no recognizable legal right to land or assets should be subject to compensation and resettlement. Depending on the degree of impacts, a comprehensive or abbreviated RAP will be prepared. Independent resettlement M&E will be conducted during implementation.	Partly consistent APs are identified in different ways. In China, illegal buildings are not compensated for. Except large and medium water resources and hydropower projects, no RAP is to be prepared, and independent resettlement M&E is not required. An RAP has been prepared as required by the Bank, and independent resettlement M&E will be conducted during implementation.

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
			preparatory work has been completed. Fair and reasonable compensation shall be granted for land acquisition to ensure that the living standard of the affected farmers is not reduced, and their long-term livelihoods are secured.		
2	Regulations on the Expropriation of Buildings on State-owned Land and Compensation	2011	Where a building of any entity or individual on state-owned land is expropriated for public interest, the owner of the expropriated building (hereinafter referred to as the "owner") shall be fairly compensated. The principle of "democratic decision-making, due process and open results" shall be followed in the building expropriation and compensation. The compensation for the value of houses to be expropriated shall not be less than the market price of the real estate comparable to the houses to be expropriated on the date of the public notice of the house expropriation decisions. The value of the houses to be expropriated shall be assessed and determined by real estate appraisal agencies with appropriate qualifications in accordance with the procedures for evaluating houses to be expropriated.		
3	Regulations of Zhejiang Province on the Land Acquisition Procedure (for Trial Implementation)	2020	In case of land acquisition, the municipal (county, city) government shall organize a social stability risk assessment, implement risk prevention measures, and develop a contingency plan. After the contingency plan is drafted, the municipal (county, city) government shall disclose it on its website, and in the township (town), village and village group for at least 30 days to collect comments from the affected rural collective economic organization and its members, village committee and other interested parties. The results of the current		

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
			status survey shall be disclosed along with the compensation and resettlement program for land acquisition. If more than half of members of the affected rural collective economic organization think that the land compensation and resettlement program does not conform to the laws and regulations, the municipal (county, city) shall organize a public hearing.		
4	Measures of Zhejiang Province for Land Acquisition Compensation and the Basic Living Security of Land-expropriated farmers	2009	For acquired collectively owned land, the land compensation fees, resettlement subsidy, and compensation fees for rural residential houses, other ground attachments, young crops, etc. shall be paid timely and fully according to law, and social security costs for the affected farmers disbursed to providing basic living security, and protect their lawful rights and interests. Municipal or county government shall establish a social security system in accordance herewith to protect the lawful rights and interests of the affected farmers practically. Municipal or county land and resources authority shall draft and implement the land acquisition compensation program.		

4.1.3 Labor Management

For labor management, employers should sign employment contracts with laborers on a voluntary basis to define both parties' rights and obligations. The Labor Law of the PRC (amended in 2018) and the Labor Contract Law (2012) apply.

China's laws make provisions on wages, working hours, labor protection and labor disputes, and prohibit the use of forced labor and/or child labor, fully consistent with the requirements of ESS2. Considering the nature of the Project, China's all-round provisions on labor protection, and the increasing labor supervision of local governments, there is almost no risk of forced and child labor for project workers.

In addition, China’s laws and regulations make provisions on sexual harassment and sex assault:

Article 38 of the Constitution stipulates, the personal dignity of citizens of the People's Republic of China is inviolable. Insult, libel, false charge or frame-up directed against citizens by any means is prohibited.

Articles 101 and 120 of the General Principles of the Civil Law stipulate, citizens and legal persons shall enjoy the right of reputation. The personality of citizens shall be protected by law, and the use of insults, libel or other means to damage the reputation of citizens or legal persons shall be prohibited. The citizen shall have the right to demand that the infringement be stopped, his reputation rehabilitated, the ill effects eliminated and an apology made; he may also demand compensation for losses.

Article 236 of the Criminal Law stipulates, whoever rapes a woman by violence, coercion or any other means shall be sentenced to fixed-term imprisonment of not less than three years but not more than 10 years; Article 237 stipulates, whoever acts indecently against or insults a woman by violence, coercion or any other forcible means shall be sentenced to fixed-term imprisonment of not more than five years or criminal detention.

Article 40 of the Law on the Protection of Women's Rights and Interests stipulates, sexual harassment against women is banned. The victims shall be entitled to complain to the entity or the relevant organs. Article 58 stipulates, if anyone commits sexual harassment or family violence against a woman to violate this Law, and if his act constitutes a violation of the public security administration, the victim may require the public security organ to give the violator an administrative punishment or may initiate a civil action in the people's court.

Article 44 of the Public Security Administration Punishments Law stipulates, anyone who acts indecently towards any person or deliberately expose his body at a public place shall be detained for not less than 5 days but not more than 10 days if the circumstances are absolutely vile. Anyone who acts indecently towards a disabled person, mentally insane patient, or minor under the age of 14, or who commits any other severe violation shall be detained for not less than 10 days but not more than 15 days.

The Special Provisions on Labor Protection of Female Employees, and the Measures for the Labor Protection of Female Workers of Zhejiang Province also stipulate, the employer shall prevent sexual harassment on female workers, and protect their privacy when handling their appeals. See Table 4-4.

Table 4-4 Legal Framework for Labor Management

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
1	Labor Law of the PRC	Amended in 2018	This Law applies to enterprises, individually-owned economic organizations (hereinafter referred to as the employer) and laborers who form a labor relationship with them within the boundary of the Peoples Republic of China. State departments, institutional organizations and social groups and laborers who form a labor relationship with them shall follow this Law.	The scope of application of ESS2 depends on the type of employment between the borrower and project workers. The borrower should develop and implement a written LMP applicable to the Project.	China's labor policies do not conduct classification according to ESS2, and do not require the preparation of an LMP. To ensure consistency, all workers will be divided into four types, and an LMP prepared for the identified labor risks.
2	Labor Law of the PRC Labor Contract Law of the PRC	Amended in 2018 Amended in 2012	A labor contract should be entered into to define both parties' rights and obligations. When an employer hires an employee, it shall faithfully inform him of the work contents, conditions and location, occupational harm, work safety state, remuneration, and other information which the employee requires to be informed. Where an employer formulates, amends or decides rules or important events which are directly related to the interests of the employees, such rules or important events shall be discussed at the meeting of employees' representatives or the general meeting of all employees, and the employer shall negotiate with the labor union or the employees' representatives on an equal basis.	ESS2 requires that the borrower should provide a document that specifies the employment terms and conditions to project workers, and pay them according to the state laws and LMP. As required by the state laws or LMP, project workers should receive a termination slip and a severance pay list timely.	Consistent
3	Civil Servant Law of the PRC	Amended in 2018	Civil servants shall be managed on the basis of openness, equality and competition, and in accordance with statutory authorities, conditions, standards and procedures. The government shall train civil servants based on their job requirements. A civil servant's	ESS2 requires that if any civil servant works in support of the project (whether full-time or part-time), his/her public sector	Consistent

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
			salary shall include the basic salary, allowances, subsidies and bonuses.	employment agreement applies, unless there is a valid transfer certificate indicating that he/she has been employed for the Project.	
4	Provisions on the Administration of Contractual Civil Servants (for Trial Implementation)	2017	Written employment contracts shall be signed with civil servants on an equal, voluntary and consensual basis to define both parties' rights and obligations. The labor contract shall specify the term, job requirements, labor conditions, salaries, benefits and insurance, termination, liability for breach, etc.		
5	Labor Law of the PRC Regulations on Labor Security Supervision Labor Protection Supervision Regulations of Zhejiang Province	Amended in 2018 2004 2005	China has a sound labor dispute mediation system through a corporate committee under the formal trade union system. Workers may also appeal through the labor bureau directly. Labor security supervision shall be conducted over enterprises and individual industrial and commercial households (hereinafter referred to as the employing entities). Labor security supervision shall be conducted over job intermediary institutions, occupational skills training institutions, and occupational skills assessment and authentication institutions. The labor security supervision over an employing entity shall be under the jurisdiction of the labor security administration at the county level or at the level of a city divided into districts at the locality of employment by the employing entity. Labor security supervision shall be conducted in such forms as routine inspection, written review, special inspection, and complaint investigation.	ESS2 requires that a GRM must be established for all direct and contracted workers to file grievances about the workplace.	Consistent
6	Trade Union Law of the PRC	Amended in 2009	All physical and mental workers of enterprises and public institutions shall have the right to join and organize trade unions, regardless	ESS2 specifies that if the laws of the borrower allow workers to	Consistent

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
	Measures of Zhejiang Province for the Implementation of the Trade Union Law of the PRC	Amended in 2002	of ethnic group, race, gender, occupation, religion and education. An enterprise or public institution shall establish a trade union according to law within one year after opening. The trade union shall urge enterprises and public institutions to cover endowment, unemployment, medical, injury, maternity and other social insurance for workers according to law. The trade union shall assist enterprises and public institutions in collective welfare, salary payment, social insurance, labor safety and health, etc.	organize and bargain freely, such laws will apply. In this case, a worker organization will be established according to law, and information required for effective negotiation provided timely.	
7	Law of the PRC on Prevention and Control of Occupational Diseases Occupational Disease Prevention and Control Plan of Zhejiang Province (2017-2020) Work Safety Regulations of Zhejiang Province	Amended in 2018 2017 Amended in 2016	In China, there are over 100 technical standards on occupational safety and disease control, which are based on industry best practices. Employers shall establish a complete occupational health and safety system, strictly enforce relevant measures and standards, and offer relevant training to workers. A mechanism of employer responsibility, authority regulation, industry self-discipline, worker participation and public participation shall be established for occupational disease prevention and control. Workers shall be entitled to occupational health protection. The employer shall establish a sound responsibility system for occupational disease prevention and control, and the trade union shall supervise such work. The employer must cover injury insurance according to law.	ESS2 requires that OHS measures be designed and implemented to: (a) identify potential hazards to project workers, especially life threatening ones; (b) offer preventive and protective measures; (c) train project workers, and keep training records; (d) record and report occupational accidents, diseases and incidents; (e) prevent, prepare for and respond to emergencies; and (f) take remedies for adverse impacts,	Consistent

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
				such as occupational injuries, deaths, disabilities and diseases.	
8	Law of the PRC on the Protection of Rights and Interests of Women Special Provisions on Labor Protection of Female Employees Measures for the Labor Protection of Female Workers of Zhejiang Province	Amended in 2018 2012 2017	Special protection shall be offered to women and children, and they shall not be hired for dangerous jobs. Women shall enjoy the same labor and social security rights as men, and receive equal pay for equal work. The employer shall protect women's safety and health at work, and not assign unsuitable jobs to women. Women enjoy special protection during menstruation, pregnancy, lying-in and breastfeeding periods. The employer shall prevent sexual harassment on female workers, and protect their privacy when handling their appeals. In Zhejiang Province, the human resources and social security, work safety management, health, and family planning departments of governments at or above the county level should protect and manage female workers' labor protection properly.	ESS2 proposes appropriate protection and assistance measures to address the vulnerability of certain worker groups, including women, the disabled, migrant workers and child labor.	Consistent
9	Measures of Zhejiang Province on Child Labor Prohibition	2008	Chinese and Zhejiang policies prohibit any organization or individual to refer anyone under 16 years to any job. Governments at or above the county level shall strengthen leadership in this respect, and establish a sound coordination system and a sound evaluation system.	ESS2 requires that any child under the minimum age should be employed for project-related work. Such age is usually 14 year, unless otherwise stipulated in state laws.	Consistent
10	Labor Law of the PRC	Amended in 2018	Forced labor shall be prohibited. Anyone who uses laborer by force, threat or illegal restriction of	ESS2 prohibits forced labor.	Consistent

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
			personal freedom shall be prosecuted criminally.		
11	Work Injury Insurance Regulations of Zhejiang Province	2017	Zhejiang has established a risk screening and early warning mechanism, and conducts publicity and training. Insurance costs shall be disbursed from the work injury insurance fund, subject to budgetary management, and managed according to the applicable state provisions. Injured workers shall be entitled to medical treatment and recuperation benefits.	ESS2 requires that a system for reviewing OHS performance and working environment regularly be developed, including identifying risks, implementing and prioritizing measures, and evaluating results.	Consistent
12	Regulations on the Continuing Education of Professional Technicians of Zhejiang Province	2003	In Zhejiang Province, a professional technician shall receive off-job continuing education for not less than 12 days per annum, relevant costs shall be borne by the employer, and he/she shall receive the same salary, benefits and insurance as if he/she were on the job. When his/her right to receive continuing education is infringed, he/she shall have the right to file an appeal with the competent authorities, which shall make a disposition and give a written reply within 30 days.	ESS2 requires that project workers be employed fairly and justly, including recruitment, remuneration and training.	Consistent Professional technicians in Zhejiang not only receive OHS training regularly, but also equal opportunities to receive continuing education.
13	Notice of the Ministry of Human Resources and Social Security on Handling Labor Relations during COVID-19 Prevention and Control Properly	2020	China requires that novel coronavirus-infected patients, suspected patients and close contacts during treatment or medical treatment, and enterprise workers who are unable to work regularly shall be paid, and their labor contracts shall not be terminated pursuant to Articles 40 and 41 of the Labor Contract Law. If an enterprise has any difficulty in production or management due to the pandemic, it may stabilize the job of a worker by remuneration adjustment, job	The 2020 Annual Report of the Bank proposes that measures better suited to the increasingly diversified and changing working environment be taken for labor protection and social security, and calls on all governments to	Consistent

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
			rotation or reduction of working hours, and avoid downsizing where possible. If an enterprise is shut down for not more than a pay period, it shall pay workers according to labor contracts; if it is shut down for more than a pay period, and a worker works normally, the salary shall not be less than the local minimum salary, or if a worker does not work normally, living expenses shall be paid.	offer social security to all workers, whether they are employed in formal or informal sectors. In view of the destructive impacts of the pandemic on the poor, especially those in informal sectors, and the importance of practicing this labor protection mode is more significant than ever. The document "Saving Lives, Expanding Influence and Getting on the Right Track" release by the Bank's Executive Board in June 2020 stresses, "Education, employment and health services should be utilized to help people restore livelihoods, and enterprises and public institutions gain a foothold."	
14	Notice of the Ningbo Municipal Human Resources and Social Security Bureau on Offering Employee Services to Enterprises during COVID-19 Prevention and Control Properly	2020	Ningbo encourages enterprises to expand recruitment by various means. For each additional insured worker of an enterprise after the end of the pandemic, the enterprise shall receive a subsidy of 500 yuan per capita, but the total subsidy shall not exceed 300,000 yuan. Enterprises shall be guided to handle salary payment and leaves properly during pandemic prevention and control by such measures as salary adjustment, flexible working hours and remote work.		

4.1.4 Information Disclosure and Public Participation

For information disclosure, public participation and GRM, the state, provincial and municipal laws, regulations and policies impose strict requirements on information disclosure on the approval and implementation of major construction projects, land acquisition compensation, government resource allocation, etc., and require that public participation channels be kept smooth.

A systematic complaint handling system has been established in Ningbo. Citizens, legal persons or other organizations shall submit suggestions, opinions or appeal requests to governments at all levels by way of letter, e-mail, telephone or visit, etc., to be handled by competent administrative authorities according to law. See Table 4-5.

Table 4-5 Legal Framework for Information Disclosure and Public Participation

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
1	Measures for Public Participation in Environmental Impact Assessment	Effective from January 2019	The state encourages the public participation in the assessment of environmental impacts. The construction entity shall seek the opinions of citizens, legal persons and other organizations within the scope of environmental impact assessment in accordance with the law. Information disclosure shall be conducted by Web, newspaper and announcement. Before submitting the EIA report to the ecology and environment authority for approval, the construction agency shall prepare a public participation note. The ecology and environment authority shall disclose information to the public through its website or otherwise for not less than 10 working days.	ESS10 requires that all stakeholders be consulted meaningfully, timely, relevant, understandable and accessible information provided to the stakeholders, and they are not manipulated or threatened. The SEP will be developed and implemented at the project level to describe the times and methods of contact with stakeholders in the whole project lifecycle.	Partly consistent China's policies do not require the development and implementation of an SEP that describes the times and methods of contact with stakeholders in the whole project lifecycle. The borrower should conduct stakeholder engagement in the whole project lifecycle, and include women and low-income population to provide timely, relevant, understandable and accessible information to stakeholders. The GRM is also included in the SEP.
2	Opinions of the General Office of the State Council on Advancing Disclosure of Government Information in the Field of Approval and	2017 2019 2017 2019	Except national secrets, trade secrets, personal privacy, and other content which is not disclosed according to the law, the information in the process of the approval and implementation of major construction projects shall be disclosed to the public as much as possible so as to improve the	ESS10 requires the borrower to disclose project information, so that stakeholders are aware of project risks, impacts and potential	Consistent

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
	Implementation of Major Construction Projects Opinions of the General Office of the Zhejiang Provincial Government on Advancing Disclosure of Government Information in the Field of Approval and Implementation of Major Construction Projects Opinions of the General Office of the State Council on Advancing Disclosure of Government Information in the Field of Approval and Implementation of Public Resource Allocation Opinions of the General Office of the Zhejiang Provincial Government on Advancing Disclosure of Government Information in the Field of Approval and Implementation of Public Resource Allocation	2019	transparency and efficiency of the approval and implementation of projects, mainly including approval service information, approval result information, invitation for bid and bidding information, land expropriation information, information on material modification of design, construction-related information, quality safety supervision information, and information relating to completion of construction, shall be publicly disclosed in priority. China is advancing the building of province-level land acquisition information disclosure platforms to ensure that land-expropriated farmers can acquire relevant information efficiently and conveniently. Matters to be disclosed include 4 Level-1 matters and 10 Level-2 ones. In the Project, the allocation of waste sorting facilities falls into public resource allocation, and the state and provincial regulations also make provisions on information disclosure: Basic, allocation (transaction), bidding, contract signing and performance information of public resource projects shall be disclosed by competent authorities and enterprises respectively along with law violations and discredit acts.	opportunities. Before project assessment by the Bank, project information including risks, participation and grievance redress should be disclosed to stakeholders during the period of meaningful consultation on the project design.	
3	Opinions of the General Office of the State Council on Advancing	2016 2016	China and Zhejiang advance government affairs disclosure comprehensively through the statutory procedure of public	ESS10 requires that all stakeholders be consulted	Consistent

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
	Disclosure of Government Information Opinions of the General Office of the Zhejiang Provincial Government on Advancing Disclosure of Government Affairs Comprehensively		participation, expert demonstration, risk assessment, legality review and collective decision-making. Decisions, implementation, management, services and results shall be disclosed. Promote government data opening, strengthen policy interpretation and expand public participation. Government affairs disclosure shall be included in the performance evaluation system, and third-party agencies encouraged to evaluate disclosure quality and effectiveness independently and fairly. In government service disclosure in Zhejiang, four lists (list of government powers, list of government responsibilities, list of negative enterprise investments and list of special fiscal funds), and one website (Zhejiang government service website) are practiced, with focus on work safety, ecological environment and pandemic prevention.	meaningfully to provide timely, relevant, understandable and accessible information to stakeholders, and they be free from manipulation, threat or discrimination.	
4	Regulations on Complaint Letters and Visits Regulations on Complaint Letters and Visits of Zhejiang Province	2005 2016	Transparent grievance redress channels have been established, and implementation measures for further appeals are in place. Citizens, legal persons or other organizations shall submit suggestions, opinions or appeal requests to governments at all levels by way of letter, e-mail, telephone or visit, etc., to be handled by competent administrative authorities according to law. The department for letters and visits of the people's government at or above the county level shall, upon receiving a letter or visit, register the letter-or-visit matter presented and handle it on the merits of each case within 15 days. The matter presented by a letter-writer or visitor shall be handled within 60 days from the date it is accepted. If the matter is complicated, the time limit for handling it may be extended	ESS10 requires that a GRM be implemented to accept and promote grievance redress for all project-affected parties, and that stakeholder engagement records be kept, including a description of stakeholders, a summary of feedback received, and a brief description of how to consider feedback, or reason for not	Consistent

No.	Name	Version	Applicability	ESS requirements	Consistency evaluation and remedies
			appropriately upon the approval by the responsible person of the administrative organ concerned, but the period extended shall not exceed 30 days, and the letter-writer or visitor shall be notified of the reasons for such extension.	considering feedback.	

4.2 Gaps from ESSs and Remedies

4.2.1 Social Risk Management

In terms of social risk assessment and information disclosure for major projects, the legal framework of China, Zhejiang and Ningbo is consistent with ESS1. Since China requires the preparation of a social stability risk assessment report, while the Bank requires the preparation of an SIA report, an SIA report has been prepared as required by the Bank.

4.2.2 LAR

For LAR and compensation, etc., China has established a complete legal framework and policy system, and the policy objectives are consistent with the Bank requirements. However, the Chinese provisions on persons affected by LAR are inconsistent with Article 10 of ESS5, e.g., in China, affected persons of illegal buildings are not compensated for. In China, illegal buildings are not compensated for. In addition, except large and medium water resources and hydropower projects, no RAP is to be prepared, and independent resettlement M&E is not required. In the Project, affected persons will be identified, an RAP prepared, and independent resettlement M&E conducted according to the Bank policy.

4.2.3 Labor Management

China, Zhejiang and Ningbo have a sound legal framework for labor management, which is consistent with ESS2 in terms of equal pay for equal work, GBV, forced or child labor, OHS, occupational disease prevention, infectious disease (including COVID-19), labor protection, etc. However, workers in China are not classified as per ESS2, and China does not require the preparation of an LMP. To ensure consistency, all workers will be divided into four types, and an LMP prepared for the identified labor risks in accordance with ESS2.

4.2.4 Information Disclosure and Public Participation:

China and Zhejiang encourage the public to participate in and supervise the preparation, construction and operation of all types of projects. There are detailed and transparent measures for information disclosure and public participation in respect of social risk assessment, public resource allocation, LA, health quarantine, etc., and smooth grievance channels are in place. To ensure consistency, the Ningbo PMO and PIUs have prepared an SEP to cover all stakeholder engagement activities. The borrower should conduct stakeholder engagement in the whole project lifecycle, and include needs and expectations of vulnerable

groups, women and low-income population to provide timely, relevant, understandable and accessible information to stakeholders. The GRM is also included in the SEP.

5 Social Risks and Impacts Screening

5.1 Methods

The social team identified potential social risks by means of literature review, FGD, questionnaire survey, key informant interview and in-depth interview, including 15 FGDs and 70 men-times of key informant interviews.

The Project's potential social risks include LAR risks, NIMBY risks, labor risks, community health and safety risks, road safety risks, inadequate stakeholder engagement risks, non-inclusion risks for vulnerable groups, etc.

Based on the risk factors identified and screened above, and the nature and scale of the project activities, social risks have been judged preliminarily.

5.2 Results

The social risk analysis of the Project is carried out for all subprojects and in all stages (preparation, construction and operation) against the Bank's ESF and ESSs (see Table 4-1). The overall social risk rating of the Batch 2 subprojects is "substantial".

5.2.1 Irrelevance

- **Ethnic minorities -** Since Ningbo is a typical city in which minority population (over 36,000, accounting for 0.59% of registered population) is scattered and introduced by marriage or employment, ESS7 does not apply.
- **Forced and child labor -**

  Child labor: China has comprehensive laws and regulations on child labor, discrimination and forced labor, largely consistent with the scope and elements of ESS2. The Measures of Zhejiang Province on Child Labor Prohibition prohibit any organization or individual to refer anyone under 16 years to any job. Governments at or above the county level shall strengthen leadership in this respect, and establish a sound coordination system and a sound evaluation system. For Batch 2 subprojects, project workers include direct workers of the PIUs, contract workers responsible for civil works and equipment installation, and drives for solid waste transfer. Project workers should have relevant experience, skills and qualifications, all with age thresholds (e.g., 18 years for driving license in China). The PIUs specify in their labor management policies that no child labor (under 16) should be employed. For example, the youngest worker of the WWTP is 23 years, and contracted workers are mostly cleaners aged 40-50 years.

  Forced labor: According to the Labor Law, the average working hours of workers shall not exceed 44 hours per week or 8 hours per day. In case of specific circumstances, the extended working hours will not exceed 3 hours per day and 36 hours in total per

month. The juvenile workers (16-18 years old) should not be involved in overtime working. The PIUs' personnel management measures and labor contracts do not contain any provision on penalty payment upon resignation. For example, workers of the WWTP may apply for resignation freely during the contract term, so there is no forced labor.

Ningbo is economically developed, where a sound enterprise employment management and supervision system is in place. Based on the industry of the Project, forced and child labor risks are negligible.

- **Recruitment discrimination -** Article 12 of the Labor Law stipulates, laborers shall not be discriminated against in employment due to their nationality, race, sex, or religious belief. Article 27 of the Employment Promotion Law stipulates, an employer shall not refuse to employ women or raise the recruitment standard for them using gender as an excuse, and shall not have such provisions as preventing female workers from getting married or bearing a child. Articles 29, 30 and 31 of the Employment Promotion Law stipulate the protection of employment rights of the disabled, infectious agent carriers and rural laborers. Article 20 of the Employment Promotion Law stipulates, any recruitment advertisement released by any employer shall not contain any discriminatory information. There is no recruitment discrimination in the Project.

5.2.2 Relevance

- **LAR: ESS5**

Among Batch 2 subprojects, 1) The centralized plastic waste sorting and processing plant is located in Ningbo resource recycling base in Haishu District, with a floor area of about 85.8 mu, and the land used is collective land in Xuanpei and Bailiangqiao Villages of Dongqiao Town, and is to be acquired; 2) The bulky and decoration waste disposal plant is located in the Haishu District landfill, with a planned floor area of 59.2 mu. The land was acquired in 2004, and some ground attachments are to be cleared and compensated for in consultation with villagers. In addition, although this land is reserved, its use right has not been allocated or transferred to the PIU yet; 3) The WWTP of Ningbo resource recycling base is located in the wastewater treatment area of the Haishu District landfill in southern Qiaodong Town of Haishu District, and the leachate treatment station has a floor area of 67 mu and is located in the Haishu District landfill; the land of the landfill was acquired in 2004, involving no additional LA; and 4) four recyclable sorting centers. Among the 4 sorting centers, the one in Zhenhai District occupies 9 mu of land, that in Beilun District occupies 9 mu, that in Yinzhou District occupies 6.97 mu and that in Haishu District occupies 15 mu, all being state-owned land. The sites and land of the sorting centers are to be further approved by the competent authorities, especially natural resources bureaus. In sum, 85.8 mu of land

will be acquired for the Project, the land plan for the sorting centers needs to be adjusted, and PIUs have not obtained certificates of the land use right, and need further consultation. In addition, some attachments on the acquired land need to be cleaned up, so the Project's LAR risks are "substantial".

- **Community health and safety risks: ESS4**

  The communities involving community health and safety impacts and risks include those around Ningbo resource recycling base and those run through by waste transfer trucks. The Project's community health and safety risks are highly connected to the technology and management level of the relevant facilities. The Project involves extensive construction, and may disturb nearby communities during construction, mainly including environmental impacts, traffic congestion and safety impacts. For example, the transport of plastic waste, bulky waste and decoration waste may pose noise, dust, spillage and traffic accidents to nearby communities.

  However, all project sites are located in Ningbo resource recycling base, workers are not allowed to enter communities during construction, and the construction sites are over 1km away from sensitive sites. Trucks will run through provincial and special highways, and avoid communities, schools, towns, hospitals and other social sensitive sites. Each sorting center has 13-15 vehicle runs, and all vehicles are enclosed vans, for which the owner has taken sound safety measures, such as GPS speed monitoring, speed limit, voice prompt and anti-fatigue. Therefore, the Project's community health and safety risks are "moderate".

- **Labor and working condition risks: ESS2**

  Project workers include direct workers of the PMO and PIUs, contract workers and primary suppliers' workers. It is estimated that there will be 241 direct workers, 890 contract workers and 160 and primary suppliers' workers. During the SIA, extensive stakeholder engagement was conducted by means of literature review, FGD, key informant interview, etc., and labor risks identified, including hazardous operations, machinery operation risks, mechanical construction noises, emergencies, safety accidents, health and infection risks, salary and benefit risks, etc. at the construction stage, and OHS risks, toxic gas risks, emergencies, infection risks, renumeration risks, etc. at the operation stage.

  In Ningbo, employers manage workers in accordance with the Labor Law (2018 Amendment), Labor Contract Law (2012 Amendment), and other applicable laws and regulations, which prohibit forced and/or child labor, and make provisions on salaries, working hours, labor protection and labor disputes, fully consistent with ESS2. In addition, Ningbo is economically developed, where a sound enterprise employment management and supervision system is in place. Considering the nature of the Project, the all-round provisions on labor protection, and the growing labor supervision in Ningbo, and the practice of contractor and supplier bidding under the Project, the Project's labor and working conditions risks are "moderate".

- **Stakeholder engagement risks: ESS10**

  At the preparation, implementation and operation stages, information disclosure and participation is an important aspect of realizing the project objectives. Project-affected

parties include recyclable sorters, waste truck drivers, community residents, plastic processing workers, wastewater treatment workers, bulky and decoration waste disposal workers, persons affected by LAR, residents along waste transport routes, etc.

Since Batch 2 subprojects involve LA, particular attention should be paid to needs and impacts of persons affected by LAR. Other interested parties include the Ningbo PMO, PIUs (Ningbo Dabashou Eco-digital Technology Co., Ltd. (Dabashou Company), Ningbo Haijing Plastic Recycling Technology Co., Ltd. (Haijing Company), Ningbo Meijing Construction Solid Waste Recycling Technology Co., Ltd. (Meijing Company), Ningbo Qingyuan Water Environment Service Co., Ltd. (Qingyuan Company), and the Ningbo Domestic Waste Sorting Guidance Center (NDWSGC)); WWTP-related enterprises (Shouchuang Kitchen Waste Plant, Kaicheng Kitchen Waste Plant and the Yemao'ao landfill), government departments concerned (e.g., ecology and environment bureaus, natural resources and planning bureaus, forestry bureaus), sub-districts, communities, property management companies, media (Ningbo Daily, www.whningbo.cn, etc.), design and consulting agencies, and contractors. Other key interested parties are the municipal ecology and environment bureau, and natural resources and planning bureau. Inadequate information disclosure or negotiation may affect the realization of the project objectives. In particular, the NIMBY effect should be addressed through adequate consultation. Since an extensive public participation mechanism has been established under Phase 1, such risks are moderate.

Among project-affected parties, vulnerable groups, and their main interests and needs have been further identified, mainly including low income residents, old people, women, contracted workers (e.g., drivers of recyclable sorting centers). Due to physical factors, old people and women will be affected more seriously by waste transport and disposal. In addition, female workers may be exposed to high OHS risks during construction, and LAR may affect livelihoods of low income residents. Therefore, risks for vulnerable groups are "moderate".

Based on screening, Batch 2 subprojects have no major social risks and impacts.
Table 5-1 outlines the potential E&S risks and impacts, applicable ESSs and documents required.

- **NIMBY risks: ESS1**

NIMBY is a cross-cutting issue, where nearby residents have concerns about impacts of waste collection, transfer and treatment facilities on their health, environment and local development, and may file complaint or even resist construction, thereby leading to community conflicts. It can be seen from an analysis of the above risks that subsequent LAR and construction activities of the centralized plastic waste sorting and processing plant, truck operations, and the persistent negative attitude of local residents to waste disposal facilities may lead to NIMBY risks.

Ningbo resource recycling base is an important output of the World Bank-financed Ningbo Municipal Solid Waste Minimization and Recycling Project (P123323) which was closed in 2020. Ningbo Municipal Government has gained rich experience in improving the local living environment, and strengthening pollution supervision and control in conjunction with new countryside building. The base has won the China Circular Economy Best Practice Award, and is selected as a provincial demonstration

base for industrial tourism and a municipal popular science education base. The Project's NIMBY risk mitigation experience has been extended throughout the province. For example, the smoke emission standard of the smoke purification system is stricter than the 2010 EU standard.

Ningbo PMO has established a GRM for nearby residents. For grievances about noise, odor, etc., the competent municipal authorities, including the office for letters and visits, ecology and environment bureau, and urban administration bureau, offer hotlines, office reception and other grievance redress channels, and the relevant sub-district offices have set up a special division to receive grievances. Therefore, NIMBY risks are "moderate".

Table 5-1 Social Impact Screening Results

Subproject	Potential social risks/impacts	ESSs and instruments
4 Recyclable sorting centers	- 4 Recyclables sorting centers (two new construction and two reconstructed) - Labor management risks of workers involved in sorting center construction and equipment installation, recyclable sorters, waste truck drivers, and primary suppliers' workers of recyclable trucks, such as labor rights protection and OHS - Communities around project sites and run through by trucks may be exposed to and community health and safety risks, such as traffic safety, noise, odor and spillage. - Inadequate stakeholder engagement risks, especially non-inclusion risks for vulnerable groups, where female workers may be exposed to high OHS risks	ESS1: An SIA and an SEP have been prepared according to ESS1; ESS2: Direct, contracted and primary suppliers' workers are involved. Labor rights protection is included in the SIA and LMP; (The PIU of this subproject is Dabashou Company, so its LMP was prepared in Batch 1); ESS4: Community health and safety measures should be developed; ESS5: LA has been completed, and due diligence is necessary; ESS10: The relevant requirements are included in the SEP.
Centralized plastic waste sorting and processing plant	- Potential LAR risks (85.8 mu) - NIMBY risks for nearby residents, such as noise and odor - Labor management risks of workers involved in base construction and	ESS1: An SIA and an SEP have been prepared according to ESS1; ESS2: Direct, contracted and primary suppliers' workers

Subproject	Potential social risks/impacts	ESSs and instruments
	equipment installation, plastic waste disposal workers, and primary suppliers' workers, such as labor rights protection and OHS - Communities around project sites and run through by trucks may be exposed to and community health and safety risks, such as traffic safety, noise, odor and spillage. - Inadequate stakeholder engagement risks, especially non-inclusion risks for vulnerable groups, where female workers may be exposed to high OHS risks, and LAR may affect livelihoods of low income residents	are involved. Labor rights protection is included in the SIA and LMP; an LMP and a worker GRM have been prepared; ESS5: If LAR is involved, an RAP should be prepared; ESS4: Community health and safety measures should be developed; ESS10: The relevant requirements are included in the SEP.
Bulky and decoration waste disposal plant	- Outstanding LAR issues though LAR completed - NIMBY risks for nearby residents, such as noise and odor - Labor management risks of workers involved in base construction and equipment installation, bulky and decoration waste disposal workers, and primary supplier's workers, such as labor rights protection and OHS - Communities around project sites and run through by trucks may be exposed to and community health and safety risks, such as traffic safety, noise, odor and spillage. - Inadequate stakeholder engagement risks, especially non-inclusion risks for vulnerable groups, where female workers may be exposed to high OHS risks	ESS1: An SIA and an SEP have been prepared according to ESS1; ESS2: Direct, contract and primary suppliers' workers are involved. Labor rights protection is included in the SIA and LMP; an LMP and a worker GRM have been prepared; ESS5: LA has been completed, resettlement due diligence is required; ESS4: Community health and safety measures should be developed; ESS10: The relevant requirements are included in the SEP.

Subproject	Potential social risks/impacts	ESSs and instruments
WWTP of Ningbo resource recycling base	- No LAR risks because the WWTP is within the existing plant area - NIMBY risks for nearby residents, such as noise and odor - Labor management risks of workers involved in WWTP construction and equipment installation, wastewater treatment workers, and primary suppliers' workers, such as labor rights protection and OHS - Communities around project sites and run through by trucks may be exposed to and community health and safety risks, such as traffic safety, noise, odor and spillage. - Inadequate stakeholder engagement risks, especially non-inclusion risks for vulnerable groups, where female workers may be exposed to high OHS risks	ESS1: An SIA and an SEP have been prepared according to ESS1; ESS2: Direct, contract and primary suppliers' workers are involved. Labor rights protection is included in the SIA and LMP; an LMP and a worker GRM have been prepared; ESS5: LA has been completed, resettlement due diligence is required; ESS4: Community health and safety measures should be developed; ESS10: The relevant requirements are included in the SEP.

6 Stakeholder Engagement

6.1 Stakeholder Identification

According to ESS10 and the Project's characteristics, the Project's stakeholders include project-affected parties, other stakeholder, and vulnerable groups:

Project-affected parties: individuals or groups affected or potentially affected by the Project, including those affected directly and indirectly

Other interested parties: individuals or groups potentially interested in the Project

Vulnerable groups: persons more likely to be affected aversely at the preparation, construction and operation stages due to own vulnerabilities, including gender, age and environmental impacts.

1) Project-affected parties

Project-affected parties include community residents, persons affected by LAR, workers dealing with plastic processing, wastewater treatment, and bulky and decoration waste disposal, etc. See Table 6-1.

Table 6-1 Identification and Analysis of Project-affected Parties

Type	Stakeholder	Impact by the Project	Influence on the Project
Project affected parties	**Subproject 2: centralized plastic waste sorting and processing plant**		
	Nearby residents	Bearing community health and safety risks, and environmental impacts and risks at the construction and operation stages	Moderate influence on the Project; their support is the foundation of successful project implementation
	Wastewater treatment workers	Receiving training on wastewater treatment, being exposed to OHS risks; responsible for management, technical support, equipment operation, etc.	Weak influence, playing a critical role in successful project implementation
	Related enterprises	Discharging wastewater to the WWTP, experiencing changes in the wastewater discharge standard and charging mechanism	Weak influence
	Primary suppliers	Bearing labor risks of supply workers, responsible for their benefits, OHS, etc.	Weak influence
	Subproject 2: centralized plastic waste sorting and processing plant		

Type	Stakeholder	Impact by the Project	Influence on the Project
	Nearby residents	Bearing community health and safety risks, and environmental impacts and risks at the construction and operation stages	Moderate influence on the Project; their support is the foundation of successful project implementation
	Plastic processing workers	Receiving training on plastic disposal; being exposed to OHS risks; responsible for management, technical support, equipment operation, etc.	Weak influence
	Truck drivers	Receiving training on driving skills and traffic safety; being exposed to OHS risks	Responsible for waste collection and transfer, vehicle repair and operation; weak influence on the Project
	Primary suppliers	Bearing labor risks of suppliers' workers, responsible for their benefits, OHS, etc.	Weak influence
	Persons affected by LAR	Affected by HD and relocated, and requiring full compensation and proper resettlement their satisfaction with compensation, resettlement, and production and livelihood restoration concerns project implementation.	High influence on the Project; their support is the key to successful project implementation
	Subproject 3: bulky and decoration waste disposal plant		
	Nearby residents	Bearing community health and safety risks, and environmental impacts and risks at the construction and operation stages	Moderate influence on the Project; their support is the foundation of successful project implementation
	Bulky and decoration waste disposal workers	Receiving operation training; being exposed to OHS risks	Weak influence

Type	Stakeholder	Impact by the Project	Influence on the Project
	Truck drivers	Receiving training on driving skills and traffic safety; being exposed to OHS risks	Responsible for waste collection and transfer, vehicle repair and operation; weak influence on the Project
	Subproject 4: 4 recyclables sorting centers		
	Nearby residents of sorting centers	Bearing community health and safety risks, and environmental impacts and risks at the construction and operation stages	Moderate influence on the Project; their support is the foundation of successful project implementation
	Residents along transfer routes	Bearing community health and safety risks, and environmental impacts and risks at the construction and operation stages	Weak influence
	Recyclable sorters	Receiving training on recyclables sorting, being exposed to OHS risks	Weak influence
	Truck drivers	Receiving training on driving skills and traffic safety, being exposed to OHS risks	Responsible for waste collection and transfer, vehicle repair and operation; weak influence on the Project

Source: E&S survey, interviews and consultation with departments concerned

2) Other Interested parties

Other interested parties include the PMO, PIUs, municipal and district government, government departments, sub-districts, communities, media (Ningbo Daily, www.whningbo.cn, etc.), design and consulting agencies, contractors, etc. See Table 6-2.

Table 6-2 Identification and Analysis of Other Interested Parties

Type	Stakeholder	Impact by the Project	Influence on the Project
Other interested parties	Ningbo PMO	No significant negative impact	Being responsible for the Project on behalf of Ningbo Municipal Government, communicating with the Bank, ensuring project implementation and operation, and conducting overall project coordination and management; high

Type	Stakeholder	Impact by the Project	Influence on the Project
			influence on successful project implementation
	Dabashou Company	Benefiting from the Project	PIU, responsible for the implementation and management of the recyclable sorting centers, high influence on the Project
	Haijing Company	Benefiting from the Project	PIU, responsible for the implementation and management of the centralized plastic waste sorting and processing plant, high influence on the Project
	Meijing Company	Benefiting from the Project	PIU, responsible for the implementation and management of the bulky and decoration waste disposal plant, high influence on the Project
	Qingyuan Company	Benefiting from the Project	PIU, responsible for the implementation and management of the WWTP, high influence on the Project
	Ecology and environment bureaus	No significant negative impact	Approving EIA documents and solid waste operation, transfer, disposal and utilization activities; high influence on the Project
	District government	No significant negative impact	Coordinating all departments concerned, supervising project implementation, performing routine functions, and accepting and handling grievances
	Development and reform commissions	No significant negative impact	Initiating the Project, approving the FS report, and developing relevant plans and standards; high influence on the Project
	Finance bureaus	No significant negative impact	Managing the project financial plan and the Bank loan
	Natural resources and	No significant negative impact	Responsible for land approval, including regulatory sanitation facility land plan, preliminary construction land examination, site selection opinion and

Type	Stakeholder	Impact by the Project	Influence on the Project
	planning bureaus		construction land planning permit; high influence on the Project
	Forestry bureaus	No significant negative impact	Handling woodland acquisition / occupation approval, etc.
	Housing and urban-rural development bureaus	No significant negative impact	Responsible for design approval, civil work bidding, construction licensing, quality inspection, safety management, final registration, etc.
	Comprehensive enforcement bureaus	No significant negative impact	Handling waste sorting tasks, and handling grievances
	Transport bureaus	No significant negative impact	Reviewing routes and timing of waste trucks
	Emergency management bureaus	No significant negative impact	Handling safety breaches, investigating safety accidents, and handling grievances
	Health commissions	No significant negative impact	Being responsible for disease prevention and control, and health emergency education and response
	Human resources and social security bureaus	No significant negative impact	Protecting labor rights, managing and training laborers, protecting rights of the poor, and managing the poor
	Disabled people federations	No significant negative impact	Protecting rights of the disabled
	Women's federations	No significant negative impact	Protecting rights of women and children
	Design and consulting agencies (e.g., FS / EIA)	No significant negative impact	Learning stakeholder needs and optimizing the design

Type	Stakeholder	Impact by the Project	Influence on the Project
	Contractors	Benefiting from the Project	Notifying issues related to stakeholder engagement to owners, handling construction grievances under the direction of owners, and preparing, disclosing and implementing various plans
	Media	No significant negative impact	Giving publicity and education on waste sorting and plastic waste

Source: E&S survey, interviews and consultation with departments concerned

3) Vulnerable groups

Vulnerable groups include old people, women and children in nearby residents.

Due to physical factors, old people will be affected more seriously by waste transport and disposal. In addition, LAR may affect livelihoods of low-income residents. See Table 6-3.

Table 6-3 Identification and Analysis of Vulnerable Groups

Type	Stakeholder	Impact by the Project	Influence on the Project
Vulnerable Group	Old people	Protecting them from harmful substances during wastewater treatment and waste disposal due to low immunity	Their participation is the foundation for realizing the project objectives.
	Low-income residents	Protecting them from harmful substances, ensuring that they receive equal pay for equal work, and ensuring their OHS	Their participation is the foundation for realizing the project objectives.
	Women	Protecting them from harmful substances, ensuring that they receive equal pay for equal work, ensuring equal pay for equal work and OHS	Their participation is the foundation for realizing the project objectives.

Source: E&S survey, interviews and consultation with departments concerned

6.2 Previous Stakeholder Engagement Activities

The main participants in the SIA include Ningbo PMO, PIUs, government agencies concerned, village committees, villagers, and other related enterprises, and the main modes of participation are FGD and interview, including:

- 8 persons affected by LAR;
- 24 residents from nearby sensitive communities;

- 33 workers of existing facilities, including 13 direct workers, 20 contract workers and 5 primary suppliers' workers;
- 12 staff members of competent authorities, including 6 at the district level, 4 at the township / sub-district level, and two at the village / community level;
- 12 staff workers of the PIUs, including 5 from Dabashou Company, two from Haijing Company, two from Meijing Company and 3 from Qingyuan Company;
- 4 representatives from associated enterprises of the WWTP.

6.3 Key Findings

Stakeholder engagement has provided an adequate basis for assessing social risks and proposing mitigation measures. The key findings are as follows:

- It is made clear that wastewater from all enterprises in Ningbo resource recycling base will be connected to the reconstructed and expanded WWTP for centralized treatment, and specific water quality indicators will be determined after consultation.
- Residents in nearby sensitive sites have reflected odor from some enterprises in the park, and spillage from waste transfer vehicles. Although LAR for the park has been completed, it may still affect nearby low-lying areas due to its high altitude. Residents expect to strengthen supervision to reduce pollution, and disclose monitoring data regularly.
- The sorting centers are mostly located in suburbs, surrounded by wasteland or other parks, far away from communities, so they have almost no impact on the living environment. No grievance from residents has been received to date.
- The land for the WWTP in Batch 2 subprojects was acquired in 2004, and the APs are well resettled through monetary compensation or property swap. The APs are satisfied with compensation, and support the government's work actively.
- The recyclable sorting centers in operation are located on land reserved by the government, but the land use needs to be adjusted to sanitation facility land, and the PIU has not received the land use right. Each recyclable sorting center has 7-10 workers, mostly women, and men mostly do skilled jobs. About 7 tons of recyclables are sorted per day. The sorters' health and safety are ensured according to the applicable policies and standards.
- The GRMs are effective. Residents can report issues to the PMO directly via the WeChat group or to the district government through deputies to the People's Congress.

6.4 Future SEP

The future SEP is based on the stakeholder analysis in the previous section, and consists mainly of the proposed strategy for information disclosure, proposed strategy for consultation, proposed strategy to incorporate views of vulnerable groups and GRM.

1) Proposed strategy for information disclosure: For each proposed subproject, the owner should disclose the scope and schedule of construction, GRM and contact information to nearby communities one month before construction. During

implementation, environmental monitoring data will be disclosed to nearby communities regularly.

In addition, the owners will disclose other project information to stakeholders, including major changes and updated E&S documents; the Ningbo PMO will also prepare an E&S performance report semiannually, and disclose it to the public by various means.

2) Proposed strategy for consultation: Stakeholder engagement will run through the whole project lifecycle. Ningbo PMO and PIUS will consult with the competent authorities to complete permission, land use and planning procedures, and establish close ties with communities and project workers.
3) Proposed strategy to incorporate views of vulnerable groups: Since vulnerable groups are more likely to suffer disproportionate losses and be excluded from consultation, appropriate measures should be taken to ensure that they fully participate in project activities, constant attention should be paid to their needs, and a transparent GRM provided to them.
4) GRM: To respond to concerns and grievances about E&S performance, a special GRM has been established for the Project, and includes two types – for the Project and for workers. For project-level grievances, all grievances from residents will be collected and handled. For worker grievances, all grievances from workers will be collected and handled.

This report already contains an abstract of the future SEP, proposed strategies for information disclosure, consultation, and incorporating views of vulnerable groups, and a GRM. See the SEP for details.

Ningbo PMO disclosed the above documents on 11 April, 2022 at the website of Ningbo Urban Management Bureau[1] to collection opinions and suggestions from stakeholders. See Figure 6-1.

[1] Refer to http://zhzfj.ningbo.gov.cn/art/2022/4/11/art_1229101803_58927515.html for more information.

Figure 6-1 Disclosure of Draft E&S Documents

In terms of WB's comments on the E&S documents and feedbacks from the public, the Ningbo PMO and PIUs finalized relevant documents including SIA, social audit, RAP and SEP, among others , and re-disclosed them on the website of Ningbo Comprehensive Enforcement Bureau (*http://zhzfj.ningbo.gov.cn/art/2022/7/19/art_1229101803_58928745.html*）on 19 July 2022.

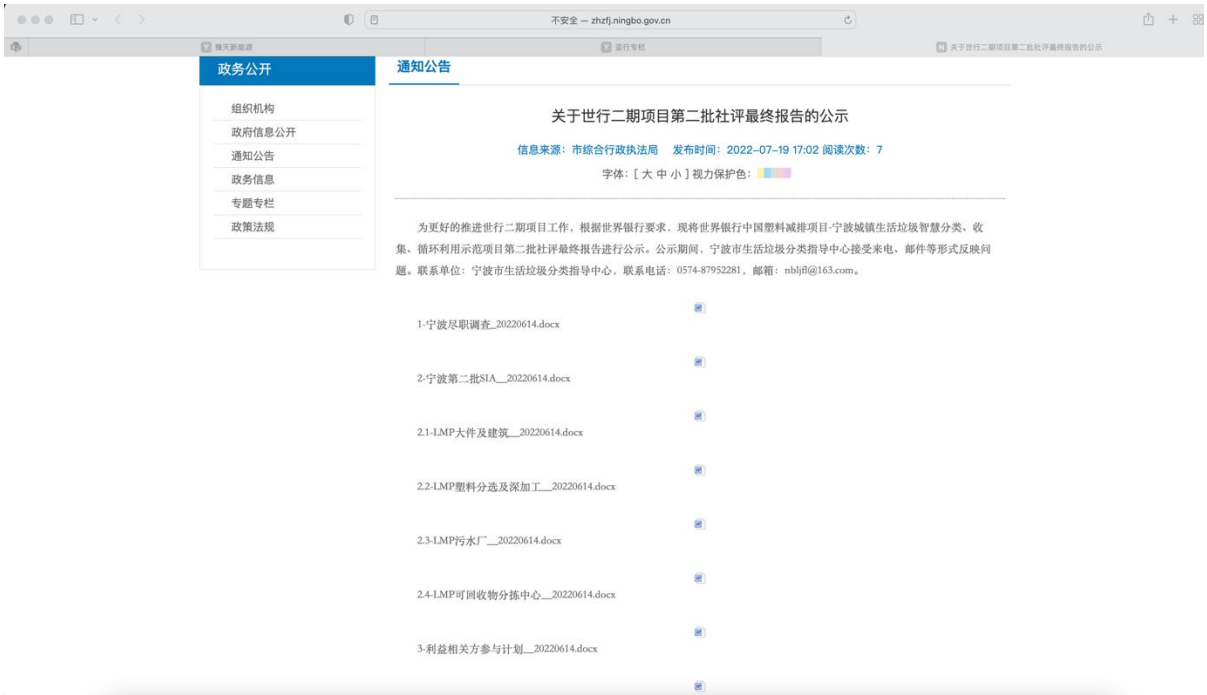


Figure 6-2 Disclosure of Final E&S Documents

7 Social Impact Analysis

The potential impacts and risks of Batch 2 subprojects are analyzed based on the baseline social information and public participation results.

7.1 Social Benefits

Batch 2 subprojects can reduce environmental pollution caused by plastic waste leakage from municipal solid waste streams including bulky waste, decoration waste, wastewater and hazardous waste, and avoid resource waste arising from incineration and land filling. They will establish a more complete waste recycling system in Ningbo, ensure the successful operation of front-end equipment at communities, expand the coverage of waste sorting, thereby improving the living standard, environmental quality, and waste sorting awareness of all local residents.

In addition, the Project will generate about 200 jobs at the construction and operation stages, in which over 80% are unskilled jobs. These jobs will be first made available to local residents to increase their income. For example, nearby residents will be recruited for simple waste sorting.

7.2 Social Impacts

7.2.1 LAR risks

1) Analysis

The LAR risks mainly include LA impacts, impacts on existing building occupants, potential risks in facility land acquisition, etc.

a) LAR impacts

Among Batch 2 subprojects, only the centralized plastic waste sorting and processing plant involves LAR. It is located in Ningbo resource recycling base in Haishu District, with a floor area of about 85.8 mu, which will be acquired. The existing land is mostly collective woodland[11], involving Xuanpei and Bailiangqiao Villages, Dongqiao Town, affecting no one.

[11] Article 2 of China's Land Management Law (amended in 2019 and effective as of January 1, 2020) defines that China implements socialist public ownership, namely, ownership by the whole people (state-owned) and collective ownership by the farmer collectives (collective-owned), of land. Land in urban area shall be owned by the State, and land in the rural areas and suburban areas, except otherwise provided for by the State, shall be collectively owned. Therefore, collective land means that the ownership of the land is owned by village collective economic organizations (village committees). The collective land (especially farmland) is usually allocated and contracted to individual villagers for operation. For the project, the land to be acquired is managed collectively by village committee but has not been not contracted to individual villager(s).

Figure 7-1 Site of the Centralized Plastic Waste Sorting and Processing Plant

b) Impacts on users of existing buildings

The bulky and decoration waste disposal plant is located in the Haishu District landfill, with a planned floor area of 59.2 mu, and the land was acquired in 2004. LA and compensation have been completed, but there are still some structures and equipment on the site to be relocated.

1) Collective building in Xuanpei Village: There is a 950 m^2 collective office building of Xuanpei Village on the site, being a two-storied masonry concrete building. 8 staff of the village committee are still working here.
2) Worker dormitory: A worker dormitory on the site is still in use, with a building area of 366 m^2. This building is owned by the Haishu District landfill, and about 10 landfill O&M workers, who are not residents of Ningbo, live here temporarily. The O&M company, the Ningbo Mingzhou Environment & Energy Co., Ltd. (Mingzhou Company) committed to providing accommodation to non-local workers through renting residential houses/apartments from the local community. Since the building is vacant and not used, the owner, Haishu District landfill, allows the Mingzhou Company use the building temporarily for free. Before the building is demolished to clear the land for the site sitting of this subproject, the Mingzhou Company will rent residential houses/ apartments from the local community for their workers.
3) Abandoned workshops and equipment: There are some abandoned workshops (totaling 300 m^2) and equipment on the site. The abandoned workshops belong to the landfill, and the abandoned equipment belongs to New CWI (Ningbo) Environmental Technology Co., Ltd., including a biogas power generator, transformers, etc.

Figure 7-2 Site of the Bulky and Decoration Waste Disposal Plant

c) Acquisition of facility land

Although the land for the bulky and decoration waste disposal plant has been acquired, the Ningbo Municipal Government has not allocated or transferred the right to use state-owned land to the PIU. The 4 recyclables sorting centers are located on state-owned construction land, but the land use plan will be adjusted for sanitation authorities, and the PIU has not obtained the right to use state-owned land.

Table 7-1 Statistics of LAR Risks of Subprojects in the Park

No.	Subproject	Project involving LA / land use	LAR	Affected villages and population	Resettlement
1	WWTP of Ningbo resource recycling base	Yinzhou District landfill in 2004	The land for the landfill was acquired in 2004. The WWTP is expanded from the existing facility and involves no additional LA.	3 villages in Qiaodong Town, Haishu District	LA has been fully completed, LA compensation agreements signed, and compensation fully paid.
2	Bulky and decoration waste disposal plant	Yinzhou District landfill in 2004	It is within the land acquired for the Haishu District landfill, and involves no additional LA.	Collective offices of 950 m^2 of Xuanpei Village, Dongqiao Town	LA and compensation have been completed, but some ground attachments have not been cleared.
3	Centralized plastic waste sorting and processing plant	LA not conducted yet	Occupying 85.8 mu of land	61 mu in Xuanpei Village, and 24.8 mu in Bailiangqiao Village	This is collective woodland with no direct affected person; an RAP has been prepared according to ESS5.

Source: PMO and social team

The land used for the 4 to-be constructed or reconstructed sorting centers is state-owned construction land, in which the sorting centers constructed on leased land in Yinzhou and Haishu Districts are operating. Currently, Ningbo PMO and PIU are coordinating with the district natural resources bureaus to adjust land use and environmental sanitation land plans to ensure that the land used for the sorting centers is lawful. See Table 7-2.

Table 7-2 Land Used for the Sorting Centers

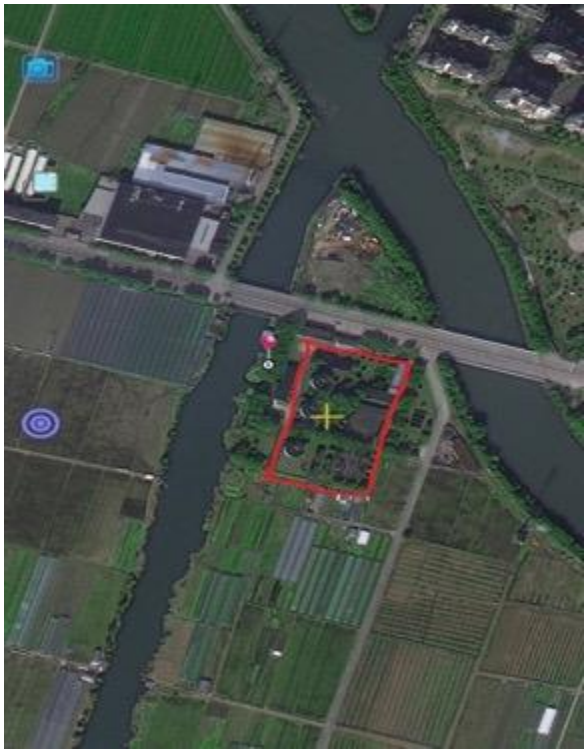
No.	Sorting center	Floor area (mu)	Location	Site	Remarks	Land use mode	Land use time
1	Zhenhai	9	West of the Luotuo Sub-district transfer station	State-owned unused land	Included in the regulatory detailed plan of Luotuo Sub-district, and approved	Long-term lease of state-owned land[12] (30 years)	End of Dec 2022
2	Beilun	9	East of the Daxie No.2 Bridge	State-owned unused land	Approved under the regulatory detailed plan of the Chaiqiao Dawan area	Long-term lease of state-owned land (30 years)	End of Dec 2022
5	Yinzhou	6.97	Southwest of Mingguang Road, Jiangshan Town	State-owned land	Land lease, existing facility	Long-term lease of state-owned land (30 years)	End of Dec. 2023
6	Haishu	15	Guangze Road, Guoxia Village, Gulin Town	State-owned land	Land use, existing facility, requiring land type adjustment (land for sanitation facilities)	Long-term lease of state-owned land (30 years)	End of Dec. 2023

Source: PMO and fieldwork summary

[12]The master land utilization plan and sanitation facility land plan of Ningbo City will be adjusted and approved in October 2022. After the sanitation facility land plan is approved, the district governments will allocate the land to the district sanitation authorities, and the PIU will lease such land to construct sorting centers for 30 years.

Current site of the Zhenhai District recyclable sorting center

Current site of the Beilun District recyclable sorting center



Current site of the Jingshan recyclable sorting center in Yinzhou District (existing facility)

Gulin recyclable sorting center in Haishu District (existing facility)

Figure 7-3 Current Situation of Sorting Centers

2) Existing management measures

For LAR and compensation, etc., China has established a complete legal framework and policy system, including the Land Administration Law of the PRC (3rd amendment in 2019), and the Regulations on the Expropriation of Buildings on State-owned Land and Compensation (Decree No.590 of the State Council, 2011). Within this framework, local governments have promulgated local regulations and policies.

The social audit reveals that: (i) The WWTP of the Ningbo resource recycling base is a reconstructed work, for which land acquisition and allocation has been completed, with no LAR risk; and (ii) LA for the bulky and decoration waste disposal plant has been completed, but some ground attachments are yet to be cleared. Ningbo PMO and PIU (Meijing Company) should strengthen communication and coordination with the competent authorities to complete site clearing within 3 months before the beginning of construction, and state-owned land allocation or transfer before the beginning of construction.

3) Rating

Although Batch 2 subprojects are all civil works, they are mostly located in the suburb, and the land acquired is mostly wasteland or woodland. Since local residents' income is mostly from nonagricultural sources, LA has little impact on their income. In addition, China, Zhejiang Province and Ningbo City have sound LA policy systems. Therefore, the Project's LAR risks are "substantial".

Table 7-3 Ratings of Land Use Risks

Subproject	Construction stage		Operation stage	
	Risk	Rating[13]	Risk	Rating
Centralized plastic waste sorting and processing plant	Acquiring 85.8 mu of collective land, almost no livelihood impact on farmers	S	Compensation, resettlement and livelihood restoration risks Preparing an RAP, and conducting M&E	M
Bulky and decoration waste disposal plant	59.2 mu of land was acquired in 2017, and there are some ground attachments on it. No certificate of the right to use state-owned land has been obtained.	M	The land has been acquired, and such ground attachments will be subject to M&E.	M
WWTP	With a floor area of 67 mu, within the land of the Haishu District landfill, involving no additional LA	L	No land issue	L
Recyclables sorting centers	All land used is state-owned land, involving no additional LA. The sites and land of the sorting centers are to be further approved by the competent authorities.	M	Acquisition of land use right	M

[13] Risk ratings: H for "High", S for "Substantial", M for "Moderate" and L for "Low".

4) Design optimization and mitigation measures

Through consultation with the PIUs, the social team has proposed the following design optimization and mitigation measures based on the risks identified above.

Table 7-4 Design Optimization and Mitigation Measures (LAR Risks)

Subproject	Design optimization	Mitigation measures	Implementers
Centralized plastic waste sorting and processing plant	• Optimize site selection to minimize LA and impacts on nearby communities.	• Prepare an RAP, and make it approved by the Bank. • Define the LAR compensation policies and rates, and ensure that they comply with the Bank and state policies. • Implement the approved RAP. • Appoint a third party for M&E during implementation.	• Ningbo PMO • District natural resources bureau • Haijing Company
Bulky and decoration waste disposal plant	• Optimize site selection to minimize LA and impacts on nearby communities. • Strengthen coordination with the competent authorities to complete land allocation or transfer before construction.	• Handle the outstanding issues as advised in the social audit report, and conduct M&E. • Strengthen communication with Peixuan Village, Dongqiao Town, and complete relocation and resettlement within 3 months before construction. • Notify the relevant agencies and staff to move within 3 months before construction. • Complete ownership negotiation in coordination with the Haishu District Urban Administration Bureau, and complete equipment relocation by the end of December 2022.	• Ningbo PMO • Municipal natural resources bureau • Meijing Company
4 recyclables sorting centers	• Strengthen coordination with the competent authorities to secure land and complete land adjustment.	• A social audit is performed on the used land, all being state-owned land. • Based on the social audit report, the Ningbo Municipal Government will approve the sanitation facility land plan in October 2022, and the allocate the land to the district sanitation authorities. • The PIU will obtain the right to use state-owned land for the Zhenhai and Beilun sorting centers by the end of December 2022 by long-term lease, and obtain that for the Yinzhou and Haishu sorting centers by the end of December 2023 by long-term lease.	• Ningbo PMO • Municipal natural resources bureau • Dabashou Company

7.2.2 Labor and working condition risks

1) Analysis

Project workers include direct workers of the PMO and PIUs, contract workers and primary suppliers' workers. It is estimated that there will be 241 direct workers, 890 contract workers and 160 primary suppliers' workers. In addition, each sorting center has about 10 workers, including two managers.

See Table 7-5 for the 4 PIUs of the Batch 2 subprojects.

Table 7-5 Activities and PIUs of Batch 2 Subprojects

No.	Subproject	PIU	Time of establishment
1	WWTP of Ningbo resource recycling base	Qingyuan Company	March 2021
2	centralized plastic waste sorting and processing plant	Haijing Company	May 2021
3	bulky and decoration waste disposal plant	Meijing Company	May 2021
4	4 recyclables sorting centers	Dabashou Company	May 2021

Dabashou Company, Qingyuan Company, Meijing Company and Haijing Company are all newly established PIUs, and are establishing improving their HR and work safety systems. Except that Qingyuan Company follows the policies of its parent company, the other 3 PIUs have issued and tried out new systems. Qingyuan Company will issue its own systems based on the LMP, ESS2, and applicable PRC laws and regulations by December 2022.

1) Dabashou Company

Dabashou Company is also a PIU of Batch 1 subprojects. It has established the following systems:

- General Manager's Office Meeting System (trial), October 2021;
- Work Attendance Management System (trial), October 2021;
- Salary Management System (trial), October 2021;
- Supplier Management System (trial), October 2021;
- Human Resources Management System (trial), April 2022;
- Work Safety Management System (trial), April 2022;
- Occupational Health Management System (trial), April 2022;
- Safety Education and Management System (trial), April 2022;
- Accident Reporting System (trial), April 2022;
- Office Emergency Response Plan (trial), April 2022.

2) Meijing Company

It has established the following systems:

- Safety Management System (trial), October 2021
- Supplier Management System (trial), October 2021
- Salary Management System (trial), October 2021
- Employment Recruitment and Transfer Management System (trial), November 2021
- Reward and Punishment Management System (trial), November 2021
- Work Safety Management System (trial), March 2022

3) Haijing Company

It has established the following systems:

- Work Attendance Management System (trial), October 2021
- Contract Management System (trial), October 2021
- Safety Management System (trial), October 2021
- Supplier Management System (trial), October 2021
- Salary Management System (trial), October 2021
- Recruitment Management System (trial), December 2021
- Employment Recruitment and Transfer Management System (trial), December 2021
- Work Safety Management System (trial), March 2022

The PIUs' existing labor management systems mainly include procedures and requirements for direct workers, and also include some provisions on contracted workers, but have some gaps from ESS2 in terms of the management of contracted, community and primary suppliers' workers.

The PIUs' existing workers do not include child labor. Direct workers can reflect their grievances through many formal and informal channels, and receive feedback quickly and effectively.

Meijing Company, Haijing Company and Dabashou Company will entrust recyclable drivers to a third-party labor service company or a specialized logistics company, so these drivers are contracted workers.

COVID-19 prevention measures have been taken for the existing facilities as required by the local government. Based on the social audit, the labor and working condition risks of the Batch 2 subprojects are OHS risks mainly, as detailed below.

✓ **Main labor and working condition risks of the centralized plastic waste sorting and processing plant:**

1) Construction stage

- Dangerous work: construction workers working at height or in confined spaces, or using heavy machinery or dangerous materials
- Safety risks in machinery operation: accidents of construction workers during construction, such as welding, cutting and operating relevant tools
- Noise from mechanical construction: loud, repeated and excessive noise that may arise during construction, possibly leading to long-term hearing problems, such as deafness, and also being a dangerous distraction that increases accident risks
- Emergency risks: emergencies and quality safety accidents arising from unsound civilized construction and quality safety management measures, or inadequate management
- Sexual harassment or gender-based violence risks: physical or mental violence against women due to gender or lifestyle differences
- Safety accidents: safety accidents arising from work shed collapse due to quality problems or natural disasters
- Health and infection risks: infection risks (e.g., COVID-19) arising from the improper diet and accommodation management, or health management of

construction workers

- Salaries and benefits: workers' rights and interests unsecured because contractors fail to strictly enforce the applicable laws and regulations, and enter into employment contracts

2) Operation stage

- Traffic: potential traffic accidents during the transport of recovered bulky and construction waste
- Noise from machinery operation: such as noise generated by sorting and crushing machines, etc.; loud, repeated and excessive noise, possibly leading to long-term hearing problems, such as deafness, and also being a dangerous distraction that increases accident risks
- Work-related injuries: work-related injuries due to improper operations during the breakdown of bulky waste
- Dust pollution: dust and volatile organic substances generated by plastic crushing and granulation during operation
- Industrial vehicles: improper operation of forklifts in the working area
- Emergency accidents: mistakes in the operation of smart equipment leading labor health and life risks
- Infection: infection risks (e.g., COVID-19) during recyclable (waste) collection and transfer, and close contact with people

✓ **<u>Main labor and working condition risks of the bulky and decoration waste disposal plant:</u>**

1) Construction stage

- Dangerous work: construction workers working at height or in confined spaces, or using heavy machinery or dangerous materials
- Safety risks in machinery operation: accidents of construction workers during construction, such as welding, cutting and operating relevant tools
- Noise from mechanical construction: loud, repeated and excessive noise that may arise during construction, possibly leading to long-term hearing problems, such as deafness, and also being a dangerous distraction that increases accident risks
- Emergency risks: emergencies and quality safety accidents arising from unsound civilized construction and quality safety management measures, or inadequate management
- Sexual harassment or gender-based violence risks: physical or mental violence against women due to gender or lifestyle differences
- Safety accidents: safety accidents arising from work shed collapse due to quality problems or natural disasters
- Health and infection risks: infection risks (e.g., COVID-19) arising from the improper diet and accommodation management, or health management of construction workers
- Salaries and benefits: workers' rights and interests unsecured because contractors fail to strictly enforce the applicable laws and regulations, and enter into employment contracts

2) Operation stage

- Traffic: potential traffic accidents during the transport of sorted recyclables

- Noise from machinery operation: such as noise generated by sorting and crushing machines, etc.; loud, repeated and excessive noise, possibly leading to long-term hearing problems, such as deafness, and also being a dangerous distraction that increases accident risks
- Injuries: industries arising from improper operations in bulky waste dismantling
- Dust pollution: dust generated by plastic crushing and granulation during operation
- Emergency accidents: mistakes in the operation of smart equipment leading labor health and life risks
- Infection: infection risks (e.g., COVID-19) during recyclable (waste) collection and transfer, and close contact with people

✓ **Main labor and working condition risks of the WWTP:**

1) Construction stage

- Noise from mechanical construction: loud, repeated and excessive noise that may arise during construction, possibly leading to long-term hearing problems, such as deafness, and also being a dangerous distraction that increases accident risks
- Emergency risks: emergencies and quality safety accidents arising from unsound civilized construction and quality safety management measures, or inadequate management
- Sexual harassment or gender-based violence risks: physical or mental violence against women due to gender or lifestyle differences
- Safety accidents: safety accidents arising from work shed collapse due to quality problems or natural disasters
- Health and infection risks: infection risks (e.g., COVID-19) arising from the improper diet and accommodation management, or health management of construction workers
- Salaries and benefits: workers' rights and interests unsecured because contractors fail to strictly enforce the applicable laws and regulations, and enter into employment contracts

2) Operation stage

- OHS risks: health problems of WWTP staff due to noise and exposure to chemicals, such as ammonia, hydrogen sulfide and sodium hydroxide
- Toxic gases: exposure to high-level toxic gases when repair workers work in wastewater manholes and box culverts, such as ammonia and sodium hydroxide
- Emergency accidents: leakage of wastewater or harmful gases due to system failure, or mistakes in the operation of smart equipment during installation and adjustment leading labor health and life risks
- Noise and vibration: noise and vibration generated by pumps and blowers in the plant
- Eye injury: use of hydrochloric acid, sodium hypochlorite and other liquids
- Infection: infection risks (e.g., COVID-19) during contact with water, and close contact with people
- Salaries and benefits: workers' rights and interests unsecured because contractors fail to strictly enforce the applicable laws and regulations, and enter into employment contracts

✓ **Main labor and working condition risks of the 4 sorting centers:**

Since recyclables are from smart waste separation cabins deployed in communities, they are relatively clean, and have relatively occupational health risks for workers. According to the disposal process, occupational hazards for workers mainly include odor, dust, physical injuries (scratches), noises, high temperature (summer), etc. The PIU has established an on-site job evaluation system, including job discipline, on-site health, operating safety, etc.

At the Jiangshan recyclable sorting center, sorters are hired by a third-party agency, mostly being women aged 45-55 years. They sign a labor contract usually one a year. However, temporarily hired workers may have not signed a labor contract, and some workers do not use PPE (gloves, face masks, etc.) as required at work.

Workers employed by contractors include both male and female ones, where female workers may be subject to GBV risks.

Table 7-6 Types and Estimated Numbers of Project Workers

Subproject	Stage		Direct hires	Contract workers	Primary suppliers' workers
WWTP	Construction	Civil works	8	300	5
		Equipment installation	8	30	30
	Operation		20	5	5
Centralized plastic waste sorting and processing plant	Construction	Civil works	10	300	0
		Equipment installation	10	40	0
	Trial operation		50-60	60	0
	Stable operation		100-115	60	0
Bulky and decoration waste disposal plant	Construction	Civil works	10	200	0
		Equipment installation	5	15	0
	Operation		100	0	0
Sorting centers (to be added)	Construction	Civil works	8	100	0
		Equipment installation	8	32	5
	Operation		12	48	0

Source: PIUs and social team

2) Existing management measures

All enterprises covered by the SIA have established a series of policies and procedures in accordance with the applicable state and local regulations to establish a labor management system. Such policies and procedures are generally consistent with ESS2.

- ✓ **Centralized plastic waste sorting and processing plant**

  Haijing Company was founded in May 2021, and has established some personnel and work safety management systems. Its employees are entitled to statutory social insurance (endowment, medical, unemployment, accident, maternity, etc.), and a housing provident fund. Female employees' extra benefits are based on the applicable state and local regulations, such as the Measures for the Labor Protection of Female Workers of Zhejiang Province. China's Labor Law and the Labor Contract Law have clear provisions on employment, labor contract management and leaves, and Haijing Company's relevant practices comply with such provisions, and are communicated to all employees through induction training, on-the-job training and routine operations. Haijing Company is improving its labor management systems according to ESS2, especially the management requirements for contract and primary suppliers' workers.

- ✓ **Bulky and decoration waste disposal plant**

  Meijing Company was founded in May 2021, and has established some HR and work safety management systems. Its employees are entitled to statutory social insurance (endowment, medical, unemployment, accident, maternity, etc.), and a housing provident fund. Female employees' extra benefits are based on the applicable state and local regulations, such as the Measures for the Labor Protection of Female Workers of Zhejiang Province. China's Labor Law and the Labor Contract Law have clear provisions on employment, labor contract management and leaves, and Meijing Company's relevant practices comply with such provisions, and are communicated to all employees through induction training, on-the-job training and routine operations. Meijing Company is improving its labor management systems according to ESS2, especially the management requirements for contract and primary suppliers' workers.

- ✓ **WWTP**

  Founded in March 2021, Qingyuan Company is a wholly funded subsidiary of Ningbo Municipal Public Utilities Investment Co., Ltd. Since the Company has just been established, its HR systems and policies are being formulated and improved, and follow those of its parent company (Ningbo Municipal Public Utilities Investment Co., Ltd.). Currently, all staff of the Company and project workers are from the parent company.

  The leachate treatment process is: conditioning tank—two-stage A/O system—external ultrafiltration system—NF system—RO system—discharge up to the standard. For the above areas and occupational hazards, the PIU has set up and operated protection facilities. For toxic gases (ammonia, hydrogen sulfide, etc.), a fully sealed design is used or facilities set up (vent pipes, blowers, fume hoods, etc.) for organized gas discharge to prevent harmful gases from escaping or reducing levels of hazardous substances.

- ✓ **4 sorting centers**

For direct workers, Dabashou Company has no gap from the requirements of ESS2 in terms of employment terms and conditions, and labor protection.

The PIU has established an on-site job evaluation system, including job discipline, on-site health, operating safety, etc. On-site safety risks are from forklift operation mainly. Each sorting center stipulates a fixed route and a speed limit (5km/h) for forklifts, and assigns someone to command to ensure on-site safety. According to manager and worker interviews, workplace occupational hazards are insignificant. Except paperboards, recyclables have almost no dust; there is some odor in summer, but it can be reduced by window opening and fan ventilation. In addition, the company distributes disposable face masks to workers, and would check the workplace for PPE (face masks, gloves, etc.) wearing irregularly every month. Notices of job responsibilities and safety instructions are posted conspicuously at the workplace.

A labor contract between a contract worker and a third-party specifies the detailed job requirements, scope of work, workplace, working hours, rest time, remuneration, overtime pay, social insurance and benefits, labor protection and conditions, occupational hazard prevention, financial compensation, etc. The Measures for the Management of Third-Party Dispatched Workers specify labor remuneration, social insurance, overtime pay, and other labor rights.

For drivers, the main risks are traffic safety risks. The third-party agency has taken the following measures: 1) implementing the applicable state, provincial and municipal traffic safety regulations, formulating safety regulations and measures, and strengthening safety education and management; 2) ensuring that drivers are licensed, and observe the traffic rules and operating regulations to ensure driving safety; 3) ensuring vehicle safety through annual review and proper management, and keep vehicle operation, repair and accident records timely, fully and accurately; and 4) ensuring that vehicles drive along fixed routes and according to the speed limit under online GPS monitoring.

In China, only adults (18 years or above) can apply for a driving license. Therefore, there is no child or underage worker in Kaicheng Company's primary suppliers' workers. These drivers are work voluntarily, and may apply for resignation freely, so there is no forced labor.

- ✓ **Sexual assault (SEA) and sexual harassment (SH) prevention**

  All PIUs of Batch 2 subprojects are committed to providing a healthy and efficient working environment, because SEA/SH is against laws and social morals, and is intolerable. The HR policies of the PIUs have strict relevant provisions for direct workers, contract workers and managers to avoid sexual harassment. The PIUs offer jobs first to women, such as finance, human resources and office jobs, and have established regulations against sexual harassment. Male and female workers enjoy equal rights in training, development and promotion. The PIUs have smooth internal complaint channels.

The district competent authorities offer SEA/SH prevention services, as shown in Table 7-7. GBV service providers are essential to solving any emerging SEA/SH event, and preventing SEA/SH events. They are divided into:

- Healthcare service providers: community hospitals, maternal and child care centers
- Social service providers: district legal assistance centers, district women's federations

Table 7-7 Contact Information of Service Providers

Service providers		**Haishu District**	**Yinzhou District**	**Jiangbei District**	**Zhenhai District**	**Beilun District**	**Fenghua District**
Healthcare service providers	Community hospitals	023-65770090	0574-88462894	0574-87582446	0574-86655001	0574-86100266	0574-88587000
	Maternal and child care centers	0574-56123838	0574-56801905	0574-55003395	0574-86272184	0574-86782091	0574-88955000
Social service providers	District legal assistance centers	0574-87258148	88190298	0574-87669148	0574-86275994	86781825	0574-88960148
	District women's federations	0574-87315589	0574-87525572	0574-87666672	0574-86275887	0574-86780524	0574-88588106

3) Rating

It is found that: 1) During facility operation, there may be multiple OHS hazards at the workplace; 2) Few workers have weak awareness of PPE use. In general, the Project's labor and working condition risks are "moderate". See Table 7-8.

Table 7-8 Ratings of Labor and Working Condition Risks

Subproject	Construction stage		Operation stage	
	Risk	Rating	Risk	Rating
Centralized plastic waste sorting and processing plant	Construction workers working at height or in confined spaces, or using heavy machinery or dangerous materials, safety risks in machinery use, and infection risks due to inadequate health management (e.g., COVID-19) All direct workers of the PIU have signed a labor contract, and its salaries, benefits, working hours, and OHS management comply with the applicable state and local laws and regulations. However, little attention is paid to the worker management of contractors and primary suppliers.	M	OHS risks, emergency risks, infection risks, and salary and benefit risks of operation staff	M

Subproject	Construction stage		Operation stage	
	Risk	Rating	Risk	Rating
Bulky and decoration waste disposal plant	Construction workers working at height or in confined spaces, or using heavy machinery or dangerous materials, safety risks in machinery use, and infection risks due to inadequate health management (e.g., COVID-19) All direct hires of the PIU have signed a labor contract, and its salaries, benefits, working hours, and OHS management comply with the applicable state and local laws and regulations. However, little attention is paid to the worker management of contractors and primary suppliers.	M	OHS risks, traffic safety risks, emergency risks, infection risks, and salary and benefit risks of operation staff	M
WWTP	Construction workers working at height or in confined spaces, or using heavy machinery or dangerous materials, safety risks in machinery use, and infection risks due to inadequate health management (e.g., COVID-19) All direct hires of the PIU have signed a labor contract, and its salaries, benefits, working hours, and OHS management comply with the applicable state and local laws and regulations. However, little attention is paid to the worker management of contractors and primary suppliers.	M	Potential OHS hazards at the workplace	M
Recyclables sorting centers	Construction workers working at height or in confined spaces, safety risks in machinery use, and infection risks due to inadequate health management (e.g., COVID-19)	M	Potential OHS risks because workers fail to use PPE (gloves, face masks, etc.) as required during operation	M

4) Design optimization and mitigation measures

Through consultation with Ningbo PMO and PIUs, the social team has proposed the following design optimization and mitigation measures based on the risks identified above.

Table 7-9 Design Optimization and Mitigation Measures (Labor and Working Condition Risks)

Subproject	Design optimization	Mitigation measures	Implementers
Centralized plastic waste	• For on-site and nearby potential traffic risks, the owners should appoint a	• Establish an appropriate LMP, which has been improved on the basis of the existing personnel management system, with	Ningbo PMO Haijing Company

Subproject	Design optimization	Mitigation measures	Implementers
sorting and processing plant.	specialized agency for traffic layout, giving full consideration of driving routes and optimization measures, and set up appropriate traffic safety facilities and guides according to the regulations. • Select suitable waste gas treatment processes. • For rotating and moving equipment, eliminate clamping risks through design, and ensure that any protrusion will not cause any personal injury during normal operation. • Use an occupational hazard mitigation design, optimize equipment selection, and use low-noise equipment where possible.	particular attention paid to the management and monitoring of contracted and primary suppliers' workers. • Stress the safety rules for drivers, improve their driving skills, restrict driving time, and prepare a rotation table to avoid fatigue driving. • Avoid dangerous roads and times of a day to reduce the probability of accidents. • Install speed limiters on trucks, and monitor driving behavior remotely. • Maintain trucks regular, use manufacturer approved parts, and avoid accidents due to equipment or part failure. • Improve road signs together with local communities and competent authorities to improve overall road safety, especially for roads near schools. • Conduct traffic safety education together with local communities, such as at schools. • Detect workplace occupational hazards regularly, and take measures based on results. • Strengthen OHS training and workers' safety awareness, conduct emergency drills regularly, and guide workers to use PPE properly. • Further improve the GRM for workers (direct and contracted workers), handle opinions, feedback and concerns of workers, and record them in writing. • Monitor labor risk management regularly, and make improvement based on suggestions.	

Subproject	Design optimization	Mitigation measures	Implementers
Bulky and decoration waste disposal plant	• For on-site and nearby potential traffic risks, the owners should appoint a specialized agency for traffic layout, giving full consideration of driving routes and optimization measures, and set up appropriate traffic safety facilities and guides according to the regulations. • For rotating and moving equipment, eliminate clamping risks through design, and ensure that any protrusion will not cause any personal injury during normal operation. • Use an occupational hazard mitigation design, optimize equipment selection, and use low-noise equipment where possible.	• Establish an appropriate LMP, which has been improved on the basis of the existing personnel management system, with particular attention paid to the management and monitoring of contracted and primary suppliers' workers. • Stress the safety rules for drivers, improve their driving skills, restrict driving time, and prepare a rotation table to avoid fatigue driving. • Avoid dangerous roads and times of a day to reduce the probability of accidents. • Install speed limiters on trucks, and monitor driving behavior remotely. • Maintain trucks regular, use manufacturer approved parts, and avoid accidents due to equipment or part failure. • Improve road signs together with local communities and competent authorities to improve overall road safety, especially for roads near schools. • Conduct traffic safety education together with local communities, such as at schools. • Detect workplace occupational hazards regularly, and take measures based on results. • Strengthen OHS training and workers' safety awareness, conduct emergency drills regularly, and guide workers to use PPE properly. • Conduct occupational health checkups annually. • Conduct a fire safety emergency drill annually.	Ningbo PMO Meijing Company

Subproject	Design optimization	Mitigation measures	Implementers
		• Further improve the GRM for workers (including direct and contracted workers), handle feedback and grievances of workers, and keep written records. • Monitor labor risk management regularly, and make improvement based on suggestions.	
WWTP	• Select a suitable deodorization process. • Use an occupational hazard mitigation design, optimize equipment selection, and use low-noise equipment where possible.	• Establish an appropriate LMP, which has been improved on the basis of the existing personnel management system, with particular attention paid to the management and monitoring of contracted and primary suppliers' workers. • Detect workplace occupational hazards regularly, and take measures based on results. • Strengthen OHS training and workers' safety awareness, conduct emergency drills regularly, and guide workers to use PPE properly. • Conduct occupational health checkups annually. • **C**onduct a fire safety emergency drill annually**.** • Further improve the GRM for workers (including direct and contract workers), handle feedback and grievances of workers, and keep written records. • Monitor labor risk management regularly, and make improvement based on suggestions.	Ningbo PMO Qingyuan Company
4 Recyclables sorting centers	• Give full consideration of driving routes and optimization measures, and set up appropriate traffic safety facilities and	• Implement an appropriate LMP according to ESS2, establish a procedure to manage and monitor third party performance, and define remedies for third-party nonconformities in the service contract.	Ningbo PMO Dabashou Company

Subproject	Design optimization	Mitigation measures	Implementers
	guides according to the regulations. • Use an occupational hazard mitigation design, optimize equipment selection, and use low-noise equipment where possible.	• Stress the safety rules for drivers, improve their driving skills, restrict driving time, and prepare a rotation table to avoid fatigue driving. • Avoid dangerous roads and times of a day to reduce the probability of accidents. • Install speed limiters on trucks, and monitor driving behavior remotely. • Maintain trucks regular, use manufacturer approved parts, and avoid accidents due to equipment or part failure. • Improve road signs together with local communities and competent authorities to improve overall road safety, especially for roads near schools. • Conduct traffic safety education together with local communities, such as at schools. • Strengthen OHS training and workers' safety awareness, conduct emergency drills regularly, and guide workers to use PPE properly. • **C**onduct a fire safety emergency drill annually**.** • Further improve the GRM for workers (including direct and contracted workers), handle feedback and grievances of workers, and keep written records. • Monitor labor risk management regularly, and make improvement based on suggestions.	

7.2.3 Community health and safety risks

1) Analysis

Batch 2 subprojects (except the recyclable sorting centers) and associated facilities are all located in Ningbo resource recycling base, and involve extensive civil works, which may disturb

nearby communities, mainly including environmental impacts, traffic congestion and safety impacts. In addition, plastic, bulky and decoration waste may pose noise, flying dust, waste spillage, traffic accidents and other relevant risks to nearby communities during transport. However, the centralized plastic waste sorting and processing plant, bulky and decoration waste disposal plant, and WWTP are all located in Ningbo resource recycling base, and their construction sites are over 1km away from sensitive sites; vehicles run through provincial and special highways, and avoid communities, schools, villages, hospitals and other social sensitive sites where possible, with little community disturbance.

Table 7-10 Information on Recyclable Transfer Trucks

Subproject	PIU	Transfer mode and route	Number of trucks	Runs
Bulky and decoration waste disposal plant	Meijing Company	• Route: from all sites in the city to the Dongqiao disposal site • Mode: dump truck	50	150 runs/day
Centralized plastic waste sorting and processing plant	Haijing Company	• Route: sorting center—Haijing Plastic Disposal Plant • Mode: logistics truck • Route: Haijing Plastic Disposal Plant—external recycling enterprises • Mode: logistics truck	There is no budget for truck purchase yet. Transport will be undertaken by a specialized logistics company.	30 runs/day
4 Recyclables sorting centers	Dabashou Company	• Route: urban communities within the project area—sorting centers • Mode: van • Recyclable plastics: sorting centers—Haijing Plastic Disposal Plant • Mode: logistics truck • Non-plastic recyclables: sorting centers—external recycling enterprises • Mode: logistics truck	Dabashou will purchase 230 trucks (belonging to Dabashou other than the sorting centers).	Each sorting center will have 30-50 runs/day after completion.

Source: estimates of PIUs

The Jiangshan recyclables sorting center in Yinzhou District and Gulin recyclables sorting center in Haishu District are away from communities, hospitals, schools, etc., and have minor traffic safety risks for communities.

For the recyclables sorting centers, a recyclable collection and transfer system consists of an integrated logistics management platform, a smart waste separation cabin, and a sorting center. Each sorting center has 30-50 vehicle runs, and all vehicles are enclosed vans, for which the owner has taken sound safety measures, such as GPS speed monitoring, speed limit, voice prompt and anti-fatigue.

2) Existing management measures

- Ningbo PMO minimizes impacts on the surrounding environment by controlling sites and vehicles. Currently, waste unloading and compression is performed in closed unloading rooms, and vehicle compartments and floors are cleaned by cleaners timely. In addition, closed waste transfer vehicles are used for transfer to avoid spillage.
- For recyclables transport fleets, the PIUs have established waste collection and transfer management systems, and defined the safety protection measures to be observed by drivers, including waste transfer times and routes, driving speed, repair, preparation, cleaning and safety.
- The municipal urban administration bureau is also conducting a special correction campaign for domestic waste collection and transfer vehicles to ensure compliance and avoid secondary pollution.

3) Rating

There is already a sound domestic waste collection and transfer system in Ningbo, and transfer routes avoid communities, schools, villages, hospitals and other social sensitive sites where possible. However, with the increase of vehicles, especially building material transport vehicles during construction, nearby communities may still be exposed to sudden road traffic safety risks. Although the associated facility operators have taken a series of measures to reduce facility operation impacts on nearby communities, nearby residents say that there is still odor in summer, and relevant environmental monitoring data is not disclosed timely. The nearest community is 200m away, and the sorting centers generate little wastewater and waste pollution. The sorting centers have no formal grievance redress channel, and have not received any grievance from nearby residents. See Table 7-11.

Table 7-11 Ratings of Community Health and Safety Risks

Subproject	Construction stage		Operation stage	
	Risk	Rating	Risk	Rating
Centralized plastic waste sorting and processing plant	Impacts on communities near the facility and communities passed through by vehicles The construction site is over 1km away from sensitive sites.	M	Vehicles run through provincial and special highways, and avoid communities, schools, villages, hospitals and other social sensitive sites where possible, with little community disturbance.	M

Bulky and decoration waste disposal plant	Impacts on communities near the facility and communities passed through by vehicles The construction site is over 1km away from sensitive sites.	M	Bulky and decoration waste will be collected in a door-to-door manner through online appointment on the smart solid waste management system. Vehicles run through provincial and special highways, and avoid communities, schools, villages, hospitals and other social sensitive sites where possible, with little community disturbance.	M
WWTP	Impacts on communities near the facility and communities passed through by vehicles The construction site is over 1km away from sensitive sites.	M	The results of the routine monitoring of wastewater, ambient air and groundwater quality comply with the relevant national standards. Therefore, community health and safety impacts are minor.	L
Recyclables sorting centers	Disturbances to nearby communities	M	Impacts of vehicles on communities run through Each sorting center has 13-15 vehicle runs, and all vehicles are enclosed vans.	M

4) Design optimization and mitigation measures

Through consultation with the PIUs, the social team has proposed the following design optimization and mitigation measures based on the risks identified above.

Table 7-12 Design Optimization and Mitigation Measures (Community Health and Safety Risks)

Subproject	Design optimization	Mitigation measures	Implementers
Centralized plastic waste sorting and processing plant	• Make a rational layout, and keep high-noise equipment, main discharge ports, etc. away from nearby sensitive sites. • Improve the construction plan, and schedule construction rationally to minimize construction impacts on communities. • Set up safety warning signs at key sites, and educate local residents on safety. • Better traffic risk control measures should be taken for vehicles, such as GPS speed monitoring, speed limit, voice prompt and anti-fatigue.	• Strengthen internal supervision and management to avoid pollutant leakage; start remedies for abnormal operating conditions according to the EIA and SIA. • Develop and strictly implement measures for driver and vehicle management, such as pre-job training, driving experience and sign setup, to reduce traffic accidents. • Establish a formal community communication mechanism to respond to community concerns timely. • The owner should appoint a qualified social consulting agency according to the ESCP to monitor and evaluate social management measures, and make improvement as advised.	Ningbo PMO Haijing Company
Bulky and decoration waste disposal plant	• Make a rational layout, and keep high-noise equipment, main discharge ports, etc. away from nearby sensitive sites. • Improve the construction plan and make rational construction arrangements to minimize impacts on community. • Set up safety signs at key traffic points in communities, and give safety education to local residents, including women, children and old	• The PIU should strengthen international supervision and management to avoid pollutant leakage; in case of an abnormal working condition, remedies should be taken according to the EIA and SIA requirements. • Take measures to manage trucks and drivers, and develop and enforce management requirements, such as pre-job training, threshold setting and sign setup, to reduce traffic accidents. • Establish a formal community communication mechanism to	Ningbo PMO Meijing Company

Subproject	Design optimization	Mitigation measures	Implementers
	people. • Better traffic risk control measures should be taken for vehicles, such as GPS speed monitoring, speed limit, voice prompt and anti-fatigue.	strengthen community communication, and respond to community concerns timely. • Appoint a qualified social consulting agency to monitor and evaluate social management measures, and make improvement based on suggestions.	
WWTP	• Make a rational layout, and keep high-noise equipment, main discharge ports, etc. away from nearby sensitive sites. • The EIA should fully analyze and predict pollutants (especially odor) in different scenarios, and install appropriate environmental facilities based on the EIA results.	• The PIU should strengthen international supervision and management to avoid pollutant leakage; in case of an abnormal working condition, remedies should be taken according to the EIA and SIA requirements. • Establish a formal community communication mechanism to strengthen community communication, and respond to community concerns timely. • Appoint a qualified social consulting agency to monitor and evaluate social management measures, and make improvement based on suggestions.	Ningbo PMO Qingyuan Company
4 Recyclables sorting centers	• Make a rational layout, and keep high-noise equipment, main discharge ports, etc. away from nearby sensitive sites. • Improve the construction plan and make rational construction arrangements to minimize impacts on community. • Set up safety signs at key traffic points in communities,	• The PIU should strengthen international supervision and management to avoid pollutant leakage; in case of an abnormal working condition, remedies should be taken according to the EIA and SIA requirements. • Take measures to manage trucks and drivers, and develop and enforce management requirements, such as pre-job training, threshold setting and sign	Ningbo PMO Dabashou Company

Subproject	Design optimization	Mitigation measures	Implementers
	and give safety education to local residents, including women, children and old people. • Better traffic risk control measures should be taken for vehicles, such as GPS speed monitoring, speed limit, voice prompt and anti-fatigue.	setup, to reduce traffic accidents. • Establish a formal community communication mechanism to strengthen community communication, and respond to community concerns timely. • Appoint a qualified social consulting agency to monitor and evaluate social management measures, and make improvement based on suggestions.	

7.2.4 Inadequate stakeholder engagement risks

1) Analysis

Information disclosure and participation at the preparation, construction and operation stages is an important aspect to realize the project objectives. Project-affected parties include recyclable sorters, waste truck drivers, community residents, plastic processing workers, wastewater treatment workers, bulky and decoration waste disposal workers, persons affected by LAR, residents along waste transport routes, etc. Since Batch 2 subprojects involve LA, particular attention should be paid to needs and impacts of persons affected by LAR. The key other interested parties are the municipal ecology and environment bureau, and natural resources and planning bureau. Inadequate stakeholder engagement may affect the realization of the project objectives, such as site selection, LAR policies, and transport routing and safety. The survey shows that adequate information disclosure and public participation were conducted during the EIA, social stability risk assessment, and LAR of the existing facilities and associated facilities. Nearby residents often communicate with the project owners through local township governments and community officials.

The disclosure of environmental monitoring indicators during operation is inadequate, and the participation of vulnerable groups is inadequate, such as old people, women and low-income residents. For the recyclables sorting centers, a recyclable collection and transfer system consists of an integrated logistics management platform, a smart waste separation cabin, and a sorting center. Each sorting center has 30-50 vehicle runs. Drivers of the sorting centers are contracted workers, and may be unable to receive the same OHS protection and training measures as direct workers.

2) Existing management measures

For information disclosure, public participation and GRM, the state, provincial and municipal laws, regulations and policies impose strict requirements on information disclosure on the approval and implementation of major construction projects, land acquisition compensation, government resource allocation, etc., and require that public participation channels be kept smooth. A systematic complaint handling system has been established in

Ningbo City. Citizens, legal persons or other organizations shall submit suggestions, opinions or appeal requests to governments at all levels by way of letter, e-mail, telephone or visit, etc., to be handled by competent administrative authorities according to law.

3) Rating

Batch 2 subprojects involve many stakeholders, which requires adequate stakeholder engagement at the preparation, construction and operation stages to protect the information and participation rights of all stakeholders. An extensive community participation mechanism was established in Phase 1 of the Project, the SIA received extensive support from all stakeholders, and information disclosure and consultation activities were conducted at the preparation. However, inadequate stakeholder engagement may still exist in subsequent construction and operation. During the survey, nearby residents expected environmental monitoring data to be further disclosed. The Project's inadequate stakeholder engagement risks are "moderate". See Table 7-13.

Table 7-13 Ratings of Inadequate Stakeholder Engagement Risks

Subproject	Construction stage		Operation stage	
	Risk	Rating	Risk	Rating
Centralized plastic waste sorting and processing plant	Inadequate disclosure and consultation on LA compensation and resettlement policies, and inadequate participation of vulnerable groups, such as old people, women and low-income residents	M	No communication and coordination mechanism between communities and the PIU (including old people, women and low-income residents)	L
Bulky and decoration waste disposal plant	Inadequate consultation on compensation for ground attachments Inadequate information disclosure and consultation, including vulnerable groups, such as old people, women and low-income residents	M	Inadequate disclosure of environmental monitoring indicators during operation	L
WWTP	Inadequate information disclosure and consultation, including vulnerable groups, such as old people, women and low-income residents	M	Inadequate disclosure of environmental monitoring indicators during operation	L
Recyclable sorting centers	Inadequate consultation on land occupation and compensation, including vulnerable groups, such as old people, women and low-income residents	M	No communication and coordination mechanism between communities and the PIU (including old people, women and low-income residents)	L

4) Design optimization and mitigation measures

Through consultation with the PIUs, the social team has proposed the following design optimization and mitigation measures based on the risks identified above.

Table 7-14 Design Optimization and Mitigation Measures (Inadequate Stakeholder Engagement Risks)

Subproject	Design optimization	Mitigation measures	Implementers
Centralized plastic waste sorting and processing plant	Establish community assistance funds to support nearby villages run facilities and services, and perform corporate social responsibility to win the support of nearby residents. Establish an environmental education base, organize diversified publicity activities regularly, and disclose emission data timely. Makes jobs first available to local residents at the construction and operation stages, especially women and low-income residents.	The PIU should act on the SEP and GRM, disclose them to the public, and provide sufficient resources to ensure their effective operation. Ensure that nearby communities participate in project design, construction and operation, where the participation rate should not be less than 70%, with particular attention paid to vulnerable groups' needs. Take full advantage of online platforms, and set up an online disclosure and discussion module for stakeholders to share project information. The PIU should assign someone to handle the GRM for nearby residents, and disclose grievance contact information to nearby communities before project implementation. The PIU should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation). Environmental monitoring data should be disclosed to stakeholders timely.	Ningbo PMO Haijing Company
Bulky and decoration waste disposal plant	Establish community assistance funds to support relevant facilities and services in nearby communities, thereby obtaining the support of nearby residents. Establish an environmental education	The PIU should act on the SEP and GRM, disclose them to the public, and provide sufficient resources to ensure their effective operation. Ensure that nearby communities participate in project design, construction and operation, where the participation rate should not be less than 70%, with particular attention paid to vulnerable groups' needs.	Ningbo PMO Meijing Company

Subproject	Design optimization	Mitigation measures	Implementers
	platform, organize diversified education activities, and disclose pollutant discharge data timely. Makes jobs first available to local residents at the construction and operation stages, especially women and low-income residents.	Take full advantage of online platforms, and set up an online disclosure and discussion module for stakeholders to share project information. The PIU should assign someone to handle the GRM for nearby residents, and disclose grievance contact information to nearby communities before project implementation. The PIU should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation). Environmental monitoring data should be disclosed to stakeholders timely.	
WWTP	Establish community assistance funds to support relevant facilities and services in nearby communities, thereby obtaining the support of nearby residents. Makes jobs first available to local residents at the construction and operation stages, especially women and low-income residents.	The PIU should act on the SEP and GRM, disclose them to the public, and provide sufficient resources to ensure their effective operation. The PIU should assign someone to handle the GRM for nearby residents, and disclose grievance contact information to nearby communities before project implementation. The PIU should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation). Environmental monitoring data should be disclosed to stakeholders timely.	Ningbo PMO Qingyuan Company
4 Recyclables sorting centers	Make jobs first available to nearby residents, especially women and low income residents, at the construction and operation stages.	The PIU should act on the SEP and GRM, disclose them to the public, and provide sufficient resources to ensure their effective operation. The PIU should assign someone to handle the GRM for nearby residents, and disclose grievance contact information to nearby communities before project implementation. Conduct environmental education by field visit, making residents (especially children)	Ningbo PMO Dabashou Company

Subproject	Design optimization	Mitigation measures	Implementers
		understand the significance of the Project, and support the Project.	

7.2.5 NIMBY risks

1) Analysis

NIMBY is a cross-cutting issue, where nearby residents have concerns about impacts of waste collection, transfer and treatment facilities on their health, environment and local development, and may file complaint or even resist construction, thereby leading to community conflicts. The bulky and decoration waste disposal plant, WWTP, centralized plastic waste sorting and processing plant, and 4 recyclables sorting centers are waste processing enterprises, and may produce such negative impacts as noise, odor and flying dust during construction and operation. Nearby residents may complaint about or even impede construction in view of their own health, the surrounding environment and local development, potentially triggering social conflicts. In adequate information disclosure may aggravate grievances of nearby residents, who will not support the to-be constructed or reconstructed facilities under the Project, or even impede their operation, finally leading to NIMBY risks.

- The bulky and decoration waste disposal plant, WWTP, and centralized plastic waste sorting and processing plant are located in the park, and the nearby social sensitive sites include Xuanpei, Bailiangqiao, Huijiang, Yushantou and Sanli Village, Qiaodong Town, and Yunfeng Village, Yinjiagn Town, Haishu District mainly, which are 1.0-3.0km away from the base.
- Recyclables sorting centers: The 4 recyclables sorting centers (two are existing facilities) are located in suburbs, surrounded by wasteland or other parks, far away from communities and tidy internally, so they have almost no impact on the living environment.

2) Existing management measures

Ningbo resource recycling base is an important output of the World Bank-financed Ningbo Municipal Solid Waste Minimization and Recycling Project (P123323) which was closed in 2020. Ningbo Municipal Government has gained rich experience in improving the local living environment, and strengthening pollution supervision and control in conjunction with new countryside building. The base has won the China Circular Economy Best Practice Award, and is selected as a provincial demonstration base for industrial tourism and a municipal popular science education base. The Project's NIMBY risk mitigation experience has been extended throughout the province.

- For community health and safety impacts and risks, the competent municipal authorities, including the office for letters and visits, ecology and environment bureau, and urban administration bureau, offer hotlines, office reception and other grievance

redress channels, and the relevant sub-district offices have set up a special division to receive grievances.

- Various measures have been taken to deepen the public awareness of the Project, such as township and village official meeting, expert lecture, and field visit, and consultation has been conducted on construction, LAR, environmental protection, etc.
- A domestic waste museum has been built, and is also an education base. Its internal gymnasium and outdoor basketball courts are open to nearby residents for free.

Ningbo PMO has established a GRM for nearby residents. For grievances about noise, odor, etc., the competent municipal authorities, including the office for letters and visits, ecology and environment bureau, and urban administration bureau, offer hotlines, office reception and other grievance redress channels, and the relevant sub-district offices have set up a special division to receive grievances.

3) Rating

It should be noted that the WWTP, and centralized plastic waste sorting and processing plant are typical NIMBY facilities, which may have cumulative E&S impacts on nearby residents. Therefore, NIMBY risks will always exist, and can be mitigated effectively if well handled, otherwise new NIMBY risks are likely to occur. See Table 7-15.

Table 7-15 Ratings of NIMBY and Inadequate Stakeholder Engagement Risks

Subproject	Construction stage		Operation stage	
	Risk	Rating[14]	Risk	Rating
Centralized plastic waste sorting and processing plant	Villagers in the two villages affected by LA may claim more compensation and raise more environmental requirements.	M	Slight odor, low noise, far away from settlements, low environmental impacts	M
Bulky and decoration waste disposal plant	Nearby communities may raise more environmental requirements.	M	Slight odor, low noise, far away from settlements, low environmental impacts	M
WWTP	Those affected by the landfill may file appeals.	M	Odor and flying ash	M
Recyclables sorting centers	Small scale, slight odor, far away from settlements, low environmental impacts	L	Small scale, slight odor, far away from settlements	L

4) Design optimization and mitigation measures

[14]H stands for high risk, S for substantial risk, M for medium risk, and L for low risk.

Through consultation with the PIUs, the social team has proposed the following design optimization and mitigation measures based on the risks identified above.

Table 7-16 Design Optimization and Mitigation Measures (NIMBY Risks)

Subproject	Design optimization	Mitigation measures	Implementers
Centralized plastic waste sorting and processing plant	Make a rational layout, and keep high-noise equipment, main discharge ports, etc. away from nearby sensitive sites. Improve the construction plan and make rational construction arrangements to minimize impacts on community.	The PIU should disclose project information by means of official website, on-site billboard and community bulletin board within one month before construction, assign someone to handle the GRM for nearby residents, and disclose grievance contact information to nearby communities before project implementation. The PIU should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation). Environmental monitoring data should be disclosed to stakeholders timely.	Ningbo PMO Haijing Company
Bulky and decoration waste disposal plant	Make a rational layout, and keep high-noise equipment, main discharge ports, etc. away from nearby sensitive sites. Improve the construction plan and make rational construction arrangements to minimize impacts on community.	The PIU should disclose project information by means of official website, on-site billboard and community bulletin board within one month before construction, assign someone to handle the GRM for nearby residents, and disclose grievance contact information to nearby communities before project implementation. The PIU should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation). Environmental monitoring data should be disclosed to stakeholders timely.	Ningbo PMO Meijing Company

Subproject	Design optimization	Mitigation measures	Implementers
WWTP	Make a rational layout, and keep high-noise equipment, main discharge ports, etc. away from nearby sensitive sites. Select a suitable deodorization process. Improve the construction plan and make rational construction arrangements to minimize impacts on community.	The PIU should disclose project information by means of official website, on-site billboard and community bulletin board within one month before construction, assign someone to handle the GRM for nearby residents, and disclose grievance contact information to nearby communities before project implementation. The PIU should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation). Environmental monitoring data should be disclosed to stakeholders timely.	Ningbo PMO Qingyuan Company
4 recyclables sorting centers	Make a rational layout, and keep high-noise equipment, main discharge ports, etc. away from nearby sensitive sites. Improve the construction plan and make rational construction arrangements to minimize impacts on community.	The PIU should disclose project information by means of official website, on-site billboard and community bulletin board within one month before construction, assign someone to handle the GRM for nearby residents, and disclose grievance contact information to nearby communities before project implementation. The PIU should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation).	Ningbo PMO Dabashou Company

8 SMP

The SIA agency first analyzes the risk management measures that have been taken by the owner in practical management and design, and assesses social performance and potential gaps based on public participation results during the social audit and SIA; then, it proposes mitigation measures based on the mitigation hierarchy according to the ESSs relevant ESSs; finally, the SIA agency and owner negotiate the mitigation measures proposed in this report, define the responsibilities of the agencies concerned, and a mitigation hierarchy.

The SMP aims to improve the overall project benefits, and minimize negative impacts and social risks through appropriate measures. A detailed SEP will be developed to identify stakeholders, and propose planning, design, preparation, implementation and M&E recommendations.

The mitigation measures proposed for the social impacts and form an SMP, including an implementation schedule, PIUs and monitoring arrangements. The SMP can be implemented in stages. A low management level may be maintained in the first 3-5 years, and the standard should be improved continually later. See Table 8-1 to Table 8-4 where proposed actions will be conducted by the pertinent PIU.

Table 8-1 SMP for WWTP of Ningbo Resource Recycling Base

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
1	Labor and working condition risks	• Establish and implement an appropriate LMP. • Improve the GRM for workers (direct and contracted). • Strengthen the management of PPE use. • OHS facilities must be designed, constructed and commissioned along with the main part, and their investment included in the project budget. • Conduct occupational hazard monitoring, and biennial occupational health checkups. • **C**onduct a fire safety emergency drill annually.	• Evaluate LMP implementation by full-time staff, and reflect this in project progress reports. • Men-times of trainees of regular induction and OHS training for workers (by gender and target group) • Percentage of licensed drivers • Inspection records on PPE use by workers • Regular health checkup reports of workers • Frequency and records of occupational hazard monitoring • Frequency, number of participants and records of emergency drills • Modes and frequency of grievances	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Qingyuan Company
2	Community health and safety risks	• Improve the construction plan and make rational construction arrangements to minimize impacts on community.	• Regulations against different types of risks during construction • Positions and numbers of safety signs	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
		• Set up safety signs at key traffic points in communities, and give safety education to local residents, including women, children and old people. • Develop measures for driver and vehicle management, such as pre-job training, threshold setting and sign setup, to reduce traffic accidents. • Establish a formal community communication mechanism to strengthen community communication, and respond to community concerns timely.	• Frequency of public health and anti-AIDS training, and number of participants (by gender and target group) • Forms of publicity on AIDS, pandemic, SEA/SH and drug prevention • Modes and frequency of grievances			Involving Qingyuan Company
3	Stakeholder engagement risks	• The PIU should act on the SEP and GRM, disclose them to the public, and provide sufficient resources to ensure their effective operation. • Establish an environmental monitoring information disclosure system. • Ensure that nearby communities participate in project design, construction and operation, with	• Use of local labor, and numbers of female and low-income laborers • Types, frequency and participants (gender, low-income) of education activities • Types, frequency and participants (gender, low-income) of opinion collection activities by the PMO, PIUs, and township and village organizations	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Qingyuan Company

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
		particular attention paid to vulnerable groups' needs.	• Modes and frequency of grievances			
4	NIMBY risks	• The PIU should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation). • Establish community assistance funds to support nearby villages run facilities and services, and perform corporate social responsibility to win the support of nearby residents. • Make jobs first available to nearby residents, especially women and low income residents, at the construction and operation stages. • Organize diversified education activities, and disclose pollutant discharge data timely. Conduct stakeholder engagement on any substantial change to the project scope. Disclose site	• Types, frequency and participants (gender, low-income) of joint meetings, and number of villages covered • Number and operation of community assistance funds • Number and operation of new facilities and services • Use of local labor, and numbers of female and low-income laborers • Types, frequency and participants (gender, low-income) of education activities • Types, frequency and participants (gender, low-income) of opinion collection activities by the PMO, PIUs, and township and village organizations	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Qingyuan Company

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
		operation and environmental indicators regularly at the operation stage.				

Table 8-2 SMP for Centralized Plastic Waste Sorting and Processing Plant

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
1	Labor and working condition risks	• Establish and implement an appropriate LMP. • Improve the GRM for workers (direct and contracted). • Conduct regular social monitoring on contracted worker management, and make improvement based on suggestions. • Strengthen the management of PPE use. • OHS facilities must be designed, constructed and commissioned along with the main part, and their investment included in the project budget. • Conduct occupational hazard monitoring, and biennial occupational health checkups.	• Evaluate LMP implementation by full-time staff, and reflect this in project progress reports. • Men-times of trainees of regular induction and OHS training for workers (by gender and target group) • Percentage of licensed drivers • Inspection records on PPE use by workers • Regular health checkup reports of workers • Frequency and records of occupational hazard monitoring	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Meijing Company

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
		• Conduct a fire safety emergency drill annually.	• Frequency, number of participants and records of emergency drills • Modes and frequency of grievances			
2	LAR risks	• Solve outstanding issues based on the suggestions in the social audit report, and conduct M&E. • Strengthen communication with Xuanpei Village, and complete relocation and resettlement 3 months before the start of construction. • Notify the occupants of the worker dormitory to move 3 months before the start of construction. • Complete land use right consultation in coordination with the Haishu District Urban Administration Bureau, and complete equipment relocation by the end of December 2022. • Strengthen communication with the competent authorities, and complete land	• E&S agency appointed • Mode of information disclosure of compensation policies • Handling of outstanding issues • Approvals of land allocation or transfer	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Meijing Company Monitored by a third-party M&E agency

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
		allocation or transfer before the start of construction.				
3	Community health and safety risks	• Improve the construction plan and make rational construction arrangements to minimize impacts on community. • Set up safety signs at key traffic points in communities, and give safety education to local residents, including women, children and old people. • Develop measures for driver and vehicle management, such as pre-job training, threshold setting and sign setup, to reduce traffic accidents. • Establish a formal community communication mechanism to strengthen community communication, and respond to community concerns timely.	• Regulations against different types of risks during construction • Positions and numbers of safety signs • Frequency of public health and anti-AIDS training, and number of participants (by gender and target group) • Forms of publicity on AIDS, pandemic, SEA/SH and drug prevention • Modes and frequency of grievances	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Meijing Company
4	Stakeholder engagement risks	• The PIU should act on the SEP and GRM, disclose them to the public, and provide sufficient resources to ensure their effective operation.	• Use of local labor, and numbers of female and low-income laborers • Types, frequency and participants (gender, low-income) of education activities	100,000 yuan	2022-2026 Semiannual	Organized by PMO

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
		• Establish an environmental monitoring information disclosure system. • Ensure that nearby communities participate in project design, implementation and operation, and pay particular attention to needs of vulnerable groups.	• Types, frequency and participants (gender, low-income) of opinion collection activities by the PMO, PIUs, and township and village organizations • Modes and frequency of grievances	Counterpart funds and loan		Involving Meijing Company
5	NIMBY risks	• The PIU should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation). • Establish community assistance funds to support nearby villages run facilities and services, and perform corporate social responsibility to win the support of nearby residents. • Make jobs first available to nearby residents, especially women and low-income residents, at the construction and operation stages. • Organize diversified education activities, and disclose pollutant discharge data timely.	• Types, frequency and participants (gender, low-income) of joint meetings, and number of villages covered • Number and operation of community assistance funds • Number and operation of new facilities and services • Use of local labor, and numbers of female and low-income laborers • Types, frequency and participants (gender, low-income) of education activities • Types, frequency and participants (gender, low-income) of opinion	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Meijing Company

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
		Conduct stakeholder engagement on any substantial change to the project scope. Disclose site operation and environmental indicators regularly at the operation stage.	collection activities by the PMO, PIUs, and township and village organizations			

Table 8-3 SMP for the Bulky and Decoration Waste Disposal Plant

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
1	Labor and working condition risks	• Establish and implement an appropriate LMP. • Improve the GRM for workers (direct and contracted). • Conduct regular social monitoring on contracted worker management, and make improvement based on suggestions. • Strengthen the management of PPE use by workers. • OHS facilities must be designed, constructed and commissioned along with the main part, and their investment included in the project budget. • Conduct occupational hazard monitoring, and biennial occupational health checkups. • **C**onduct a fire safety emergency drill annually.	• Evaluate LMP implementation by full-time staff, and reflect this in project progress reports. • Men-times of trainees of regular induction and OHS training for workers (by gender and target group) • Percentage of licensed drivers • Inspection records on PPE use by workers • Regular health checkup reports of workers • Frequency and records of occupational hazard monitoring • Frequency, number of participants and records of emergency drills • Modes and frequency of grievances	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Haijing Company
2	LAR risks	• Make clear the LAR compensation policies and rates, and ensure compliance with the Bank and domestic requirements.	• RAP • E&S agency appointed	100,000 yuan	2022-2026 Semiannual	Organized by PMO

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
		• Prepare an RAP and make it approved by the Bank. • Act on the approved RAP. • Appoint a third party for M&E.	• Mode of information disclosure of compensation policies • Livelihood restoration of affected persons • Effectiveness of the GRM • Land use approvals	Counterpart funds and loan		Involving Haijing Company Monitored by a third-party M&E agency
3	Community health and safety risks	• Improve the construction plan and make rational construction arrangements to minimize impacts on community.; • Set up safety signs at key traffic points in communities, and give safety education to local residents, including women, children and old people. • Develop measures for driver and vehicle management, such as pre-job training, threshold setting and sign setup, to reduce traffic accidents. • Establish a formal community communication mechanism to strengthen community communication, and respond to community concerns timely.	• Regulations against different types of risks during construction • Positions and numbers of safety signs • Frequency of public health and anti-AIDS training, and number of participants (by gender and target group) • Forms of publicity on AIDS, pandemic, SEA/SH and drug prevention • Modes and frequency of grievances	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Haijing Company

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
4	Stakeholder engagement risks	• The PIU should act on the SEP and GRM, disclose them to the public, and provide sufficient resources to ensure their effective operation. • Establish an environmental monitoring information disclosure system. • Ensure that nearby communities participate in project design, implementation and operation, and pay particular attention to needs of vulnerable groups.	• Use of local labor, and numbers of female and low-income laborers • Types, frequency and participants (gender, low-income) of education activities • Types, frequency and participants (gender, low-income) of opinion collection activities by the PMO, PIUs, and township and village organizations • Modes and frequency of grievances	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Haijing Company
5	NIMBY risks	• The PIU should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation). • Establish community assistance funds to support nearby villages run facilities and services, and perform corporate social responsibility to win the support of nearby residents.	• Types, frequency and participants (gender, low-income) of joint meetings, and number of villages covered • Number and operation of community assistance funds • Number and operation of new facilities and services • Use of local labor, and numbers of female and low-income laborers • Types, frequency and participants (gender, low-income) of education activities	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Haijing Company

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
		• Make jobs first available to nearby residents, especially women and low-income residents, at the construction and operation stages. • Organize diversified education activities, and disclose pollutant discharge data timely. Conduct stakeholder engagement on any substantial change to the project scope. Disclose site operation and environmental indicators regularly at the operation stage.	• Types, frequency and participants (gender, low-income) of opinion collection activities by the PMO, PIUs, and township and village organizations			

Table 8-4 SMP for the 4 Recyclable Sorting Centers

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
1	Labor and working condition risks	• Establish and implement an appropriate LMP. • Improve the GRM for workers (direct and contracted). • Conduct regular social monitoring on contracted worker management, and make improvement based on suggestions. • Strengthen the management of PPE use by workers. • OHS facilities must be designed, constructed and commissioned along with the main part, and their investment included in the project budget. • **C**onduct a fire safety emergency drill annually.	• Evaluate LMP implementation by full-time staff, and reflect this in project progress reports. • Men-times of trainees of regular induction and OHS training for workers (by gender and target group) • Percentage of licensed drivers • Inspection records on PPE use by workers • Regular health checkup reports of workers • Frequency and records of occupational hazard monitoring • Frequency, number of participants and records of emergency drills • Modes and frequency of grievances	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by PMO Involving Dabashou Company
2	LAR risks	• Ningbo PMO and Dabashou Company should strengthen coordination with the competent	• Effectiveness of the GRM • Approvals of land allocation or transfer	100,000 yuan	2022-2026 Semiannual	Organized by PMO

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
		authorities to obtain the land for the Project as soon as possible. • Strengthen communication with the competent authorities, and obtain relevant approvals of the right to use state-owned land before the start of construction (or equipment installation).		Counterpart funds and loan		Involving Dabashou Company Monitored by a third-party M&E agency
3	NIMBY risks	• Disclose project information by means of official website, on-site billboard, community bulletin board, etc. one month before construction. • The PIU should assign someone to handle the GRM for nearby residents, and disclose grievance contact information to nearby communities before project implementation. • The PIU should establish a communication mechanism with communities during construction and operation to respond to community requests (monthly during construction and quarterly during operation).	• Types, frequency and participants (gender, low-income) of joint meetings, and number of villages covered • Number and operation of community assistance funds • Number and operation of new facilities and services • Use of local labor, and numbers of female and low-income laborers • Types, frequency and participants (gender, low-income) of education activities • Types, frequency and participants (gender, low-income) of opinion	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by the PMO Involving Dabashou Company

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
			collection activities by the PMO, PIUs, and township and village organizations			
4	Community health and safety risks	• Improve the construction plan and make rational construction arrangements to minimize impacts on community. • Set up safety signs at key traffic points in communities, and give safety education to local residents, including women, children and old people. • Develop measures for driver and vehicle management, such as pre-job training, threshold setting and sign setup, to reduce traffic accidents. • Establish a formal community communication mechanism to strengthen community communication, and respond to community concerns timely.	• Regulations against different types of risks during construction • Positions and numbers of safety signs • Frequency of public health and anti-AIDS training, and number of participants (by gender and target group) • Forms of publicity on AIDS, pandemic, SEA/SH and drug prevention • Modes and frequency of grievances	100,000 yuan Counterpart funds and loan	2022-2026 Semiannual	Organized by the PMO Involving Dabashou Company
5	Stakeholder engagement risks	• The PIU should act on the SEP and GRM, disclose them to the public, and provide sufficient resources to ensure their effective operation.	• Use of local labor, and numbers of female and low-income laborers	100,000 yuan	2022-2026 Semiannual	Organized by the PMO

No.	Potential risks	Actions	Monitoring indicators	Budget and sources	Completion time	Implementers
		• Establish an environmental monitoring information disclosure system. • Ensure that nearby communities participate in project design, implementation and operation, and pay particular attention to needs of vulnerable groups.	• Types, frequency and participants (gender, low-income) of education activities • Types, frequency and participants (gender, low-income) of opinion collection activities by the PMO, PIUs, and township and village organizations • Modes and frequency of grievances	Counterpart funds and loan		Involving Dabashou Company

9 Institutional Arrangements and Capacity Building

9.1 Institutional Arrangements

The organizational structure for social management is shown in Figure 9-1.

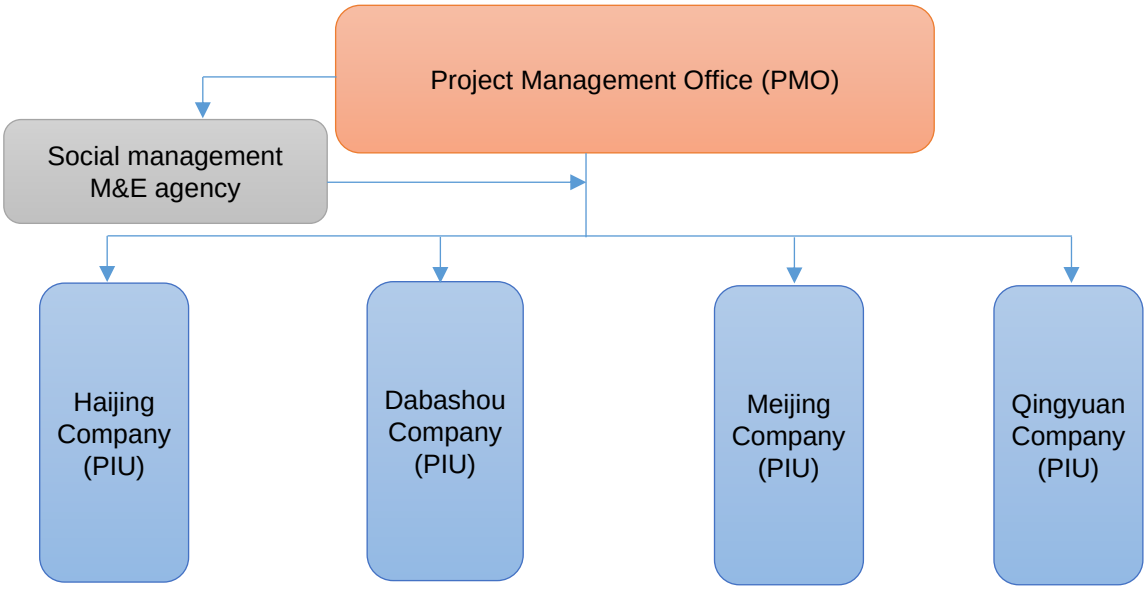


Figure 9-1 Organizational Chart

The main responsibilities of all departments concerned are:

1) Ningbo Project Management Office (PMO)

- Guiding and supervising the PIUs to carry out relevant E&S management work of the subprojects in accordance with the requirements of the ESMF, and E&S management documents approved by the Bank;
- Assigning at least one full-time staff to coordinate the implementation of the E&S management framework, and maintaining contact with World Bank E&S experts during the implementation period;
- Hiring external E&S monitoring consultants to conduct external monitoring of the Project's E&S management and prepare external monitoring reports, and reporting to the Bank every six months.
- Ensuring that relevant measures and requirements in the E&S management plans are included in the bidding documents;
- Screening the E&S risk levels of subprojects with the assistance of an external expert group, reviewing E&S safeguards documents, and submitting them to the Bank for review as necessary;
- Carrying out E&S management capacity building for subproject implementation units;
- Supervise the implementation of applicable E&S safeguards documents (EMP, SAP, LMP, SAP, etc.);
- Ensuring funds for project implementation

2) PIUs

- Establishing internal organization and assigning staff responsible for E&S management;
- Assigning a full-time E&S staff member to implement E&S documents;
- Conducting relevant stakeholder consultation activities in accordance with the requirements of the SEP;
- Supervising the implementation of E&S management measures;
- Submitting periodic subproject progress reports to the PMO;

9.2 Capacity Building

The social team has found that though Ningbo PMO has participated in the implementation of a previous Bank-financed project, it is implementing E&S management measures and requirements under the Bank's ESF for the first time. In addition, since the 4 PIUs are newly established to implement a Bank-financed project for the first time, they lack social management experience. In order to implement the SMP more effectively, and ensure that the affected persons benefit from the Project, Ningbo PMO will take the following measures to strengthen institutional capacity:

1) Strengthen training for the PIUs through social and resettlement expert with experience in Bank-financed projects, so that the PIUs fully understand the Bank's requirements, applicable state laws and regulations, the types and purposes of social management documents, and methods and schedule to implement the measures under the SMP.
2) Establish an internal supervision mechanism, a feedback mechanism, and a social risk early warning system from the PMO to the PIUs. The staff specializing in social management should have a holistic view, excellent policy understanding and professionalism, and experience in dealing with the public.
3) Information disclosure: All E&S documents should be disclosed to the public for supervision.
4) Establish an external M&E mechanism, and appoint an independent third party with experience in Bank-financed projects to monitor and evaluate SMP and RAP implementation.

Table 9-1 Social Management Capacity Building Schedule

Trainees	Key points	Objective	Resource / trainer	Men-times	Mode	Time (day)	Frequency
Ningbo PMO	1) The Bank's ESSs; 2) Approved ESMF, SEP, LMP and ESCP; 3) SMP and M&E; 4) SEP and LMP implementation and management; 5) Implementation and M&E of E&S measures; 6) Ningbo PMO's requirements for social and resettlement management	Strengthening the social management capacity of the Ningbo PMO	Bank specialist or appointed social and resettlement specialist	10	Lecture, seminar and field visit	1	At least once a year during implementation
Workshop (high-level) External specialist consulting services	1) The Bank's ESSs; 2) Approved ESMF, SEP, LMP and ESCP; 3) SMP and M&E; 4) SEP and LMP implementation and management; 5) Implementation and M&E of E&S measures; 6) Organizational setup and capacity building for social and resettlement management 7) The Bank's policy and requirements for social and resettlement M&E	Strengthening the E&S management knowledge and capacity of external specialists	Bank specialist or appointed social and resettlement specialist	20	Lecture, seminar and field visit	1	At least twice a year during implementation

Trainees	Key points	Objective	Resource / trainer	Men-times	Mode	Time (day)	Frequency
PIUs	1) The Bank's ESSs; 2) Approved ESMF, SEP, LMP and ESCP; 3) SMP and M&E; 4) SEP and LMP implementation and management; 5) Implementation and M&E of E&S measures; 6) PIUs' requirements for social and resettlement management 7) GRM and file management	Strengthening the social and OHS management capacity of the PIUs and their social management staff	Bank specialist or appointed social and resettlement specialist	20~30	Lecture, seminar and field visit	1	At least twice a year during implementation

10 M&E

10.1 Internal Monitoring

Ningbo PMO is responsible for monitoring the E&S performance of the entire project implementation process. The dedicated E&S staff in the PMO shall be responsible for collecting and processing information related to E&S management in a timely manner, regularly tracking the implementation status of subprojects, inspecting the E&S performance of subprojects on-site, identifying problems and making suggestions for improvement. At the same time, the PMO must give full play to the coordination role, require all district PMOs and PIUs to assume the responsibility in the E&S performance of their subprojects, and ensure that relevant E&S impact mitigation measures are effectively implemented at the project level.

The PIUs are responsible for the E&S performance, including designation of E&S department with dedicated staff, supervision of the implementation of mitigation measures in the E&S documents, and regular reporting to the PMO on the E&S progress.

The supervising agencies will be hired for all construction activities to conduct construction supervision tasks, including the E&S measures as stipulated in the construction contracts. Supervision companies will identify on-site E&S problems in a timely manner, put forward correction requirements, and ensure that the E&S management of the project construction meets the contract requirements, and reflect the E&S performance situation in their monthly supervision reports.

10.2 External Monitoring

In addition to daily management and supervision of E&S performance by the PMO and PIUs, the PMO will also engage a third-party monitoring agency to conduct independent monitoring of E&S performance.

The external E&S monitoring agency will be engaged by Ningbo PMO to monitor the E&S performance of all project activities, and submit M&E opinions and reports. The responsibilities of the consultants are:

a) Reviewing whether the construction organization design, environmental management plan, safety production plan, traffic management plan and other documents of the contractors meet the requirements of the approved E&S documents;
b) Assisting the PMO and PIUs to carry out E&S management training for contractors and supervising agencies, covering labor management, stakeholder engagement, etc.; assisting in investigating and dealing with E&S emergencies or accidents;
c) Monitoring the implementation of the social action plan and other social management documents, including consultation and investigation for the APs;
d) Periodically submitting monitoring reports to the PMO and PIUs.

In addition, relevant government departments will also have their regulatory monitoring over project construction and operation.

During project implementation, the Bank will also conduct regular field missions to monitor and support the compliance E&S performance.

10.3 Reporting System

The PIUs will prepare regular progress reports (once every six months) on the progress and performance of SMP, ESCP, and other related plans (such as SEP), and submit to the PMO.

Ningbo PMO will summarize the overall E&S performance and issues of all subprojects, prepare an E&S progress report every six months, and submit it to the Bank as part of the project progress report.

The external E&S monitoring agency will prepare an external monitoring report every six months, and submit to the PMO. These external reports will be provided to the Bank together with the PMO's semiannual progress reports.

Appendix 1 Public Consultation Records

Table 1 Completed Public Consultation Activities and Key Findings

Date	Venue	Stakeholders	#	Methods	Topic	Results
Dec 23, 2020	Meeting room of NMII	NMII Municipal urban administration bureau Municipal environmental sanitation center Central South Architectural Design Institute Other experts	15	FGD	Internal review meeting on the feasibility study of the Project	The feasibility study report is complete. The Project is rational in scale, design, investment and economy. The report can serve as a basis for subsequent work. The general play is further optimized. The operation scheme of the existing 800t/d wastewater treatment system at the construction stage is further refined. The effluent indicators for enterprises in the base are defined. The equipment investment is further rationalized.
Feb 10, 2021	Meeting room of NMII	NMII Municipal urban administration bureau Municipal finance bureau Ningbo PMO	11	Organizational interview FGD	Consultation on issues related to the Project	All wastewater produced by enterprises in the park should be discharged into the WWTP under the Project. The future charging logic based on the factor method is defined.
Mar 23, 2021	Meeting room 1615 of NMII	NMII Municipal finance bureau NDWSGC Shouchuang Kitchen Waste Plant	20	FGD	Project introduction Coordination of charging mechanism	Long-term land should be reserved for the WWPT based on the regulatory land plan of the Ningbo resource recycling base. All wastewater produced by enterprises in the park should be discharged into the WWTP of the Ningbo

Date	Venue	Stakeholders	#	Methods	Topic	Results
		Kaicheng Kitchen Waste Plant NBSMC Renewable Resources Technology Co., Ltd. Yemao'ao landfill Central South Architectural Design Institute				resource recycling base, and water quality indicators will be defined after consultation. The wastewater discharge rate will be fixed based on the budget in the preliminary design and after water quality indicator calculation. Discharging enterprises should optimize their wastewater to reduce operating costs of the WWTP of the Ningbo resource recycling base; A certain overload should be allowed for the WWTP. The effluent water quality of the WWTP should reach the Class B level in the wastewater quality standard for discharge to municipal sewers (GB/T31962-2015), to be finally based on the EIA approval. Sewers of discharging enterprises should be designed, constructed and operated in step with the WWTP.
May 19, 2021	Meeting room 1615 of NMII	Municipal comprehensive enforcement bureau Municipal development and reform commission Municipal finance bureau Municipal ecology and environment bureau	12	FGD Key informant interview Questionnaire survey	Project introduction EIA coordination Definition of two tail water indicators	All wastewater produced by enterprises in the Ningbo resource recycling base will be discharged into the reconstructed/expanded WWTP for centralized treatment. Since the Yemao'ao landfill has been closed temporarily, the leachate treatment capacity of the landfill under the Project remains unchanged.

Date	Venue	Stakeholders	#	Methods	Topic	Results
		NDWSGC District ecology and environment bureau NMII Renxin Environmental Research Institute			Opinions on and attitudes to the Project	The EIA report will be approved by the municipal ecology and environment bureau. The municipal development and reform commission, municipal finance bureau, and other agencies concerned will work on the Project together.
Jun 8, 2021	Meeting room 1615 of NMII	Municipal comprehensive enforcement bureau Municipal development and reform commission Municipal finance bureau Municipal ecology and environment bureau NDWSGC District ecology and environment bureau NMII Renxin Environmental Research Institute Other consulting agencies	14	FGD	Internal review meeting on preliminary design	Influent water quality indicators will be determined rationally in full consultation with the EIA agency and in consideration of WWTP reception. All design parameters are verified. The general plan is optimized to reduce the investment and operating costs. Measures should be taken during construction in order not to affect the operation of the existing system. The construction agency should provide existing building information as soon as possible.

Source: E&S survey, interviews and consultation with departments concerned

Table 2 FGDs in Affected Villages

Stakeholder	# of participants	Key points
Xuanpei Village	**15**	1) LA compensation rates should be fixed rationally, not less than that for the landfill (Phase 2) in 2018 (80,000 yuan/mu); 2) Commercial crops and big trees should be compensated through appraisal; 4) A sharing mechanism should be established, where the village collective and villagers can earn money by equity participation or otherwise.
Bailiangqiao Village	12	1) Villagers often complain about odor generated by the kitchen waste disposal plant and incineration plant; 2) Compensation rates should be fixed rationally, and the highest policy rates should apply.
Huijiang Village	**8**	1) Villagers often complain about odor and black smoke, and have little trust in operation management; 2) Monitoring data is not notified to villagers as promised, aggravating their worries about environmental problems; 3) There is a strong wish for relocation, and the new village should not be worse than that of Xuanpei Village.
Yushantou Village	**7**	1) Vehicle odor affects villagers seriously; 2) Some vehicles have a leakage problem, and spills flow into the village with rain, affecting the village environment greatly; 3) Villagers are affected seriously by the nearby industrial park and waste disposal facility, and expect the new village to be constructed as soon as possible.
Sanli Village	**6**	1) This village is located in a low-lying area, and wastewater brought down by rain affects the river greatly; 2) The new village has been completed, but its house value is affected by the existing waste disposal facility; the housing land in the new village should be converted into state-owned construction land; 3) An environmental monitoring station should be set up, and air quality monitoring data disclosed.

Source**:** E&S survey, interviews and consultation with departments concerned

Appendix 2 LMP for PIUs

Appendix 2.1 LMP for Bulky and Decoration Waste Treatment Plant

The bulky and decoration waste treatment plant (hereinafter, "this subproject") is one of the Batch 2 subprojects. Its owner is Ningbo Meijing Construction Waste Recycling Technology Co., Ltd. (hereinafter, "the Company"), which was founded in May 2021.

The Company is 40% funded by Ningbo Fubang Green Energy Technology Co., Ltd., 30% by Ningbo Public Utilities Investment Co., Ltd., and 30% by Ningbo Ecological & Environmental Protection Group Co., Ltd., with a registered capital of 40 million yuan. Its business scope is the disposal of bulky, decoration and construction waste, the processing, production and sale of building materials, the sale of recycled waste, the preparation and sale of regenerated building materials, and the sale of biomass briquette fuels

This LMP is a living document, and the current version is based on the SIA on the Batch 2 subprojects, and the Company's HR policies and management systems.

In October 2021, the Company established a series of HR and work safety systems. With the progress of the Project, the Company will further improve its LMP in accordance with the World Bank's ESS2, and the applicable laws and regulations of China.

1 Overview of Project Workers

According to the definition of project workers in ESS2, project activities, key informant interviews and document review, this subproject involves direct workers and contracted workers.

Direct Hires: People employed directly by Ningbo Municipal PMO and PIUs specifically for project management [15], including technicians and operation and management staff, all with relevant experience.

Contract Workers: Those employed including construction workers of this subproject, and workers of the third-party operation company that may be appointed at the operation stage (i.e. drivers, etc.)

Based on local residents' needs, bulky and decoration waste will be collected door-to-door with appointments made through the smart project management system constructed under the Project, so this subproject has no direct primary supplier.

In this subproject, primary suppliers' workers are workers at the recyclable sorting centers mainly. An estimate of types and numbers of workers is shown in Table 1.

Table 1 Estimate of Types and Numbers of Project Workers

Subproject	Stage		Direct hires	Contract workers	Primary suppliers' workers
Bulky and decoration waste	Construction	Civil works	10	200	0
		Equipment installation	5	15	0
	Operation		80	50[16]	0

[15] Some workers may be full-time or part-time civil servants. If there is no valid transfer certificate indicating that he/she has been employed for the Project, his/her public sector employment agreement applies, and the requirements on labor protection (Clauses 17~20) and OHS (Clauses 24~30) of ESS2 should be met.

[16] Mostly drivers of bulky and construction waste, to be recruited by a third-party labor service company

Subproject	Stage	Direct hires	Contract workers	Primary suppliers' workers
disposal plant				

Source: estimated by the Company

All direct hires will be from the Company. Since the Company has been newly established, it has a workforce of less than 5 persons, all having undergraduate or above education. The Company is in the process of recruiting more staff.

The Company will review labor management systems of bidding contractors through its bidding mechanism, and ask contractors to establish labor management procedures in accordance with ESS2. Bidding is under preparation, and it is uncertain if contracted workers include non-local workers, which will be further identified during implementation.

2 Screening of Potential Significant Labor Risks

2.1 Subproject activities

This subproject is located in the Ningbo resource recycling base, with a floor area of 59.2 mu and a total new building area of 22,150 m^2. After completion, it will have a total treatment capacity of 300,000 tons of bulky and decoration waste, and 60,000 tons of existing waste annually. It will build a bulky waste production line with capacity of treating 45,000 tons of bulky waste annually, a RDF (refuse derived fuel) production line with an annual capacity of 82,000 tons, and a production line with an annual capacity of 18 million reclaimed bricks.

2.2 Major labor risks

At the preparation stage, a social impact survey and extensive stakeholder engagement were conducted on this subproject, and major labor risks were identified. According to the SIA of the Batch 2 subprojects, as the Project is located in the developed city of Ningbo, where the government has a well-established labor management and supervision systems for enterprises, so this subproject's labor risks are negligible or very low, mainly including:

- Forced labor and child labor
- Discrimination in recruitment

According to the scope, scale and nature of this subproject, major labor risks related that may be encountered by workers include:

A. Construction stage

- **Dangerous work**: Construction workers working at height or in confined spaces, or using heavy machinery or dangerous materials;
- **Safety risks in machinery operation**: Accidents of construction workers during construction, such as welding, cutting or operating relevant tools;
- **Noise from mechanical construction**: Loud, repeated and excessive noises that may arise during construction, possibly leading to long-term hearing problems, such as deafness, and also being a dangerous distraction that increases accident risks;
- **Emergency risks**: Emergencies and quality safety accidents arising from unsound civilized construction and quality safety management measures, or inadequate management;
- **Sexual harassment or gender-based violence risks**: Physical or mental violence against women due to gender or lifestyle differences;
- **Workplace accidents**: Accidents arising from work shed collapse due to quality

problems or natural disasters;

- **Health and infection risks**: Disease infection risks (e.g., COVID-19) arising from the improper diet and accommodation management, or health management of construction workers;
- **Salaries and benefits**: Workers' rights and interests unsecured because contractors fail to strictly enforce the applicable laws and regulations, and enter into employment contracts;

B. Operation stage

- **Traffic**: Potential traffic accidents during the transport of collected bulky and construction waste;
- **Noise from machinery operation**: Noises generated by sorting and crushing machines, etc.; loud, repeated and excessive noise, possibly leading to long-term hearing problems, such as deafness, and also being a dangerous distraction that increases accident risks;
- **Work-related injuries**: Work-related injuries due to improper operations during the breakdown of bulky waste;
- **Dust pollution**: Dust generated from the breaking down of bulky waste
- **Emergency accidents**: Mistakes in the operation of smart equipment leading labor health and life risks;
- **Infection**: Disease infection risks (e.g., COVID-19) during recyclable (waste) collection and transfer, and close contact with people.

3 Brief Overview of Labor Legislation: Terms and Conditions

China has established a sound system of laws and regulations on labor management. As a member of the International Labor Organization (ILO), China has approved 26 conventions (including 20 that have taken effect), including equal remuneration, discrimination, minimum age, child labor, OHS, employment policy, consulting, risk of association, etc. In general, the Chinese and Ningbo policies make provisions on salary, working hours, labor protection and labor disputes, and prohibit forced labor and child labor, which is completely consistent with the requirements of ESS2.

Table 2 Applicable PRC Laws relating to Labor and Working Conditions

No.	Title	Effective year
1	China's Labor Law	1995, amended in 2018
2	Provisions of the State Council on Working Hours of Workers and Staff	1995
3	China's Emergency Incident Response Law	2007
4	Regulations on the Implementation of China's Labor Contract Law	2008
5	China's Labor Contract Law	2008, amended in 2012
6	Special Rules on Labor Protection of Female Employees	2012
7	China's Law on the Prevention and Control of Occupational Diseases	2017

Table 3 List of ILO Conventions Approved by China

Convention	Date
Basic conventions (4)	
C100 - Equal Remuneration Convention, 1951 (No.100)	1990.12.02
C111 - Discrimination (Employment and Occupation) Convention, 1958	2006.01.12

Convention	Date
(No.111)	
C138 - Minimum Age Convention, 1973 (No.138), specifying the minimum wage of 16 years	1999.04.28
C182 - Worst Forms of Child Labor Convention, 1999 (No.182)	2002.08.08
Governance (priority) conventions (2)	
C122 - Employment Policy Convention, 1964 (No.122)	1997.12.17
C144 - Tripartite Consultation (International Labor Standards) Convention, 1976 (No.144)	1990.11.02
Technical conventions (14)	
C011 - Right of Association (Agriculture) Convention, 1921 (No.11)	1934.04.27
C014 - Weekly Rest (Industry) Convention, 1921 (No. 14)	1934.05.17
C019 - Equality of Treatment (Accident Compensation) Convention, 1925 (No. 19)	1934.04.27
C026 - Minimum Wage-Fixing Machinery Convention, 1928 (No. 26)	1930.05.05
C027 - Marking of Weight (Packages Transported by Vessels) Convention, 1929 (No. 27)	1931.06.24
C032 - Protection against Accidents (Dockers) Convention (Revised), 1932 (No. 32)	1935.11.30
C045 - Underground Work (Women) Convention, 1935 (No. 45)	1936.12.02
C080 - Final Articles Revision Convention, 1946 (No. 80)	1947.08.04
C150 - Labor Administration Convention, 1978 (No. 150)	2002.03.07
C155 - Occupational Safety and Health Convention, 1981 (No. 155)	2007.01.25
C159 - Vocational Rehabilitation and Employment (Disabled Persons) Convention, 1983 (No. 159)	1988.02.02
C167 - Safety and Health in Construction Convention, 1988 (No. 167)	2002.03.07
C170 - Chemicals Convention, 1990 (No. 170)	1995.01.11
Maritime Labor Convention, 2006 (MLC) According to A4.5 (2) and (10), the government designates the following social security sectors: medical, unemployment benefit, pension, employment injury benefit, and maternity benefit.	2015.12.12, amended in 2016 and 2018

Source: official website of ILO, December 29, 2020

On this basis, the Company is establishing detailed HR and safety management systems. As of March 2022, the Company had established and tried out the following systems:

- Safety Management System (trial), October 2021
- Supplier Management System (trial), October 2021
- Renumeration Management System (trial), October 2021
- Employee Recruitment and Transfer Management System (trial), November 2021
- Reward and Punishment Management System (trial), November 2021

- Work Safety Management System (trial), March 2022

When the Company signs a labor contract with a worker, its basic terms and conditions include detailed job requirements, scope and place of work, working and rest hours, remuneration, bonus, social insurance, labor protection, labor conditions, occupational hazard protection, and economic compensation. During the contract term, an employee may consult the HR staff at any time. Both parties may alter the contract when reaching an agreement. The working hours at the Company will comply with China's policies. In case of overtime work, an overtime pay will be paid according to policies[17]. Employees are entitled to paid leaves. For example, if an employee has a service length of less than 10 years, he/she is entitled to a paid annual leave of 5 days; if an employee has a service length of 10 years or more, he/she is entitled to a paid annual leave of 10 days.

The Company's employees are entitled to statutory social insurance (endowment, medical, unemployment, accident, maternity, etc.), and a housing provident fund. Female employees' extra benefits are based on the applicable state and local regulations, such as the Measures for the Labor Protection of Female Workers of Zhejiang Province.

China's Labor Law and the Labor Contract Law have clear provisions on employment, labor contract management and leaves, and the Company's relevant practices comply with such provisions, and are communicated to all employees through induction training, on-the-job training and routine operations. In terms of contract terms and working conditions for **direct hires**, there is no gap between the Company's practices and ESS2. However, the policies used by the PIU in managing labor risks of contracted and primary supply workers have gaps from ESS2. The Company have taken measures in this LMP to align them with ESS2.

4 Brief Overview of Labor Legislation: Occupational Health and Safety

In China, there are over one hundred technical specifications and standards for the control of occupational safety and prevention of diseases under the Labor Law system. These technical specifications and standards are developed based on the industry best practices or updated toward the industry best practice, i.e. WHO, and relevant technical codes/norms of EU or USA, and the requirements of the International Labor Conventions[18]. These technical specifications and standards become compulsory to apply in the design and operation of the facilities.

According to the Labor Law and the Law on the Prevention and Control of Occupational Diseases , the main OHS requirements are as follows:

1) Employers shall establish a complete occupational health and safety system, strictly enforce relevant measures and standards, and offer relevant training to workers to prevent accidents at work, and reduce occupational hazards.

[17] In China, enterprises are required: 1) to pay no less than 150 percent of the normal wages if the extension of working hours is arranged; 2) to pay no less than 200 percent of the normal wages if the extended hours are arranged on days of rest and no deferred rest can be taken; and 3) to pay no less than 300 percent of the normal wages if the extended hours are arranged on statutory holidays.

[18] Historical So far, China has signed 25 of the International Labor Conventions, including Convention on Equal Pay for Equal Work (100th convention), Minimum Employment Age Convention (138th convention), The Worst Forms of Child Labor Convention (182th convention), and Employment and Occupation Discrimination Convention (111th convention), etc.

2) Labor safety and health facilities must comply with the applicable national standards. Newly constructed, reconstructed or expanded labor safety and health facilities must be designed, constructed and put into operation together with the main part of the project.
3) Employers shall provide labor safety and health conditions, and necessary labor protection articles complying with the state provisions to workers, and conduct regular health checkups for workers doing hazardous jobs.
4) Workers doing special jobs must receive special training and be qualified for such jobs.
5) Workers must comply strictly with safety operation regulations at work, and shall have the right to reject employer management staff's nonconforming or risky instructions, and criticize or prosecute activities endangering life safety and physical health.
6) The state shall establish a counting, reporting and handling system for casualty accidents and occupational diseases. Labor authorities of governments at or above the county level and employers shall count, report and handle casualty accidents and occupational diseases of workers at work.

The HR procedures and policies drafted by the Company cover OHS requirements for workers, and special equipment operations.

For the construction and operation of this subproject, the rules and regulations drafted by the Company provide labor safety and health conditions, and necessary labor protection articles complying with the state provisions to workers, and conduct regular health checkups for workers. The Company has developed and implemented requirements for special equipment operations. Therefore, no gap is found between the Company's practices and ESS2.

Employees have the right to report any act endangering their health and safety. In addition, employees may file an OHS complaint to the municipal Human Resources and Social Security Bureau. Therefore, the employee GRM complies with ESS2.

5 Responsible Staff

The agencies responsible for this subproject are the Ningbo PMO (civil servants) and the Company.

- **Ningbo PMO:** Ningbo PMO will be responsible for overall project organization, coordination, supervision and guidance, and communicate with the World Bank. The Ningbo PMO has promised to appoint an environmental officer and a social officer, responsible for E&S policy training, document preparation, and implementation and performance evaluation, including labor management.
- **PIU (the Company):** According to the Company's organization structure, the Company will comprise the Financial Center, Human Resources and Administration Dept., Procurement Center, Storage Center, Logistics Center, Information Management Dept., Technology Center, Production Center, etc., in which the Human Resources and Administration Dept. is responsible for the Company's personnel affairs, including recruitment, training, payroll, social insurance and performance evaluation, as well as training on OHS and job skills and duties. As discussed in Sections 3 and 4, the HR management procedures and policies drafted by the Company cover working conditions and OHS for workers.

  The Company will appoint a full-time staff to be responsible for tracking the preparation and implementation of the E&S documents, including labor conditions, OHS, employee grievance redress, direct workers' performance, and contractor labor management, etc.

The Company will establish a sound GRM for employees, including internal and external channels. The Company will offer multiple channels for workers to raise workplace issues. A worker may first report to the person responsible for the workplace or his/her direct supervisor; if he/she is dissatisfied with the reply, he/she may report to the department manager, or finally report to the General Manager. All grievance redress channels run in parallel, and workers may use any channel at their discretion.

In sum, the Company has established sound management procedures for direct workers (especially child labor, forced labor and OHS), meeting the requirements of ESS2. However, as confirmed by the Company, the Company does not currently have policies or procedures for managing risks to workers employed by contractors or primary supplier or community workers that are anticipated under ESS2, and this LMP includes measures to address such gap

In addition, when employing a contractor, the Company will include labor management requirements in the tendering documents. The contractor should comply with ESS2 and this LMP (including the prohibition of child and forced labor, labor terms and conditions, OHS, etc.), include this in its contract, and cause any subcontractor to do the same.

See Section 6 for detailed requirements.

6 Policies and Procedures

China has a relatively sound legal framework on labor and working conditions, especially child labor, forced labor and OHS. Contractors would usually develop a series of management plans and procedures, covering quality, environment, safety management, site management, and worker management, etc.

The Chinese laws stipulate that when an employer employs an employee, it should sign an employment contract with the employee equally and voluntarily to define their rights and obligations. Both China's Labor Law (2018) and Labor Contract Law (2012) apply. The national and municipal policies make provisions on salary, working hours, labor protection and labor disputes, and prohibit forced labor and child labor, which are completely consistent with the requirements of ESS2.

According to Sections 3, 4 and 5, the labor risks identified in Section 2 have been managed effectively under the prevailing LMP.

For the gaps from the ESS2 requirements (e.g., contracted worker management), the Ningbo PMO and the Company will take measures to strengthen the LMP for this subproject to comply with ESS2.

- **Ningbo PMO:** Ningbo PMO will appoint a full-time staff for routine labor risk communication, and provide support to the PIU. The PIU is also required to appoint a full-time staff member to supervise labor and safety performance accordingly. The Ningbo PMO will document the above arrangement in the ESCP.
- **PIU (the Company):** The Company will take the following measures to strengthen contracted worker management -
  - Appointing qualified employees to manage the performance of direct workers and contractors;
  - Implementing this LMP;

- Ensuring that each contractor develops its own LMP according to this LMP;
- Ensuring that the waste collection and transfer contractor develops its own LMP according to this LMP;
- Including detailed COVID-19 prevention and control measures in the contract;
- Monitoring, supervising and reporting health and safety concerns related to COVID-19, including main responsibilities and reporting arrangements related to contractors;
- Strengthening workers' awareness and training to prevent COVID-19 dissemination;
- Strengthening workers' awareness and training to prevent and reduce gender-based violence and sexual harassment;
- Supervising contractors to perform the labor obligations in the General Contract Terms in the tendering documents, and meet the requirements of ESS2 and China's Labor Law;
- Supervising contractors to implement this LMP;
- Ensuring the workplace OHS standard complies with the state OHS laws and OHS plan;
- Supervising the waste collection and transfer contractor to ensure the safety of waste collection and transfer, stressing the safety rules for drivers, improving their driving skills, and preparing a rational work schedule to avoid fatigue driving;
- Supervising project workers training;
- Ensuring that a GRM available to all types of project workers is established, and supervising its implementation;
- Supervising primary suppliers to take measures to correct potential risks related to child labor forced labor and OHS;
- Reporting the performance of project workers to the Ningbo PMO **semiannually**.

- **Contractors:** The contract shall include provisions on compliance with ESS2. Contractors and subcontractors shall assume the following duties -
  - Developing an LMP and an OHS plan, which will be submitted to the PIU for approval;
  - Keeping recruitment and employment records of contracted workers;
  - Notifying job descriptions and labor conditions to contracted workers;
  - Developing and implementing a labor GRM;
  - Implementing prevention and control measures for COVID-19 and other infectious diseases;
  - Monitoring, supervising and reporting health and safety concerns related to COVID-19;
  - Strengthening workers' awareness and training to prevent and reduce COVID-19 dissemination risks;
  - Strengthening workers' awareness and training to prevent and reduce gender-based violence and sexual harassment;
  - Establishing a regular review and reporting system on worker OHS performance;
  - Offering induction, and health and safety training to workers regularly;
  - Ensuring that all workers confirm that they understand the working requirements in writing;
  - Updating its LMP if necessary;
  - Reporting the labor performance of contracted workers to the PIU **monthly**

- **Third-party monitor:** Ningbo PMO will appoint a third-party monitor to evaluate the performance of all types of workers, and the TORs should meet the Bank requirements.

7 Age of Employment

China's Labor Law (2018) defines minimum working age at 16, which is more stringent than the requirements of ESS 2 (14 years old).

Both China's Labor Law (2018) and Regulation on Special Protection for Juvenile Workers (1994) sets out specific protection for juvenile workers (aged from 16 to 18). Juvenile workers should be prohibited in working in a few hazardous positions such in unhealthy, hazardous or toxic circumstance, during the night, with dangerous machinery, equipment or tools, or involving handling or transport of heavy loads.

The Company complies strictly with China's policy on the prohibition of child and forced labor. Qualified candidates should have received undergraduate or above education, with a minimum age of 21-22 years. As of August 2021, the youngest employee of the Company was 21 years old. Before employment, the Company asks every candidate to provide basic information (e.g., a copy of the ID card) for further verification by the HR Dept.

During the construction and operation of this subproject, the Company will ask its contractors and primary suppliers to verify the age of all workers to assure no child labor will be employed or engaged with this subproject. This will require workers to provide official documentation, which could include a birth certificate, national identification card, or medical or school record.

If a child under the minimum age is identified working on this subproject, measures will be taken to immediately terminate the employment or engagement of the child in a responsible manner, considering the best interest of the child.

8 Terms and Conditions

As shown in legal review (Section 3 in this LMP), China has established very comprehensive regulations regarding terms and conditions for a labor contract, which are deemed in alignment with relevant requirements of ESS2.

The Company can sign a labor contract in writing with an employee. The labor contract should cover the basic terms and conditions, including the term of specific job positions, work content and place of work, work time and rest time, labor remuneration, bonus and social insurances, labor protection, labor conditions and protection against occupational hazards, and specified economic compensation. The content of a labor contract should be reached through prior consensus between the employer and an employee, without any violation against China's labor related regulations and the requirements of ESS2.

Contractors' labor management procedures will set out terms and conditions for the contracted workers. These terms and conditions will meet the requirements of ESS2 and the ESCP, and be aligned with this LMP.

9 GRM

Ningbo PMO and the Company will establish and implement a GRM for workers, including direct workers. Ningbo PMO and the Company have established grievance redress hotlines (0574-87191097 and 0574-56177703). In addition, the Company will ask contractors to develop and implement a GRM for workers.

The construction contractors will prepare their labor management procedure before subproject construction, which will also include detailed description of the GRM for workers, which includes:

- A procedure to receive grievances such as comment/complaint form, suggestion boxes, email, a telephone hotline;
- Stipulated timeframes to respond to grievances;
- A registration system to record and track the timely resolution of grievances;
- A responsible unit to receive, record and track resolution of grievances.

The Company will assign dedicated staff to supervise grievance redress by contractors, and report to the PMO in **monthly** progress reports.

The GRM for workers will be described in staff induction training, which will be provided to all project workers. The mechanism will be based on the following principles:

- The process will be transparent and allow workers to express their concerns and file grievances.
- There will be no discrimination against those who express grievances and any grievances will be treated confidentially.
- Anonymous grievances will be treated equally as other grievances, whose origin is known.
- Grievances will be seriously treated and timely and appropriate action in response will be taken.

Information about the existence of the GRM will be readily available to all project workers (direct and contracted) through the PIU's website, staff meetings, and other means as needed.

In addition, Ningbo Municipal Human Resources and Social Security Bureau has disclosed the appeal hotlines of all municipal and district labor protection supervision agencies on its official website (http://rsj.ningbo.gov.cn/art/2018/10/9/art_1229130162_49605564.html), so that all workers can file grievances about labor contracts, remuneration, working conditions, etc.

The GRM for workers will not prevent workers to use the mediation procedure provided in the China's Labor Law. The basic procedure is as follows:

Stage 1: The party that seeks arbitration shall file a written application to the labor dispute arbitration committee within 60 days starting from the date of the occurrence of labor dispute. In general, the arbitration committee shall produce a ruling within 60 days after receiving the application. The parties involved shall implement arbitration rulings if they do not have any objections to these rulings. Labor dispute arbitration committees shall comprise the representatives of labor administrative departments, representatives from trade unions at the same level, and the employer representatives. The chairmanship of such a committee shall be held by the representative of a labor administrative department.

Stage 2: If any of the parties involved in a labor dispute has objections to an arbitration ruling, it can raise a lawsuit with the People's Court within 15 days after receiving the ruling.

10 Contractor Management

The PIU will ask all contractors participating in the Project to operate in a manner that complies with the ESS (including the requirements in the ESCP). Contractor management is conducted through the tendering process. The tendering documents shall meet the Bank's requirements, including labor, OHS, and COVID-19 prevention and control.

As part of the process to select construction contractors who will engage contracted workers, the Company will review the following information:

- Information in public records, for example, corporate registers and public documents relating to violations of applicable labor law, including reports from labor inspectorates and other enforcement bodies;
- Business licenses, registrations, permits, and approvals;
- Documents relating to a labor management system, including OHS issues, for example, labor management procedures;
- Identification of labor management, safety, and health personnel, their qualifications, and certifications;
- Workers' certifications/permits/training to perform required work;
- Records of safety and health violations, and responses;
- Accident and fatality records and notifications to authorities;
- Records of legally required worker benefits and proof of workers' enrollment in the related programs;
- Worker payroll records, including hours worked and pay received; and
- Copies of previous contracts with contractors and suppliers, showing inclusion of provisions and terms reflecting ESS2.

The bidding document will screen out any bidder that uses child labor or involve historic child labor use. Per China's Labor Law, the minimum working age is 16 years old. The contracts with selected contractors will include provisions related to labor and occupational health and safety, as set out in ESS2 and China's regulations.

The Company will manage and supervise the performance of contractors, with focus on their contract compliance, possibly including regular auditing, on-site inspection and/or record review. Contractors' labor management records and reports may include:

- A representative sample of employment contracts or arrangements between third parties and contracted workers;
- Records relating to grievances received and their resolution;
- Reports relating to safety inspections, including fatalities and incidents and implementation of corrective actions;
- Records relating to incidents of non-compliance with national law; and
- Records of training provided for contracted workers to explain labor and working conditions and OHS for the subproject.

Contractor labor performance should be part of project implementation progress reports submitted to Ningbo PMO.

11 Primary Supply Workers

The Company will review primary suppliers to identify their labor force, and screen major risks and impacts, especially forced labor, child labor, and serious workplace safety problems.

If a primary supplier has any major child labor or forced labor risk, or any serious safety problem, the Company should take the following measures:

- Assess the level of major risks related to primary suppliers' workers, and designing appropriate mitigation measures in the SMP;

- Following up with primary suppliers on quarterly basis forthe implementation status of environmental measures (if any), thereby ensuring that labor management is well implemented, and reporting their labor performance to the Ningbo PMO regularly as part of progress reports;
- If it is impossible to take any remedy for any identified labor risk, the PIU will transfer primary suppliers to suppliers that can prove their compliance with ESS2 within a reasonable period.

Appendix 2.2 LMP for Centralized Plastic Waste Sorting and Processing Plant, and Recyclables Sorting Centers

The centralized plastic waste sorting and processing plant, and the 4 recyclables sorting centers are among the Batch 2 subprojects. Its owner is Ningbo Haijing Resource Recycling Technology Co., Ltd. (hereinafter, the "Company"), which was founded in May 2021.

The Company is 70% funded by Ningbo Fubang Green Energy Technology Co., Ltd., with a registered capital of 30 million yuan. Its business scope is the import of waste plastics usable as raw materials, recycling of waste plastics, cleaning, processing, production and sale of recycled plastic particles and products, sale of synthetic rubbers, and import and export of various commodities and technologies either directly or as an agent (except those restricted or prohibited by the state).

This LMP is a living document, and is based on the SIA on the Batch 2 subprojects, and the Company's personnel policies and management systems.

In October 2021, the Company established a series of HR management and work safety systems. With the progress of the Project, the Company will further improve its LMP in accordance with the Bank's ESS2, and the applicable laws and regulations of China.

1 Overview of Project Workers

According to the definition of project workers in ESS2, the centralized plastic waste sorting and processing plant involves direct hires, contract workers and primary suppliers' workers.

Direct hires: People employed directly by Ningbo PMO and PIUs specifically for project management[19], including technicians, and operation and management staff, all with relevant experience;

Contract workers: Construction workers contract including those for the construction of the centralized plastic waste sorting and processing plant. At the operation stage, semi-finished products from the recyclables sorting centers may be transferred by drivers hired by a third party.

Primary suppliers'' workers: Mainly to the workers of key suppliers providing necessary goods or raw materials directly for a project's core functions. Primary suppliers' workers are workers at the recyclables sorting centers[20] mainly.

An estimate of types and numbers of workers of the centralized plastic waste sorting and processing plant is shown in Table 1.

Table 1 Estimate of Types and Numbers of Project Workers

Subproject	Stage		Direct hires	Contract workers	Primary suppliers' workers
Centralized plastic	Construction	Civil works	10	300	0
		Equipment installation	10	40	0

[19] Some workers may be full-time or part-time civil servants. If there is no valid transfer certificate indicating that he/she has been employed for the Project, his/her public sector employment agreement applies, and the requirements on labor protection (Clauses 17~20) and OHS (Clauses 24~30) of ESS2 should be met.

[20] The recyclables sorting centers are also one of the Batch 2 subprojects, implemented by Ningbo Dabashou Eco-digital Technology Co., Ltd., which has prepared an LMP according to ESS2.

Subproject	Stage	Direct hires	Contract workers	Primary suppliers' workers
waste sorting and processing plant	Trial operation	50-60	60	0
	Stable operation	100-115	60[21]	0

Source: estimated by the Company

All direct hires will be from the Company. Since the Company has been newly established, it has a workforce of less than 10, all having received undergraduate or above education. The Company is in the process of recruitment.

The Company will review labor management systems of bidding contractors through its bidding mechanism, and ask contractors to establish labor management procedures in accordance with ESS2. Bidding is under preparation, so it is uncertain if contracted workers include non-local workers, which will be further identified during implementation.

Primary suppliers' workers of the centralized plastic waste sorting and processing plant are workers (about 10 each) and drivers at the recyclables sorting centers. According to the SIA, since sorting is unskilled, sorters will be from nearby villages, mostly women.

2 Screening of Potential Significant Labor Risks

2.1 Subproject activities

The centralized plastic waste sorting and processing plant is located in the Ningbo resource recycling base, with a floor area of 85.7 mu and a total new building area of 60,000 m^2. After completion, it will have treatment capacity of 40,000 tons of plastics annually.

2.2 Major labor risks

At the preparation stage, a social impact survey and extensive stakeholder engagement were conducted, and major labor risks were identified. According to the SIA, the Project is located in the developed city of Ningbo, where the government has well-established labor management and supervision systems for enterprises, so the labor risks are negligible or very low, mainly including:

- Forced labor and child labor
- Discrimination in recruitment

According to the scope, scale and nature of the centralized plastic waste sorting and processing plant, major labor risks related that may be encountered by workers include:

A. Construction stage

- **Dangerous work**: Construction workers working at height or in confined spaces, or using heavy machinery or dangerous materials;
- **Safety risks in machinery operation**: Accidents of construction workers during construction, such as welding, cutting and operating relevant tools;
- **Noise from mechanical construction**: Loud, repeated and excessive noises that may arise during construction, possibly leading to long-term hearing problems, such as deafness, and also being a dangerous distraction that increases accident risks;

[21] Mostly drivers of plastic waste, to be recruited by a third-party labor service company

- **Emergency risks**: Emergencies and quality safety accidents arising from unsound civilized construction and quality safety management measures, or inadequate management;
- **Sexual harassment or gender-based violence risks**: Physical or mental violence against women due to gender or lifestyle differences;
- **Workplace accidents**: Safety accidents arising from work shed collapse due to quality problems or natural disasters;
- **Health and infection risks**: Disease infection risks (e.g., COVID-19) arising from the improper diet and accommodation management, or health management of construction workers;
- **Renumeration**: Workers' rights and interests unsecured because contractors fail to strictly enforce the applicable laws and regulations, and enter into employment contracts.

B. Operation stage

- **Traffic**: Potential traffic accidents during the transport of sorted recyclables;
- **Noise from machinery operation**: Such as noises generated by sorting and crushing machines, etc.; loud, repeated and excessive noises, possibly leading to long-term hearing problems, such as deafness, and also being a dangerous distraction that increases accident risks;
- **Dust pollution**: Dust and volatile organic substances generated by plastic crushing and granulation during operation;
- **Industrial vehicles**: Improper operation of forklifts in the working area;
- **Emergency accidents**: Mis-operation of smart equipment leading labor health and life risks;
- **Infection**: Disease infection risks (e.g., COVID-19) during recyclables (waste) collection and transfer, and close contact with people.

During preparation, Ningbo PMO investigated the Company's labor management according to ESS2 to analyze and summarize the gaps between the Company's labor management and ESS2, and propose enhancement measures.

3 Brief Overview of Labor Legislation: Terms and Conditions

China has established a sound system of laws and regulations on labor management. As a member of the International Labor Organization (ILO), China has approved 26 conventions (including 20 that have taken effect), including equal remuneration, discrimination, minimum age, child labor, OHS, employment policy, consulting, risk of association, etc. In general, the Chinese and Ningbo policies make provisions on salary, working hours, labor protection and labor disputes, and prohibit forced labor and child labor, which is completely consistent with the requirements of ESS2.

Table 2 Applicable PRC Laws relating to Labor and Working Conditions

No.	Title	Effective year
1	China's Labor Law	1995, amended in 2018
2	Provisions of the State Council on Working Hours of Workers and Staff	1995

No.	Title	Effective year
3	China's Emergency Incident Response Law	2007
4	Regulations on the Implementation of China's Labor Contract Law	2008
5	China's Labor Contract Law	2008, amended in 2012
6	Special Rules on Labor Protection of Female Employees	2012
7	China's Law on the Prevention and Control of Occupational Diseases	2017

Table 3 List of ILO Conventions Approved by China

Convention	Date
Basic conventions (4)	
C100 - Equal Remuneration Convention, 1951 (No.100)	1990.12.02
C111 - Discrimination (Employment and Occupation) Convention, 1958 (No.111)	2006.01.12
C138 - Minimum Age Convention, 1973 (No.138), specifying the minimum wage of 16 years	1999.04.28
C182 - Worst Forms of Child Labor Convention, 1999 (No.182)	2002.08.08
Governance (priority) conventions (2)	
C122 - Employment Policy Convention, 1964 (No.122)	1997.12.17
C144 - Tripartite Consultation (International Labor Standards) Convention, 1976 (No.144)	1990.11.02
Technical conventions (14)	
C011 - Right of Association (Agriculture) Convention, 1921 (No.11)	1934.04.27
C014 - Weekly Rest (Industry) Convention, 1921 (No. 14)	1934.05.17
C019 - Equality of Treatment (Accident Compensation) Convention, 1925 (No. 19)	1934.04.27
C026 - Minimum Wage-Fixing Machinery Convention, 1928 (No. 26)	1930.05.05
C027 - Marking of Weight (Packages Transported by Vessels) Convention, 1929 (No. 27)	1931.06.24
C032 - Protection against Accidents (Dockers) Convention (Revised), 1932 (No. 32)	1935.11.30
C045 - Underground Work (Women) Convention, 1935 (No. 45)	1936.12.02
C080 - Final Articles Revision Convention, 1946 (No. 80)	1947.08.04
C150 - Labor Administration Convention, 1978 (No. 150)	2002.03.07
C155 - Occupational Safety and Health Convention, 1981 (No. 155)	2007.01.25
C159 - Vocational Rehabilitation and Employment (Disabled Persons) Convention, 1983 (No. 159)	1988.02.02
C167 - Safety and Health in Construction Convention, 1988 (No. 167)	2002.03.07
C170 - Chemicals Convention, 1990 (No. 170)	1995.01.11
Maritime Labor Convention, 2006 (MLC) According to A4.5 (2) and (10), the government designates the following social security sectors: medical, unemployment benefit, pension, employment injury benefit, and maternity benefit.	2015.12.12, amended in 2016 and 2018

Source: official website of ILO, December 29, 2020

On this basis, the Company is establishing detailed personnel and safety management systems. As of March 2022, the Company had established and tried out the following systems:

- Workplace Attendance Management System (trial), October 2021
- Contract Management System (trial), October 2021
- Safety Management System (trial), October 2021
- Supplier Management System (trial), October 2021
- Renumeration Management System (trial), October 2021
- Recruitment Management System (trial), December 2021
- Employee Recruitment and Transfer Management System (trial), December 2021
- Work Safety Management System (trial), March 2022

When the Company signs a labor contract, its basic terms and conditions include detailed job requirements, scope and place of work, working and rest hours, remuneration, bonus, social insurance, labor protection, labor conditions, occupational hazard protection, and economic compensation. During contract performance, an employee may consult the HR staff at any time. Both parties may alter the contract when reaching an agreement. The working hours of the company comply with China's policies. In case of overtime work, an overtime pay will be paid according to policies[22]. Employees are entitled to paid leaves. For example, if an employee has a service length of less than 10 years, he or she is entitled to a paid annual leave of 5 days; if an employee has a service length of 10 years or more, he or she is entitled to a paid annual leave of 10 days.

The Company's employees are entitled to statutory social insurance (endowment, medical, unemployment, accident, maternity, etc.), and a housing provident fund. Female employees' extra benefits are based on the applicable state and local regulations, such as the Measures for the Labor Protection of Female Workers of Zhejiang Province.

China's Labor Law and the Labor Contract Law have clear provisions on employment, labor contract management and leaves, and the Company's relevant practices comply with such provisions, and are communicated to all employees through induction training, on-the-job training and routine operations. In terms of contract terms and working conditions for **direct hires**, there is no gap between the Company's practices and ESS2. However, the policies used by the PIU in managing labor risks of contracted and primary supply workers have significant gaps from ESS2. The Ningbo PMO and the Company have taken measures in this LMP to align them with the ESS2.

4 Brief Overview of Labor Legislation: Occupational Health and Safety

In China, there are over one hundred technical specifications and standards for the control of occupational safety and prevention of diseases under the Labor Law system. These technical specifications and standards are developed based on the industry best practices or updated toward the industry best practice, i.e. WHO, and relevant technical codes/norms of EU or USA, and the

[22] In China, enterprises are required: 1) to pay no less than 150 percent of the normal wages if the extension of working hours is arranged; 2) to pay no less than 200 percent of the normal wages if the extended hours are arranged on days of rest and no deferred rest can be taken; and 3) to pay no less than 300 percent of the normal wages if the extended hours are arranged on statutory holidays.

requirements of the International Labor Conventions [23]. These technical specifications and standards become compulsory to apply in the design and operation of the facilities.

According to the Labor Law and the Law on the Prevention and Control of Occupational Diseases, the main OHS requirements are as follows:

1) Employers shall establish a complete occupational health and safety system, strictly enforce relevant measures and standards, and offer relevant training to workers to prevent accidents at work, and reduce occupational hazards.
2) Labor safety and health facilities must comply with the applicable national standards. Newly constructed, reconstructed or expanded labor safety and health facilities must be designed, constructed and put into operation together with the main part of the project.
3) Employers shall provide labor safety and health conditions, and necessary labor protection articles complying with the state provisions to workers, and conduct regular health checkups for workers doing hazardous jobs.
4) Workers doing special jobs must receive special training and be qualified for such jobs.
5) Workers must comply strictly with safety operation regulations at work, and shall have the right to reject employer management staff's nonconforming or risky instructions, and criticize or prosecute activities endangering life safety and physical health.
6) The state shall establish a counting, reporting and handling system for casualty accidents and occupational diseases. Labor authorities of governments at or above the county level and employers shall count, report and handle casualty accidents and occupational diseases of workers at work.

The HR procedures and policies drafted by the Company cover OHS requirements for workers, and special equipment operations.

For the construction and operation of the centralized plastic waste sorting and processing plant, the rules and regulations drafted by the Company provide labor safety and health conditions, and necessary labor protection articles complying with the state provisions to workers, and conduct regular health checkups for workers. The Company has developed and implemented requirements for special equipment operations. Therefore, there is no gap found between the Company's practices and the ESS2.

Employees have the right to report any act endangering their health and safety. In addition, employees may file an OHS complaint to the municipal human resources and social security bureau. Therefore, the employee GRM complies with the ESS2.

5 Responsible Staff

The agencies responsible for the centralized plastic waste sorting and processing plant are Ningbo PMO (civil servants) and the Company.

- **Ningbo PMO**: Ningbo PMO will be responsible for the overall project organization, coordination, supervision and guidance, and communicate with the Bank. Ningbo PMO has promised to appoint an environmental officer and a social staff to be responsible for

[23] Historical So far, China has signed 25 of the International Labor Conventions, including Convention on Equal Pay for Equal Work (100th convention), Minimum Employment Age Convention (138th convention), The Worst Forms of Child Labor Convention (182th convention), and Employment and Occupation Discrimination Convention (111th convention), etc.

E&S policy training, document preparation, and implementation and performance evaluation, including labor management.

- **PIU (the Company)**: According to the Company's organization structure, the Company will consist of the Financial Center, General Affairs Office (including the Human Resources Dept., Administration Dept., Public Relations Dept.), Procurement Center, Operations Center, Project Information Management Center, Production Technology Center, etc., in which the Human Resources Dept. of the General Affairs Office is responsible for the Company's HR affairs, including employee recruitment, training, payroll, social insurance and performance evaluation, as well as training on OHS and job skills and duties. As discussed in Sections 3 and 4, the personnel management procedures and policies drafted by the Company cover working conditions and OHS for workers.

The Company will appoint a full-time staff to be responsible for E&S document management, including labor conditions, OHS, employee grievance redress, direct workers' performance, management of contracted workers and primary supply workers, etc.

The Company will establish a sound GRM for employees, including internal and external channels. The Company will offer multiple channels for workers to raise workplace issues. A worker may first report to the person responsible for the workplace or his/her direct supervisor; if he/she is dissatisfied with the reply, he/she may report to the department manager, or finally report to the General Manager. All grievance redress channels run in parallel, and workers may use any channel at their discretion.

In sum, the Company has established a sound management procedure for direct workers (especially child labor, forced labor and OHS), meeting the requirements of ESS2. However, as confirmed by the Company, the Company does not currently have policies or procedures for managing risks to workers employed by contractors or primary supplier or community workers that are anticipated under ESS2, and this LMP includes measures to address such gap.

In addition, when employing a contractor, the Company will include labor management requirements in the tendering documents. The contractor should comply with the ESS2 and this LMP (including the prohibition of child and forced labor, labor terms and conditions, OHS, etc.), include this in its contract, and cause any subcontractor to do the same.

See Section 6 for detailed requirements.

6 Policies and Procedures

China has a relatively sound legal framework on labor and working conditions, especially child labor, forced labor and OHS. Contractors would usually develop a series of management plans and procedures, covering quality, environment, safety management, site management, worker management, etc.

The Chinese laws stipulate that when an employer employs an employee, it should sign an employment contract with the employee equally and voluntarily to define their rights and obligations. Both China's Labor Law (2018) and Labor Contract Law (2012) apply. The national and municipal policies make provisions on salary, working hours, labor protection and labor

disputes, and prohibit forced labor and child labor, which is completely consistent with the requirements of ESS2.

According to Sections 3, 4 and 5, the labor risks identified in Section 2 have been managed effectively under the prevailing LMP.

For the gaps from the ESS2 requirements (e.g., management of contracted workers and primary supply workers), Ningbo PMO and the Company will take measures to strengthen the LMP to comply with ESS2.

- **Ningbo PMO**: Ningbo PMO will appoint a full-time staff member for routine labor risk communication, and provide support to the PIU. The PIU is also required to appoint a full-time staff member to supervise labor and safety performance. Ningbo PMO will document the above arrangements in the ESCP.
- **PIU (the Company)**: The Company will take the following measures to strengthen contracted worker management –
  - Appointing qualified employees to manage the performance of direct workers and contractors;
  - Implementing this LMP;
  - Ensuring that each contractor develops its own LMP according to this LMP;
  - Ensuring that the waste collection and transfer contractor develops its own LMP according to this LMP;
  - Including detailed COVID-19 prevention and control measures in the contract;
  - Monitoring, supervising and reporting health and safety concerns related to COVID-19, including main responsibilities and reporting arrangements related to contractors;
  - Strengthening workers' awareness and training to prevent COVID-19 dissemination;
  - Supervising contractors to perform the labor obligations in the General Contract Terms in the tendering documents, and meet the requirements of ESS2 and China's Labor Law;
  - Supervising contractors to implement this LMP;
  - Ensuring that the workplace OHS standard complies with the state OHS laws and OHS plan;
  - Supervising the waste collection and transfer contractor to ensure the safety of waste collection and transfer, stressing the safety rules for drivers, improving their driving skills, and preparing a rational work schedule to avoid fatigue driving;
  - Supervising project worker training;
  - Ensuring that a GRM available to all types of project workers is established, and supervising its implementation;
  - Supervising primary suppliers to take measures to correct potential risks related to child labor forced labor and OHS;
  - Reporting the performance of project workers to the Ningbo PMO semiannually
- **Contractors**: The contract shall include provisions on compliance with ESS2. Contractors and subcontractors shall assume the following duties –

- Developing an LMP and an OHS plan, which will be submitted to the PIU for approval;
- Keeping recruitment and employment records of contracted workers;
- Notifying job descriptions and labor conditions to contracted workers;
- Developing and implementing a labor GRM;
- Implementing prevention and control measures for COVID-19 and other infectious diseases;
- Monitoring, supervising and reporting health and safety concerns related to COVID-19,
- Strengthening workers' awareness and training to prevent and reduce COVID-19 dissemination risks;
- Strengthening workers' awareness and training to prevent and reduce gender-based violence and sexual harassment;
- Establishing a regular review and reporting system on worker OHS performance;
- Offering induction, and health and safety training to workers regularly;
- Ensuring that all workers confirm that they understand the working requirements in writing;
- Updating its LMP if necessary;
- Reporting the labor performance of contracted workers to the PIU monthly

- **Third-party monitor**: The Ningbo PMO will appoint a third-party monitor to evaluate the performance of all types of workers, and the TORs should meet the Bank requirements.

7 Age of Employment

China's Labor Law (2018) defines minimum working age at 16, which is more stringent than the requirements of ESS 2 (14 years old).

Both China's Labor Law (2018) and Regulation on Special Protection for Juvenile Workers (1994) sets out specific protection for juvenile workers (aged from 16 to 18). Juvenile workers should be prohibited in working in a few hazardous positions such in unhealthy, hazardous or toxic circumstance, during the night, with dangerous machinery, equipment or tools, or involving handling or transport of heavy loads.

The Company complies strictly with China's policy on the prohibition of child and forced labor. Qualified candidates should have received undergraduate or above education, with a minimum age of 21-22 years. As of August 2021, the youngest employee of the Company was 21 years old. Before employment, the Company asks every candidate to provide basic information (e.g., a copy of the ID card) for further verification by the HR Dept.

During the construction and operation of the centralized plastic waste sorting and processing plant, the Company will ask its contractors and primary suppliers to verify the ages of all workers to assure no child labor will be employed. This will require workers to provide official documentation, which could include a birth certificate, national identification card, or medical or school record.

If a child under the minimum age is identified working on the centralized plastic waste sorting and processing plant, measures will be taken to immediately terminate the employment or engagement of the child in a responsible manner, considering the best interest of the child.

8 Terms and Conditions

As shown in legal review (Section 3 in this LMP), China has established very comprehensive regulations regarding terms and conditions for a labor contract, which are deemed in alignment with relevant requirements of the ESS2.

The Company can sign a labor contract in writing with an employee. The labor contract should cover the basic terms and conditions, including the term of specific job positions, work content and place of work, work time and rest time, labor remuneration, bonus and social insurances, labor protection, labor conditions and protection against occupational hazards, and specified economic compensation. The content of a labor contract should be reached through prior consensus between the employer and an employee, without any violation against China's labor related regulations and the requirements of the ESS2.

The contractors' labor management procedures will set out terms and conditions for the contracted workers. These terms and conditions will meet the requirements of the ESS2 and the ESCP, and be aligned with this LMP.

9 GRM

Ningbo PMO and the Company will establish and implement a GRM for workers, including direct hires. Ningbo PMO and the Company have established grievance redress hotlines (0574-8719 1097 and 0574-5617 7690). In addition, the PIU will ask contractors to develop and implement a GRM for workers.

The construction contractors will prepare their labor management procedure before subproject construction, which will also include detailed description of the GRM for workers, which includes:

- A procedure to receive grievances such as comment/complaint form, suggestion boxes, email, a telephone hotline;
- Stipulated timeframes to respond to grievances;
- A registration system to record and track the timely resolution of grievances;
- A responsible unit to receive, record and track resolution of grievances.

The Company will assign dedicated staff to supervise grievance redress by contractors, and report to the PMO in **monthly progress reports**.

The GRM for workers will be described in staff induction training, which will be provided to all project workers. The mechanism will be based on the following principles:

- The process will be transparent and allow workers to express their concerns and file grievances.
- There will be no discrimination against those who express grievances and any grievances will be treated confidentially.
- Anonymous grievances will be treated equally as other grievances, whose origin is known.
- Grievances will be seriously treated and timely and appropriate action in response will be taken.

Information about the existence of the GRM will be readily available to all project workers (direct and contracted) through the PIU's website, staff meetings, and other means as needed.

In addition, the Ningbo Municipal Human Resources and Social Security Bureau has disclosed the appeal hotlines of all municipal and district labor protection supervision agencies on its official

website (http://rsj.ningbo.gov.cn/art/2018/10/9/art_1229130162_49605564.html), so that all workers can file grievances about labor contracts, remuneration, working conditions, etc.

The GRM for workers will not prevent workers to use the mediation procedure provided in the China's Labor Law. The basic procedures are as follows:

Stage 1: The party that asks for arbitration shall file a written application to the labor dispute arbitration committee within 60 days starting from the date of the occurrence of labor dispute. In general, the arbitration committee shall produce a ruling within 60 days after receiving the application. The parties involved shall implement arbitration rulings if they do not have any objections to these rulings. Labor dispute arbitration committees shall be composed of the representatives of labor administrative departments, representatives from trade unions at the same level, and the employer representatives. The chairmanship of such a committee shall be held by the representative of a labor administrative department.

Stage 2: If any of the parties involved in a labor dispute has objections to an arbitration ruling, it can raise a lawsuit with the People's Court within 15 days after receiving the ruling.

10 Contractor Management

The PIU will ask all contractors under the Project to operate in a manner that complies with the ESS (including the requirements in the ESCP). Contractor management is conducted through the tendering process. The tendering documents shall meet the Bank's requirements, including labor, OHS, and COVID-19 prevention and control.

As part of the process to select construction contractors who will engage contracted workers, the Company will review the following information:

- Information in public records, for example, corporate registers and public documents relating to violations of applicable labor law, including reports from labor inspectorates and other enforcement bodies;
- Business licenses, registrations, permits, and approvals;
- Documents relating to a labor management system, including OHS issues, for example, labor management procedures;
- Identification of labor management, safety, and health personnel, their qualifications, and certifications;
- Workers' certifications/permits/training to perform required work;
- Records of safety and health violations, and responses;
- Accident and fatality records and notifications to authorities;
- Records of legally required worker benefits and proof of workers' enrollment in the related programs;
- Worker payroll records, including hours worked and pay received; and
- Copies of previous contracts with contractors and suppliers, showing inclusion of provisions and terms reflecting ESS2.

The bidding document will screen out any bidder that uses child labor or involve historic child labor use. Per China's Labor Law, the minimum working age is 16 years old. The contracts with

selected contractors will include provisions related to labor and occupational health and safety, as set out in ESS2 and China's regulations.

The Company will manage and supervise the performance of contractors, with focus on their contract compliance, possibly including regular auditing, on-site inspection and/or record review. Contractors' labor management records and reports may include:

- A representative sample of employment contracts or arrangements between third parties and contracted workers;
- Records relating to grievances received and their resolution;
- Reports relating to safety inspections, including fatalities and incidents and implementation of corrective actions;
- Records relating to incidents of non-compliance with national law; and
- Records of training provided for contracted workers to explain labor and working conditions and OHS for the subproject.

Contractor labor performance should be part of the project implementation progress reports to Ningbo PMO.

11 Primary Suppliers' Workers

The Company will review primary suppliers to identify their labor force, and screen major risks and impacts, especially forced labor, child labor and serious safety problems.

The centralized plastic waste sorting and processing plant involves primary suppliers' workers mainly, who are also direct hires or contract workers of the recyclables sorting centers – one of the Batch 2 subprojects. The PIU (Ningbo Dabashou Eco-digital Technology Co., Ltd.) has also prepared and implemented an LMP according to ESS2, so primary supply worker risks are negligible.

At the operation stage, if any additional primary suppliers are involved, the Company will review it to determine the number of primary suppliers' workers, and screen major risks and impacts, with focus on forced labor, child labor and severe safety problems. The key points of review and proposed measures are as follows:

- Evaluating the magnitude of major risks related to primary suppliers' workers, and designing appropriate mitigation measures in the SMP;
- Following up with primary suppliers on quarterly basis for the implementation status of environmental measures (if any), thereby ensuring that labor management is well implemented, and reporting their labor performance to the Ningbo PMO regularly as part of progress reports;
- If it is impossible to take any remedy for any identified labor risk, the PIU will transfer primary suppliers to a suppliers who can prove its compliance with ESS2 within a reasonable period.

Appendix 2.3 LMP for WWTP of the Ningbo Resource Recycling Base

The WWTP of the Ningbo resource recycling base (hereinafter, "this subproject") is one of the Batch 2 subprojects. Its owner is Ningbo Qingyuan Water Environment Service Co., Ltd. (hereinafter, the "Company"), which was founded in March 2021, being a wholly-funded subsidiary of Ningbo Municipal Public Utilities Investment Co., Ltd. Since the Company has been newly established, its HR systems and policies are being formulated and improved, and follow those of its parent company (Ningbo Municipal Public Utilities Investment Co., Ltd.). Currently, all staff of the Company and project workers are from the parent company.

This LMP is a living document, and the current version is based on the SIA on the Batch 2 subprojects, and the personnel policies of Ningbo Municipal Infrastructure Investment Co., Ltd.

Since this subproject is under preparation, the Company has not started operation, and its personnel management and work safety systems are being established, which are expected to be issued and come into effect by the end of December 2022. As of March 2022, the Company had followed the personnel systems and policies of its holding company mainly.

1 Overview of Project Workers

The WWTP of the Ningbo resource recycling base will be reconstructed and expanded within the existing leachate processing plant, with a floor area of 67 mu. After completion, it will have a treatment capacity of 2,500m^3/d, including an additional capacity of 1,800m^3/d and an existing capacity of 700m^3/d.

According to the definition of project workers in ESS2, project activities, key informant interviews and document review, this subproject involves direct workers, contracted workers and primary supply workers.

Direct hires: People employed directly by the Ningbo PMO and PIUs specifically for project management[24], including technicians, and operation and dispatching center staff, all with relevant experience

Contract workers: Construction workers of this subproject, and workers of the third-party operation company that may be appointed at the operation stage

Primary suppliers' workers: Transport and installation workers of new equipment suppliers during future project construction, and workers of suppliers supplying raw materials (e.g., coagulants)

An estimate of types and numbers of workers is shown in Table 1.

Table 1 Estimate of Types and Numbers of Project Workers

Subproject	Stage		Direct hires	Contract workers	Primary suppliers' workers
WWTP of the Ningbo	Construction	Civil works	8	300	5
		Equipment installation	8	30	30

[24] Some workers may be full-time or part-time civil servants. If there is no valid transfer certificate indicating that he/she has been employed for the Project, his/her public sector employment agreement applies, and the requirements on labor protection (Clauses 17~20) and OHS (Clauses 24~30) of ESS2 should be met.

Subproject	Stage	Direct hires	Contract workers	Primary suppliers' workers
resource recycling base	Operation	20	5	5

Source: estimated by the Company

All direct hires will be from Ningbo Municipal Public Utilities Investment Co., Ltd. Currently, Ningbo Municipal Public Utilities Investment Co., Ltd. has a workforce of 41, including 19 female workers. All workers have received junior college or above education, are aged 18 years or above, and have mostly settled in Ningbo. All workers have signed an employment contract, and their salaries, benefits, working hours, and OHS management comply with the applicable state and local laws and regulations.

The Company will review labor management systems of bidding contractors through its bidding mechanism, and ask contractors to establish labor management procedures in accordance with ESS2. Bidding is under preparation, so it is uncertain if contracted workers include non-local workers, which will be further identified during implementation.

2 Screening of Potential Significant Labor Risks

2.1 Subproject activities

The scope of construction of this subproject includes:

1) Reconstruction and expansion within the existing leachate processing plant, including the demolition of the existing administrative room and two-stage wastewater treatment A/O system, and construction of a conditioning tank, two MBR complexes, a vehicle washing center, an administrative room, etc.;
2) Construction of the compound wall, roads, landscaping and other associated works of the plant;
3) Purchase and installation of process equipment

2.2 Major labor risks

At the preparation stage, a social impact survey and extensive stakeholder engagement were conducted on this subproject, and major labor risks were identified. According to the SIA of the Batch 2 subprojects, the Project is located in the developed city of Ningbo, where the government has a well-established labor management and supervision system for enterprises, so this subproject's labor risks are negligible or very low, mainly including:

- Forced labor and child labor
- Discrimination in recruitment

According to the scope, scale and nature of this subproject, major labor risks related that may be encountered by workers include:

A. Construction stage

- **Dangerous work**: Construction workers working at height or in confined spaces, or using heavy machinery or dangerous materials;
- **Safety risks in machinery operation**: Accidents of construction workers during construction, such as welding, cutting and operating relevant tools;
- **Noise from mechanical construction**: Loud, repeated and excessive noises that may arise during construction, possibly leading to long-term hearing problems, such as

deafness, and also being a dangerous distraction that increases accident risks;

- **Emergency risks**: Emergencies and quality safety accidents arising from unsound civilized construction and quality safety management measures, or inadequate management;
- **Sexual harassment or gender-based violence risks**: Physical or mental violence against women due to gender or lifestyle differences;
- **Workplace accidents**: Safety accidents arising from work shed collapse due to quality problems or natural disasters;
- **Health and infection risks**: Disease infection risks (e.g., COVID-19) arising from the improper diet and accommodation management, or health management of construction workers;
- **Renumeration risks**: Workers' rights and interests unsecured because contractors fail to strictly enforce the applicable laws and regulations, and enter into employment contracts.

B. Operation stage

- **OHS risks**: Health problems of WWTP staff due to noise and exposure to chemicals, such as ammonia, hydrogen sulfide and sodium hydroxide;
- **Toxic gases**: Exposure to high-level toxic gases when repair workers work in wastewater manholes and box culverts, such as ammonia and sodium hydroxide;
- **Emergency accidents**: Leakage of wastewater or harmful gases due to system failure, or mistakes in the operation of smart equipment during installation and adjustment leading labor health and life risks;
- **Noise and vibration**: Noise and vibration generated by pumps and blowers in the plant
- **Eye injury**: use of hydrochloric acid, sodium hypochlorite and other liquids;
- **Disease Infection**: Disease infection risks (e.g., COVID-19) during contact with water, and close contact with people;
- **Renumeration**: workers' rights and interests unsecured because contractors fail to strictly enforce the applicable laws and regulations, and enter into employment contracts.

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C170 - Chemicals Convention, 1990 (No. 170)	1995.01.11
Maritime Labor Convention, 2006 (MLC) According to A4.5 (2) and (10), the government designates the following social security sectors: medical, unemployment benefit, pension, employment injury benefit, and maternity benefit.	2015.12.12, amended in 2016 and 2018

Source: official website of ILO, December 29, 2020

On this basis, Ningbo Municipal Public Utilities Investment Co., Ltd. has established detailed regulations on labor and working conditions, pending approval by the board of directors, including:

- Human Resources Management System;
- Workplace Attendance Management System;
- Renumeration Management System;
- Regulations on Duty Watch and Subsidies;
- Training Management System;
- Standard Labor Contract;
- Note on the GRM for employees

When Ningbo Public Utilities Investment Co., Ltd. signs a labor contract, its basic terms and conditions include detailed job requirements, scope and place of work, working and rest hours, remuneration, bonus, social insurance, labor protection, labor conditions, occupational hazard protection, and economic compensation. During contract term, an employee may consult the HR staff at any time. Both parties may alter the contract when reaching an agreement. The working hours comply with China's policies. In case of overtime work, an overtime pay will be paid according to policies[25]. Employees are entitled to paid leaves. For example, if an employee has a service length of less than 10 years, he/she is entitled to a paid annual leave of 5 days; if an employee has a service length of 10 years or more, he/she is entitled to a paid annual leave of 10 days.

The employees of Ningbo Municipal Public Utilities Investment Co., Ltd. are entitled to statutory social insurance (endowment, medical, unemployment, accident, maternity, etc.), and a housing provident fund. Female employees' extra benefits are based on the applicable state and local regulations, such as the Measures for the Labor Protection of Female Workers of Zhejiang Province.

China's Labor Law and the Labor Contract Law have clear provisions on employment, labor contract management and leaves, and the relevant practices of Ningbo Municipal Infrastructure Investment Co., Ltd. comply with such provisions, and are communicated to all employees through induction training, on-the-job training and routine operations. In terms of contract terms and working conditions for **direct hires**, there is no gap between the practices of Ningbo Municipal Public Utilities Investment Co., Ltd. And ESS2. However, the policies used by the PIU in managing labor risks of contracted and primary suppliers' workers have significant gaps from ESS2. Ningbo PMO and the Company have taken measures in this LMP to align them with ESS2.

4 Brief Overview of Labor Legislation: Occupational Health and Safety

In China, there are over one hundred technical specifications and standards for the control of occupational safety and prevention of diseases under the Labor Law system. These technical specifications and standards are developed based on the industry best practice or updated toward the industry best practice, i.e. WHO, and relevant technical codes/norms of EU or USA, and the

[25] In China, enterprises are required: 1) to pay no less than 150 percent of the normal wages if the extension of working hours is arranged; 2) to pay no less than 200 percent of the normal wages if the extended hours are arranged on days of rest and no deferred rest can be taken; and 3) to pay no less than 300 percent of the normal wages if the extended hours are arranged on statutory holidays.

requirements of the International Labor Conventions[26]. These technical specifications and standards become compulsory to apply in the design and operation of the facilities.

According to the Labor Law and the Law on the Prevention and Control of Occupational Diseases, the main OHS requirements are as follows:

1) Employers shall establish a complete occupational health and safety system, strictly enforce relevant measures and standards, and offer relevant training to workers to prevent accidents at work, and reduce occupational hazards.
2) Labor safety and health facilities must comply with the applicable national standards. Newly constructed, reconstructed or expanded labor safety and health facilities must be designed, constructed and put into operation together with the main part of the project.
3) Employers shall provide labor safety and health conditions, and necessary labor protection articles complying with the state provisions to workers, and conduct regular health checkups for workers doing hazardous jobs.
4) Workers doing special jobs must receive special training and be qualified for such jobs.
5) Workers must comply strictly with safety operation regulations at work, and shall have the right to reject employer management staff's nonconforming or risky instructions, and criticize or prosecute activities endangering life safety and physical health.
6) The state shall establish a counting, reporting and handling system for casualty accidents and occupational diseases. Labor authorities of governments at or above the county level and employers shall count, report and handle casualty accidents and occupational diseases of workers at work.

The HR procedures and policies drafted by the Company cover OHS requirements for workers.

For the construction and operation of this subproject, the Company will provide labor safety and health conditions, and necessary labor protection articles complying with the state provisions to workers, and conduct regular health checkups for workers by reference to the rules and regulations of its parent company (Ningbo Municipal Public Utilities Investment Co., Ltd.). There is no gap found between the Company's practices and ESS2.

Employees have the right to report any act endangering their health and safety. In addition, employees may file an OHS complaint to the municipal human resource and social security bureau. Therefore, the employee GRM complies with ESS2.

5 Responsible Staff

The agencies responsible for this subproject are the Ningbo PMO (civil servants) and the Company.

- **Ningbo PMO**: Ningbo PMO will be responsible for the overall project organization, coordination, supervision and guidance, and communicate with the Bank. Ningbo PMO has promised to appoint an environmental staff and a social staff to be responsible for E&S policy training, document preparation, implementation and performance evaluation, including labor management.

[26] Historical So far, China has signed 25 of the International Labor Conventions, including Convention on Equal Pay for Equal Work (100th convention), Minimum Employment Age Convention (138th convention), The Worst Forms of Child Labor Convention (182th convention), and Employment and Occupation Discrimination Convention (111th convention), etc.

- **PIU (the Company)**: According to the Company's preliminary organization structure, the Company will comprise the General Office, Finance Dept., Project Dept., etc., in which the General Office is responsible for the Company's personnel affairs, including recruitment, training, payroll, social insurance and performance evaluation, as well as training on OHS and job skills and duties. As discussed in Sections 3 and 4, the HR procedures and policies of the parent company of the Company cover working conditions and OHS for workers.

  The Company will appoint a full-time staff to be responsible for E&S document management, including labor conditions, OHS, employee grievance redress, direct workers' performance, management of contracted and primary supply workers, etc.

  The Company will establish a sound GRM for employees, including internal and external channels. The Company will offer multiple channels for workers to raise workplace issues. A worker may first report to the person responsible for the workplace or his/her direct supervisor; if he/she is dissatisfied with the reply, he/she may report to the department manager, or finally report to the General Manager. All channels run in parallel, and workers may use any channel at their discretion.

In sum, the Company has established a sound management procedure for direct workers (especially child labor, forced labor and OHS), meeting the requirements of ESS2. However, as confirmed by the Company, the company does not currently have policies or procedures for managing risks to workers employed by contractors or primary supplier that are anticipated under ESS2, and this LMP includes measures to address such gap.

In addition, when employing a contractor, the Company will include labor management requirements in the tendering documents. The contractor should comply with ESS2 and this LMP (including the prohibition of child and forced labor, labor terms and conditions, OHS, etc.), include this in its contract, and cause any subcontractor to do the same.

The Company will establish systems on HR, OHS management, work safety, etc. in accordance with the Bank's ESS2, the applicable laws and regulations of China, and Section 6 below, especially the management and monitoring of contracted and primary workers recruited through third parties.

6 Policies and Procedures

China has a relatively sound legal framework on labor and working conditions, especially child labor, forced labor and OHS. Contractors would usually develop a series of management plans and procedures, covering quality, environment, safety management, site management, worker management, etc.

The Chinese laws stipulate that when an employer employs an employee, it should sign an employment contract with the employee equally and voluntarily to define their rights and obligations. Both China's Labor Law (2018) and Labor Contract Law (2012) apply. The national and Ningbo's municipal policies make provisions on salary, working hours, labor protection and labor disputes, and prohibit forced labor and child labor, which is completely consistent with the requirements of ESS2.

According to Sections 3, 4 and 5, the labor risks identified in Section 2 have been managed effectively under the prevailing LMP.

For the gaps from the ESS2 requirements (e.g., management of contracted and primary supply workers), Ningbo PMO and the Company will take measures to strengthen the LMP for this subproject to comply with ESS2.

- **Ningbo PMO**: Ningbo PMO will appoint a full-time staff member for routine labor risk communication, and provide support to the PIU. The PIU is also required to appoint a full-time staff member to supervise labor and safety performance. The Ningbo PMO will document the above arrangement in the ESCP.
- **PIU (the Company)**: The Company will take the following measures to strengthen the management of contracted and primary supply workers –
    - Appointing qualified employees to manage the performance of direct workers and contractors;
    - Implementing this LMP;
    - Ensuring that each contractor develops its own LMP according to this LMP;
    - Including detailed COVID-19 prevention and control measures in the contract;
    - Monitoring, supervising and reporting health and safety concerns related to COVID-19, including main responsibilities and reporting arrangements related to contractors;
    - Strengthening workers' awareness and training to prevent COVID-19 dissemination;
    - Strengthening workers' awareness and training to prevent and reduce gender-based violence and sexual harassment;
    - Supervising contractors to perform the labor obligations in the General Contract Terms in the tendering documents, and meet the requirements of ESS2 and China's Labor Law;
    - Supervising contractors to implement this LMP;
    - Ensuring that the workplace OHS standard complies with the state OHS laws and OHS plan;
    - Supervising project worker training;
    - Ensuring that a GRM available to all types of project workers is established, and supervising its implementation;
    - Supervising primary suppliers to take measures to correct potential risks related to child labor forced labor and OHS;
    - Reporting the performance of project workers to the Ningbo PMO **semi-annually**
- **Contractors**: The contract shall include provisions on compliance with ESS2. Contractors and subcontractors shall assume the following duties –
    - Developing an LMP and an OHS plan, which will be submitted to the PIU for approval;
    - Keeping recruitment and employment records of contracted workers;
    - Notifying job descriptions and labor conditions to contracted workers;
    - Developing and implementing a labor GRM;
    - Implementing prevention and control measures for COVID-19 and other infectious diseases;
    - Monitoring, supervising and reporting health and safety concerns related to COVID-19,
    - Strengthening workers' awareness and training to prevent and reduce COVID-19 dissemination risks;

- Strengthening workers' awareness and training to prevent and reduce gender-based violence and sexual harassment;
- Establishing a regular review and reporting system on worker OHS performance;
- Offering induction, and health and safety training to workers regularly;
- Ensuring that all workers confirm that they understand the working requirements in writing;
- Updating its LMP if necessary;
- Reporting the labor performance of contracted workers to the PIU **monthly**

- **Third-party monitor:** Ningbo PMO will appoint a third-party monitor to evaluate the performance of all types of workers, and the TORs should meet the Bank requirements.

7 Age of Employment

China's Labor Law (2018) defines minimum working age at 16, which is more stringent than the requirements of ESS 2 (14 years old).

Both China's Labor Law (2018) and Regulation on Special Protection for Juvenile Workers (1994) sets out specific protection for juvenile workers (aged from 16 to 18). Juvenile workers should be prohibited in working in a few hazardous positions such in unhealthy, hazardous or toxic circumstance, during the night, with dangerous machinery, equipment or tools, or involving handling or transport of heavy loads.

The Company complies strictly with China's policy on the prohibition of child and forced labor. Qualified candidates should have received undergraduate or above education, with a minimum age of 21-22 years. As of August 2021, the youngest employee of Ningbo Municipal Infrastructure Investment Co., Ltd. was 22 years old. Before employment, Ningbo Municipal Infrastructure Investment Co., Ltd. asks every candidate to provide basic information (e.g., a copy of the ID card) for further verification by the HR Dept.

During the construction and operation of this subproject, the Company will ask its contractors and primary suppliers to verify the ages of all workers to assure no child labor will be employed or engaged with this subproject. This will require workers to provide official documentation, which could include a birth certificate, national identification card, or medical or school record.

If a child under the minimum age is identified working on this subproject, measures will be taken to immediately terminate the employment or engagement of the child in a responsible manner, considering the best interest of the child.

8 Terms and Conditions

As shown in legal review (Section 3 in this LMP), China has established very comprehensive regulations regarding terms and conditions for a labor contract, which are deemed in alignment with relevant requirements of ESS2.

Ningbo Municipal Public Utilities Investment Co., Ltd. can sign a labor contract in writing with an employee. The labor contract should cover the basic terms and conditions, including the term of specific job positions, work content and place of work, work time and rest time, labor remuneration, bonus and social insurances, labor protection, labor conditions and protection against occupational hazards, and specified economic compensation. The content of a labor contract should be reached through prior consensus between the employer and an employee,

without any violation against China's labor related regulations and the requirements of ESS2. The Company promises to adopt the same personnel management systems.

The contractors' labor management procedures will set out terms and conditions for the contracted workers. These terms and conditions will meet the requirements of ESS2 and the ESCP, and be aligned with this LMP.

9 GRM

Ningbo PMO and the Company will establish and implement a GRM for workers, including direct hires. Ningbo PMO and the Company have established grievance redress hotlines (0574-8719 1097 and 0574-8738 4952). In addition, the Company will ask contractors to develop and implement a GRM for workers.

The construction contractors will prepare their labor management procedure before subproject construction, which will also include detailed description of the GRM for workers, which includes:

- A procedure to receive grievances such as comment/complaint form, suggestion boxes, email, a telephone hotline;
- Stipulated timeframes to respond to grievances;
- A registration system to record and track the timely resolution of grievances;
- A responsible unit to receive, record and track resolution of grievances.

The Company will assign dedicated staff to supervise grievance redress by contractors, and report to the PMO in **monthly progress reports**.

The GRM for workers will be described in staff induction training, which will be provided to all project workers. The mechanism will be based on the following principles:

- The process will be transparent and allow workers to express their concerns and file grievances.
- There will be no discrimination against those who express grievances and any grievances will be treated confidentially.
- Anonymous grievances will be treated equally as other grievances, whose origin is known.
- Grievances will be seriously treated and timely and appropriate action in response will be taken.

Information about the existence of the GRM will be readily available to all project workers (direct and contracted) through the PIU's website, staff meetings, and other means as needed.

In addition, the Ningbo Municipal Human Resources and Social Security Bureau has disclosed the appeal hotlines of all municipal and district labor protection supervision agencies on its official website (http://rsj.ningbo.gov.cn/art/2018/10/9/art_1229130162_49605564.html), so that all workers can file grievances about labor contracts, remuneration, working conditions, etc.

The GRM for workers will not prevent workers to use the mediation procedure provided in the China's Labor Law. The basic procedure is as follows:

Stage 1: The party that asks for arbitration shall file a written application to the labor dispute arbitration committee within 60 days starting from the date of the occurrence of labor dispute. In general, the arbitration committee shall produce a ruling within 60 days after receiving the application. The parties involved shall implement arbitration rulings if they do not have any objections to these rulings. Labor dispute arbitration

committees shall be composed of the representatives of labor administrative departments, representatives from trade unions at the same level, and the employer representatives. The chairmanship of such a committee shall be held by the representative of a labor administrative department.

Stage 2: If any of the parties involved in a labor dispute has objections to an arbitration ruling, it can raise a lawsuit with the People's Court within 15 days after receiving the ruling.

10 Contractor Management

The Company will ask all contractors participating in the Project to operate in a manner that complies with the ESS (including the requirements in the ESCP). Contractor management is conducted through the tendering process. The tendering documents shall meet the World Bank's requirements, including labor, OHS, and COVID-19 prevention and control.

As part of the process to select construction contractors who will engage contracted workers, the Company will review the following information:

- Information in public records, for example, corporate registers and public documents relating to violations of applicable labor law, including reports from labor inspectorates and other enforcement bodies;
- Business licenses, registrations, permits, and approvals;
- Documents relating to a labor management system, including OHS issues, for example, labor management procedures;
- Identification of labor management, safety, and health personnel, their qualifications, and certifications;
- Workers' certifications/permits/training to perform required work;
- Records of safety and health violations, and responses;
- Accident and fatality records and notifications to authorities;
- Records of legally required worker benefits and proof of workers' enrollment in the related programs;
- Worker payroll records, including hours worked and pay received; and
- Copies of previous contracts with contractors and suppliers, showing inclusion of provisions and terms reflecting ESS2.

The bidding document will screen out any bidder that uses child labor or involve historic child labor use. Per China's Labor Law, the minimum working age is 16 years old. The contracts with selected contractors will include provisions related to labor and occupational health and safety, as set out in ESS2 and China's regulations.

The Company will manage and supervise the performance of contractors, with focus on their contract compliance, possibly including regular auditing, on-site inspection and/or record review. Contractors' labor management records and reports may include:

- A representative sample of employment contracts or arrangements between third parties and contracted workers;
- Records relating to grievances received and their resolution;
- Reports relating to safety inspections, including fatalities and incidents and implementation of corrective actions;
- Records relating to incidents of non-compliance with national law; and

- Records of training provided for contracted workers to explain labor and working conditions and OHS for the subproject.

Contractor labor performance should be part of progress reports submitted to the Ningbo PMO.

11 Primary Supplier's Workers

The Company will review primary suppliers to identify their labor force, and screen major risks and impacts, especially forced labor, child labor and serious safety problems.

If a primary supplier has any major child labor or forced labor risk, or any serious safety problem, the Company should take the following measures:

- Evaluating the magnitude of major risks related to primary supply workers, and designing appropriate mitigation measures in the SMP;
- Following up with primary suppliers on quarterly basis for the implementation status of environmental measures (if any), thereby ensuring that labor management is well implemented, and reporting their labor performance to Ningbo PMO regularly as part of progress reports;
- If it is impossible to take any remedy for any identified labor risk, the PIU will transfer primary suppliers to suppliers that can prove their compliance with ESS2 within a reasonable period.

Appendix 2.4 LMP for Recyclables Sorting Centers

The recyclables sorting centers (hereinafter, "this subproject") are one of the Batch 2 subprojects. Its PIU is Ningbo Dabashou Eco-digital Technology Co., Ltd. (hereinafter, the "Company"), which was founded in May 2021, being one of the PIUs of the Batch 1 subprojects. At the preparation stage of the Batch 1 subprojects, an LMP was prepared based on the SIA on the Batch 1 subprojects[27]. The Company is 44% funded by NBSMC Renewable Resources Technology Co., Ltd., 32% by Ningbo Municipal Public Utilities Investment Co., Ltd., and 24% by the contribution representatives of 8 urban districts.

This LMP is a living document, and has been updated on the SIA Report for the Batch 2 subprojects.

1 Overview of Project Workers

The 4 recyclables sorting centers are located in Zhenhai, Beilun, Yinzhou and Haishu Districts of Ningbo City. Among the Batch 2 subprojects, the recyclables sorting centers in Yinzhou and Haishu districts will be reconstructed based on existing facilities, and the other two will be newly constructed, with a treatment capacity of 50-75t/d each. The sorting centers target recyclables, including plastic bottles, low-value dirty plastics, daily chemical plastic waste, waste paper, waste glass, waste metals, waste textiles, etc., and recyclables are mainly from smart dustbins in communities.

According to the definition of project workers in ESS2, social audit and SIA, this subproject involves direct and contracted workers.

Direct hires: Management staff, technicians, dispatching center staff, etc. at the construction and operation stages, all with relevant experience

Contract workers: Construction workers of this subproject, and sorters and drivers (from smart dustbins in communities to sorting centers) hired by the third-party operation company that may be appointed at the operation stage

An estimate of types and numbers of workers is shown in Table 1.

Table 1 Estimate of Types and Numbers of Project Workers

Subproject	Stage		Direct hires	Contract workers	Primary suppliers' workers
Recyclables sorting centers	Preparation		8	0	0
	Construction	Civil works	8	100	2
		Equipment installation	8	32	1
	Operation		12	48	0

Source: The Company

The Company has been newly established, and has a workforce of less than 10, all having received undergraduate or above education. The Company is recruiting staff gradually as necessary.

The Company will review labor management systems of bidding contractors through its bidding mechanism and ask contractors to establish labor management procedures in accordance with ESS2. Bidding is under preparation, so it is uncertain if contracted workers include nonlocal workers, which will be further identified during implementation.

[27] See the SIA Report for the Batch 1 subprojects approved by the Bank in February 2021.

According to the social audit, the sorters (about 10 at each sorting center) and drivers will be mainly from nearby villages, mostly women aged 35-55 years.

2 Screening of Potential Significant Labor Risks

2.1 Subproject activities

The 4 recyclables sorting centers are located in Zhenhai, Beilun, Yinzhou and Haishu districts of Ningbo City, with a floor area of about 10 mu each. Recyclable waste includes waste paper, waste plastics, waste textiles, waste glass, etc., and is from smart waste collection cabins deployed in the urban communities. Such waste is transferred by vans to the recyclables sorting center for simple manual sorting and compression, and then are sold to terminal waste utilization enterprises.

2.2 Major labor risks

At the preparation stage, a social impact survey and extensive stakeholder engagement were conducted on this subproject, and major labor risks were identified. According to the SIA of the Batch 2 subprojects, the Project is located in the developed city of Ningbo, where the government has a well-established labor management and supervision system for enterprises, so this subproject's labor risks are negligible or very low, mainly including:

- Forced labor and child labor
- Discrimination in recruitment

According to the scope, scale and nature of this subproject, major labor risks related that may be encountered by workers include:

A. Construction stage

- **Dangerous work**: Construction workers working at height or in confined spaces, or using heavy machinery or dangerous materials;
- **Safety risks in machinery operation**: Accidents of construction workers during construction, such as welding, cutting and operating relevant tools;
- **Noise from mechanical construction**: Loud, repeated and excessive noises that may arise during construction, possibly leading to long-term hearing problems, such as deafness, and also being a dangerous distraction that increases accident risks;
- **Emergency risks**: Emergencies and quality safety accidents arising from unsound civilized construction and quality safety management measures, or inadequate management;
- **Sexual harassment or gender-based violence risks**: Physical or mental violence against women due to gender or lifestyle differences;
- **Workplace accidents**: Safety accidents arising from work shed collapse due to quality problems or natural disasters;
    - **Health and infection risks**: Disease infection risks (e.g., COVID-19) arising from the improper diet and accommodation management, or health management of construction workers;
    - **Renumeration**: Workers' rights and interests unsecured because contractors fail to strictly enforce the applicable laws and regulations, and enter into employment contracts.

B. Operation stage

- **Traffic risks**: Potential traffic accidents during the transport of recyclables from smart dustbins in communities to sorting centers;
- **Physical injuries**: Scratches by recyclables (plastics, glass, etc.) during sorting;
- **Noise:** Noises generated by equipment operation, which may harm the workers' hearing and physical health;
- **Heat and odor:** odor arising from deteriorating residues of recyclables in summer, which may harm the workers' physical health;
- **Dust pollution**: dust generated by the sorting and packing of recyclables (e.g., paperboards), which may harm the workers' physical health;
- **Emergency risk**s: operating mistakes in forklift operation and recyclable packing, which pose health and life risks to workers;
- **Infection**: Disease infection risks (e.g., COVID-19) during recyclable (waste) collection and transfer, and close contact with people.

3 Brief Overview of Labor Legislation: Terms and Conditions

China has established a sound system of laws and regulations on labor management. As a member of the International Labor Organization (ILO), China has approved 26 conventions (including 20 that have taken effect), including equal remuneration, discrimination, minimum age, child labor, OHS, employment policy, consulting, risk of association, etc. In general, the national and municpal policies make provisions on salary, working hours, labor protection and labor disputes, and prohibit forced labor and child labor, which is completely consistent with the requirements of ESS2.

Table 2 Applicable PRC Laws relating to Labor and Working Conditions

No.	Title	Effective year
1	China's Labor Law	1995, amended in 2018
2	Provisions of the State Council on Working Hours of Workers and Staff	1995
3	China's Emergency Incident Response Law	2007
4	Regulations on the Implementation of China's Labor Contract Law	2008
5	China's Labor Contract Law	2008, amended in 2012
6	Special Rules on Labor Protection of Female Employees	2012
7	China's Law on the Prevention and Control of Occupational Diseases	2017

Table 3 List of ILO Conventions Approved by China

Convention	Date
Basic conventions (4)	
C100 - Equal Remuneration Convention, 1951 (No.100)	1990.12.02
C111 - Discrimination (Employment and Occupation) Convention, 1958 (No.111)	2006.01.12
C138 - Minimum Age Convention, 1973 (No.138), specifying the minimum wage of 16 years	1999.04.28
C182 - Worst Forms of Child Labor Convention, 1999 (No.182)	2002.08.08
Governance (priority) conventions (2)	
C122 - Employment Policy Convention, 1964 (No.122)	1997.12.17
C144 - Tripartite Consultation (International Labor Standards) Convention, 1976 (No.144)	1990.11.02

Convention	Date
Technical conventions (14)	
C011 - Right of Association (Agriculture) Convention, 1921 (No.11)	1934.04.27
C014 - Weekly Rest (Industry) Convention, 1921 (No. 14)	1934.05.17
C019 - Equality of Treatment (Accident Compensation) Convention, 1925 (No. 19)	1934.04.27
C026 - Minimum Wage-Fixing Machinery Convention, 1928 (No. 26)	1930.05.05
C027 - Marking of Weight (Packages Transported by Vessels) Convention, 1929 (No. 27)	1931.06.24
C032 - Protection against Accidents (Dockers) Convention (Revised), 1932 (No. 32)	1935.11.30
C045 - Underground Work (Women) Convention, 1935 (No. 45)	1936.12.02
C080 - Final Articles Revision Convention, 1946 (No. 80)	1947.08.04
C150 - Labor Administration Convention, 1978 (No. 150)	2002.03.07
C155 - Occupational Safety and Health Convention, 1981 (No. 155)	2007.01.25
C159 - Vocational Rehabilitation and Employment (Disabled Persons) Convention, 1983 (No. 159)	1988.02.02
C167 - Safety and Health in Construction Convention, 1988 (No. 167)	2002.03.07
C170 - Chemicals Convention, 1990 (No. 170)	1995.01.11
Maritime Labor Convention, 2006 (MLC) According to A4.5 (2) and (10), the government designates the following social security sectors: medical, unemployment benefit, pension, employment injury benefit, and maternity benefit.	2015.12.12, amended in 2016 and 2018

Source: official website of ILO, December 29, 2020

The Company is also a PIU of the Batch 1 subprojects. With the implementation of the Batch 1 subprojects, the Company's systems have improved greatly, including/l

- General Manager's Office Meeting System (trial), October 2021;
- Workplace Attendance Management System (trial), October 2021;
- Renumeration Management System (trial), October 2021;
- Supplier Management System (trial), October 2021;
- Human Resources Management System (trial), April 2022;
- Work Safety Management System (trial), April 2022;
- Occupational Health Management System (trial), April 2022;
- Safety Education and Management System (trial), April 2022;
- Accident Reporting System (trial), April 2022;
- Office Emergency Response Plan (trial), April 2022.

When the Company signs a labor contract, its basic terms and conditions include detailed job requirements, scope and place of work, working and rest hours, remuneration, bonus, social insurance, labor protection, labor conditions, occupational hazard protection, and economic compensation. During contract term, an employee may consult the HR staff at any time. Both parties may alter the contract when reaching an agreement. The working hours of the Company comply with China's policies. In case of overtime work, an overtime pay will be paid according to

policies[28]. Employees are entitled to paid leaves. For example, if an employee has a service length of less than 10 years, he/she is entitled to a paid annual leave of 5 days; if an employee has a service length of 10 years or more, he/she is entitled to a paid annual leave of 10 days.

The employees of the Company are entitled to statutory social insurance (endowment, medical, unemployment, accident, maternity, etc.), and a housing provident fund. Female employees' extra benefits are based on the applicable state and local regulations, such as the Measures for the Labor Protection of Female Workers of Zhejiang Province.

The Company's Renumeration Management System specifies that the basic salary structure is: monthly salary = base salary + job salary + performance bonus + traffic subsidy + communication subsidy + meal subsidy. In general, the employees' monthly salaries are much higher than the local minimum salary standard[29]; the annual salary is 13 times the monthly salary. According to the information provided by the General Office of the Company, the minimum monthly salary is over 4,000 yuan. For duty watch in non-working hours, the Company offers subsidies, such as 200 yuan per day per capita on legal holidays and 100 yuan per day per capita at weekends.

In addition, an employee having worked at the Company for one year and having attained 35 years is entitled to a health checkup every two years.

China's Labor Law and the Labor Contract Law have clear provisions on employment, labor contract management and leaves, and the relevant practices of the Company comply with such provisions, and are communicated to all employees through induction training, on-the-job training and routine operations. In terms of contract terms and working conditions for **direct hires**, there is no gap found between the practices of the Company and ESS2. However, the policies used by the PIU in managing labor risks of contracted, community and primary supply workers have significant gaps from ESS2. The Ningbo PMO and the Company have taken measures in this LMP to align them with ESS2.

4 Brief Overview of Labor Legislation: Occupational Health and Safety

In China, there are over one hundred technical specifications and standards for prevention and control of occupational safety and diseases under the Labor Law system. These technical specifications and standards are developed based on the industry best practice or updated toward the industry best practice, i.e. WHO, and relevant technical codes/norms of EU or USA, and the requirements of the International Labor Conventions[30]. These technical specifications and standards become compulsory to apply in the design and operation of the facilities.

The Company attaches great importance to the OHS of direct workers, and has established and implemented relevant management procedures and policies.

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[28] In China, enterprises are required: 1) to pay no less than 150 percent of the normal wages if the extension of working hours is arranged; 2) to pay no less than 200 percent of the normal wages if the extended hours are arranged on days of rest and no deferred rest can be taken; and 3) to pay no less than 300 percent of the normal wages if the extended hours are arranged on statutory holidays.

[29] Being 2,010 yuan/month in 2020

[30] Historical So far, China has signed 25 of the International Labor Conventions, including Convention on Equal Pay for Equal Work (100th convention), Minimum Employment Age Convention (138th convention), The Worst Forms of Child Labor Convention (182th convention), and Employment and Occupation Discrimination Convention (111th convention), etc.

The Company's Work Safety Management System includes **31 sets of regulations related to potential business risks. The potential labor risks identified can be managed effectively through this system**, including the work safety responsibility system, safety management system for equipment, facilities and goods, work safety training and education system, work safety supervision and potential risk management system, accident reporting and investigation system, driver file management system, vehicle safety inspection system, PPE management system, road transport management system, emergency rescue support system, occupational health management system, etc.

In addition, the Work Safety Management System also includes the work safety reporting and investigation system, and the reporting hotline and e-mail address are disclosed. When the Company receives any report or complaint, the General Manager will establish an investigation team, which will keep the reporter's information confidential.

For COVID-19 and other potential infectious diseases, pandemic prevention and control organizations have been established at the municipal and district levels, and the Company has established an internal pandemic prevention and control system, and prepared a working plan, covering material reservation, living support, security. Dedicated staff is assigned for temperature taking, ventilation, disinfection, PPE distribution, publicity and education, pandemic information collection and submission, and emergency measures and a handling process have been defined to reduce infection risks.

The Company has established a sound OHS system according to the Labor Law, and Law on the Prevention and Control of Occupational Diseases, complies strictly with the national regulations and standards on OHS, and conducts OHS education for workers to prevent work-related accidents, and reduce occupational hazards. OHS facilities must comply with the national standards. The Company provides labor safety and health conditions, and necessary labor protection articles complying with the state provisions to workers, and conducts regular health checkups for workers. Employees have the right to report any act endangering their health and safety. There is no gap found between the Company's practices and ESS2.

5 Responsible Staff

The agencies responsible for this subproject are the Ningbo PMO (civil servants) and the Company.

- **Ningbo PMO**: Ningbo PMO will be responsible for the overall project organization, coordination, supervision and guidance, and communicate with the Bank. Ningbo PMO has promised to appoint an environmental staff and a social staff to be responsible for E&S policy training, document preparation, implementation and performance evaluation, including labor management.

- **PIU (the Company)**: The Company is a PIU of the Batch 1 subprojects, and the recyclables sorting centers in the Batch 2 subprojects. The Company comprises the Procurement Center, Finance Center, General Office, Strategic Planning Center, Project Management Center, and Software Center, in which the General Office is responsible for the Company's HR affairs, including recruitment, training, payroll, social insurance and performance evaluation, as well as training on OHS and job skills and duties. As discussed in Sections 3 and 4, the personnel management procedures and policies of the parent company of the Company cover working conditions and OHS for worker.

The Company will appoint a full-time staff to be responsible for E&S document management, including labor conditions, OHS, employee grievance redress, direct workers' performance, management of contracted workers, etc.

The Company has established a trade union, and employees may join it voluntarily. The trade union's main duties include: 1) conducting occupational disease prevention and control, and health checkups for workers; 2) supervising the implementation of resolutions of the workers' congress; 3) directing workers to sign labor contracts, and negotiate remuneration, working hours, work safety and health, benefits, etc.; 4) signing collective labor contracts on behalf of workers, supervising the performance thereof, and mediating labor disputes; and 5) protecting the special rights and interests of female workers.

The Company has established a sound GRM for employees, including internal and external channels.

A. Internal channels, including:

- Workplace head or direct supervisor;
- Manager in charge;
- Personnel officer of the General Office;
- Labor union chairman and internal hotline;
- General Manager;
- Public account, applet, website feedback and "400" hotline

The Company will offer multiple channels for workers to raise workplace issues. A worker may first report to the person responsible for the workplace or his/her direct supervisor; if he/she is dissatisfied with the reply, he/she may report to the department manager, or finally report to the General Manager. All channels run in parallel, and workers may use any channel at their discretion.

B. External channels: The Company has established a work safety reporting and investigation system, and assigned dedicated staff to accept complaints related to work safety.

The GRM operates well, and can usually handle employee complaints and give feedback. The Company has dedicated and qualified HR staff responsible to manage day-to-day work and handle employee complaints, which is consistent with the requirements of ESS2.

In sum, the Company has established a sound management procedure for direct workers (especially child labor, forced labor and OHS), meeting the requirements of ESS2. However, as confirmed by the Company, the Company does not currently have policies or procedures for managing risks to workers employed by contractors or primary supplier that are anticipated under ESS2, and this LMP includes measures to address such gap.

In addition, when employing a contractor, the Company will include labor management requirements in the tendering documents. The contractor should comply with ESS2 and this LMP (including the prohibition of child and forced labor, labor terms and conditions, OHS, etc.), include this in its contract, and cause any subcontractor to do the same.

See Section 6 for detailed requirements.

6 Policies and Procedures

China has a relatively sound legal framework on labor and working conditions, especially child

labor, forced labor and OHS. Contractors would usually develop a series of management plans and procedures, covering quality, environment, safety management, site management, worker management, etc.

The Chinese laws stipulate that when an employer employs an employee, it should sign an employment contract with the employee equally and voluntarily to define their rights and obligations. Both China's Labor Law (2018) and Labor Contract Law (2012) apply. The Chinese and Ningbo policies make provisions on salary, working hours, labor protection and labor disputes, and prohibit forced labor and child labor, which is completely consistent with the requirements of ESS2.

According to Sections 3, 4 and 5, the labor risks identified in Section 2 have been managed effectively under the prevailing LMP.

For the gaps from the ESS2 requirements (e.g., management of contracted and primary suppliers' workers), Ningbo PMO and the Company will take measures to strengthen the LMP for this subproject to comply with ESS2.

- **Ningbo PMO**: Ningbo PMO will appoint a full-time staff for routine labor risk communication, and provide support to the PIU. The Company is also required to appoint a full-time staff to supervise labor and safety performance.
- **PIU (the Company)**: To make up the above gaps, the Company will improve its LMP, and strengthen the following aspects –
  - Appointing qualified employees to manage the performance of direct workers and contractors;
  - Implementing this LMP;
  - Ensuring that each contractor develops its own LMP according to this LMP;
  - Supervising contractors to perform the labor obligations in the General Contract Terms in the tendering documents, and meet the requirements of ESS2 and China's Labor Law;
  - Supervising contractors to implement this LMP;
  - Ensuring that the workplace OHS standard complies with the state OHS laws and OHS plan;
  - Including detailed COVID-19 prevention and control measures in the contract;
  - Monitoring, supervising and reporting health and safety concerns related to COVID-19, including main responsibilities and reporting arrangements related to contractors;
  - Strengthening workers' awareness and training to prevent COVID-19 dissemination;
  - Supervising project worker training;
  - Ensuring that a GRM available to all types of project workers is established, and supervising its implementation;
  - Supervising primary suppliers to take measures to correct potential risks related to child labor forced labor and OHS;
  - Reporting the performance of project workers to the Ningbo PMO **semiannually**

- **Contractors**: The contract shall include provisions on compliance with ESS2. Contractors and subcontractors shall assume the following duties –
  - Developing an LMP and an OHS plan, which will be submitted to the PIU for approval;
  - Keeping recruitment and employment records of contracted workers;
  - Notifying job descriptions and labor conditions to contracted workers;
  - Developing and implementing a labor GRM;
  - Implementing prevention and control measures for COVID-19 and other infectious diseases;
  - Monitoring, supervising and reporting health and safety concerns related to COVID-19,
  - Strengthening workers' awareness and training to prevent and reduce COVID-19 dissemination risks;
  - Establishing a regular review and reporting system on worker OHS performance;
  - Offering induction, and health and safety training to workers regularly;
  - Ensuring that all workers confirm that they understand the working requirements in writing;
  - Updating its LMP if necessary;
  - Reporting the labor performance of contracted workers to the PIU **monthly**
- **Third-party monitor**: Ningbo PMO will appoint a third-party monitor to evaluate the performance of all types of workers, and the TORs should meet the Bank requirements.

7 Age of Employment

China's Labor Law (2018) defines minimum working age at 16, which is more stringent than the requirements of ESS 2 (14 years old).

Both China's Labor Law (2018) and Regulation on Special Protection for Juvenile Workers (1994) sets out specific protection for juvenile workers (aged from 16 to 18). Juvenile workers should be prohibited in working in a few hazardous positions such in unhealthy, hazardous or toxic circumstance, during the night, with dangerous machinery, equipment or tools, or involving handling or transport of heavy loads.

The Company complies strictly with China's policy on the prohibition of child and forced labor. Qualified candidates should have received undergraduate or above education, with a minimum age of 21-22 years. As of October 2021, the youngest employee of the Company was 23 years old. Before employment, the Company asks every candidate to provide basic information (e.g., a copy of the ID card) for further verification by the HR Dept.

During the construction and operation of this subproject, the Company will ask its contractors and primary suppliers to verify the ages of all workers to assure no child labor will be employed or engaged with this subproject. This will require workers to provide official documentation, which could include a birth certificate, national identification card, or medical or school record.

If a child under the minimum age is identified working on this subproject, measures will be taken to immediately terminate the employment or engagement of the child in a responsible manner, considering the best interest of the child.

8 Terms and Conditions

As shown in legal review (Section 3 in this LMP), China has established very comprehensive regulations regarding terms and conditions for a labor contract, which are deemed in alignment with relevant requirements of ESS2.

The Company can sign a labor contract in writing with an employee. The labor contract should cover the basic terms and conditions, including the term of specific job positions, work content and place of work, work time and rest time, labor remuneration, bonus and social insurances, labor protection, labor conditions and protection against occupational hazards, and specified economic compensation. The content of a labor contract should be reached through prior consensus between the employer and an employee, without any violation against China's labor related regulations and the requirements of ESS2.

The contractors' labor management procedures will set out terms and conditions for the contracted workers. These terms and conditions will meet the requirements of ESS2 and the ESCP, and be aligned with this LMP.

9 GRM

As described in Section 5, the Company has established sound internal and external grievance redress channels.

The Ningbo PMO and the Company will establish and implement a GRM for workers, including direct hires. Ningbo PMO and the Company have established grievance redress hotlines (0574-87191097 and 0574-56177692). In addition, the Company will ask contractors to develop and implement a GRM for workers.

The construction contractors will prepare their labor management procedure before subproject construction, which will also include detailed description of the GRM for workers, which includes:

- A procedure to receive grievances such as comment/complaint form, suggestion boxes, email, a telephone hotline;
- Stipulated timeframes to respond to grievances;
- A registration system to record and track the timely resolution of grievances;
- A responsible unit to receive, record and track resolution of grievances.

The Company will assign dedicated staff to supervise grievance redress by contractors, and report to the PMO in **monthly progress reports**.

The GRM for workers will be described in staff induction training, which will be provided to all project workers. The mechanism will be based on the following principles:

- The process will be transparent and allow workers to express their concerns and file grievances.
- There will be no discrimination against those who express grievances and any grievances will be treated confidentially.
- Anonymous grievances will be treated equally as other grievances, whose origin is known.
- Grievances will be seriously treated and timely and appropriate action in response will be taken.

Information about the existence of the GRM will be readily available to all project workers (direct hires and contract workers) through the PIU's website, staff meetings, and other means as needed.

In addition, the Ningbo Municipal Human Resources and Social Security Bureau has disclosed the appeal hotlines of all municipal and district labor protection supervision agencies on its official website (http://rsj.ningbo.gov.cn/art/2018/10/9/art_1229130162_49605564.html), so that all workers can file grievances about labor contracts, remuneration, working conditions, etc.

The GRM for workers will not prevent workers to use the mediation procedure provided in the China's Labor Law. The basic procedure is as follows:

Stage 1: The party that asks for arbitration shall file a written application to the labor dispute arbitration committee within 60 days starting from the date of the occurrence of labor dispute. In general, the arbitration committee shall produce a ruling within 60 days after receiving the application. The parties involved shall implement arbitration rulings if they do not have any objections to these rulings. Labor dispute arbitration committees shall be composed of the representatives of labor administrative departments, representatives from trade unions at the same level, and the employer representatives. The chairmanship of such a committee shall be held by the representative of a labor administrative department.

Stage 2: If any of the parties involved in a labor dispute has objections to an arbitration ruling, it can raise a lawsuit with the People's Court within 15 days after receiving the ruling.

10 Contractor Management

The Company will ask all contractors participating in the Project to operate in a manner that complies with the ESS (including the requirements in the ESCP). Contractor management is conducted through the tendering process. The tendering documents shall meet the Bank's requirements, including labor, OHS, and COVID-19 prevention and control.

As part of the process to select construction contractors who will engage contracted workers, the Company will review the following information:

- Information in public records, for example, corporate registers and public documents relating to violations of applicable labor law, including reports from labor inspectorates and other enforcement bodies;
- Business licenses, registrations, permits, and approvals;
- Documents relating to a labor management system, including OHS issues, for example, labor management procedures;
- Identification of labor management, safety, and health personnel, their qualifications, and certifications;
- Workers' certifications/permits/training to perform required work;
- Records of safety and health violations, and responses;
- Accident and fatality records and notifications to authorities;
- Records of legally required worker benefits and proof of workers' enrollment in the related programs;
- Worker payroll records, including hours worked and pay received; and
- Copies of previous contracts with contractors and suppliers, showing inclusion of provisions and terms reflecting ESS2.

The bidding document will screen out any bidder that uses child labor or involve historic child labor use. Per China's Labor Law, the minimum working age is 16 years old. The contracts with selected contractors will include provisions related to labor and occupational health and safety, as set out in ESS2 and China's regulations.

The Company will manage and supervise the performance of contractors, with focus on their contract compliance, possibly including regular auditing, on-site inspection and/or record review. Contractors' labor management records and reports may include:

- A representative sample of employment contracts or arrangements between third parties and contracted workers;
- Records relating to grievances received and their resolution;
- Reports relating to safety inspections, including fatalities and incidents and implementation of corrective actions;
- Records relating to incidents of non-compliance with national law; and
- Records of training provided for contracted workers to explain labor and working conditions and OHS for the subproject.

Contractor labor performance should be part of progress reports submitted to the Ningbo PMO.

11 Primary Supply Workers

The Company will review primary suppliers to identify their labor force, and screen major risks and impacts, especially forced labor, child labor and serious safety problems.

If a primary supplier has any major child labor or forced labor risk, or any serious safety problem, the Company should take the following measures:

- Evaluating the magnitude of major risks related to primary supply workers, and designing appropriate mitigation measures in the SMP;
- Following up with primary suppliers on quarterly basis for the implementation status of environmental measures (if any), thereby ensuring that labor management is well implemented, and reporting their labor performance to Ningbo PMO regularly as part of the implementation progress reports;
- If it is impossible to take any remedy for any identified labor risk, the PIU will transfer primary suppliers to suppliers that can prove their compliance with ESS2 within a reasonable period.

Appendix 3 Conclusions and Suggestions of the Social Audit Report

1. Conclusions of Social Audit

During this SIA process, a social audit was conducted for the 2nd batch subprojects and their associated facilities.

Among Batch 2 subprojects, the existing facilities are the WWTP to be reconstructed, and two recyclable sorting centers (Jiangshan recyclable sorting center in Yinzhou District and Gulin recyclable sorting center in Haishu District). The existing facilities has no high social risk.

WWTP: It will be reconstructed on the existing site, and its LAR risks are "low". The company has entered into labor contracts with laborers, is free from child and forced labor, and has established an EHS department and an OHS system, including the construction and maintenance of occupational health protection facilities, PPE, occupational health monitoring and evaluation, publicity, worker health monitoring, etc. Based on the field survey and interviews, OHS risks are "low". However, the company's LMP has no specific requirement for contractor and primary supplier management.

Recyclable sorting centers: Based on the currently selected sites, the land used has been acquired and reserved by the government, but the land use plan needs to be adjusted, and the PIU has not received a certificate of land use right, so land use risks are "moderate"; since all recyclables are from smart waste separation cabins deployed in communities, they are relatively clean. During waste sorting, worker occupational health risks are relatively minor, and the recyclable sorting centers have developed on-site operating regulations, and offer PPE for free to reduce occupational hazards. The PIU[31] has established a sound LMP, but the social team found during the survey that some workers did not wear PPE (face masks, gloves, etc.) as required at work, and temporary workers might have not entered into a labor contract. Sound traffic risk control measures have been taken for vehicles, such as GPS speed monitoring, speed limit, voice prompt and anti-fatigue, and waste collection and transfer routes are kept away from densely populated communities. Therefore, traffic and community safety risks are "low".

Bulky and decoration waste disposal plant: It will be built on land acquired and reserved by the government, but it was found during the survey that some attachments on site were to be cleared, and the PIU had not received a certificate of land use right, so its LAR risks are "moderate".

For the **associated facilities**, a certificate of the right to use state-owned land has been obtained for the Haishu District landfill, Kaicheng Kitchen Waste Plant, and the Shouchuang Kitchen Waste Plant, so its LAR risks are "low". The company has entered into labor contracts with laborers, is free from child and forced labor, and has established an EHS department and an OHS system, including the construction and maintenance of occupational health protection facilities, PPE, occupational health monitoring and evaluation, publicity, worker health monitoring, etc.

[31] It is also a PIU of Batch 1 subprojects.

Based on the field survey and interviews, OHS risks are “low”. However, the company’s LMP has no specific requirement for contractor and primary supplier management.

The Kaicheng Kitchen Waste Plant and Shouchuang Kitchen Waste Plant have developed strict waste collection and transfer management measures, and use fully sealed vehicles for transport via fixed routes, with minor community disturbances.

In addition, it is found that adequate information disclosure and public participation were conducted for the existing and associated facilities of the Batch 2 subprojects during the EIA, social stability risk assessment, and LAR. However, compared to the Bank’s ESF, the existing and associated facilities of the Batch 2 subprojects need to be strengthened in community health and safety, communication, grievance redress, etc., such as disclosing E&S monitoring reports to the public regularly (especially water and air quality data), and responding to community concerns positively.

2. Issues and suggestions for correction

Table 1 below summarizes the key issues identified in this social audit and the corresponding suggestions.

In the future, the external social M&E agency appointed by Ningbo PMO will track M&E effectiveness continually, and report to the Bank regularly.

Table 1 Summary of issues identified in this social audit and suggestions for correction

No.	Applicable ESSs	Concern	Findings and issues	Risk rating	Suggestions	Agency responsible	Timing
1. WWTP of Ningbo resource recycling base							
1	ESS2	Labor management	Third party labor contract management is unsound.	Moderate	Improve the LMP to strengthen third party labor management and monitoring.	Mingzhou and Qingyuan	Dec 31, 2022
2	ESS4 and ESS10	Community health and safety, communication mechanism	Environmental monitoring shows that wastewater and waste gases meet the emission standards. Nearby residents worry that odor produced by the facility may affect their health; residents may express their concerns through relevant channels, but there is no relevant written record. There are still some gaps from ESS10.	Moderate	Disclose environmental monitoring results to and strengthen communication with nearby residents, and keep records.	Qingyuan	At least semiannually (July and January)
					Disclose annual environmental reports to nearby communities timely, including basic corporate information, environmental management, pollutants generated, management and discharge, etc.	Qingyuan	January
					Establish a formal GRM, and offer sufficient resources (manpower and finance) to ensure its proper operation.	Qingyuan	As per the SEP
2. Associated Facility 1 of WWTP — Haishu District landfill							

1	ESS4 and ESS10	Community health and safety, communication mechanism	There is no resident within 1km around the construction site. However, nearby residents say that they can still smell odor sometimes, and have not seen environmental monitoring reports timely.	Moderate	Disclose environmental monitoring results to nearby residents timely, strengthen communication with them, and keep records properly.	Qingyuan	At least semiannually (July and January)
					Disclose annual environmental reports to nearby communities timely, including basic corporate information, environmental management, pollutants generated, management and discharge, etc.	Qingyuan	January
					Establish a formal GRM, and offer sufficient resources (manpower and finance) to ensure its proper operation.	Qingyuan	As per the SEP
3. Associated Facility 2 of WWTP — Kaicheng Kitchen Waste Plant							
1	ESS4 and ESS10	Community health and safety, communication mechanism	There is no resident within 1km around the construction site. However, nearby residents say that they can still smell odor sometimes, and have not seen environmental	Moderate	Disclose annual environmental reports to nearby communities timely, including basic corporate information, environmental management, pollutants generated, management and discharge, etc.	Kaicheng	At least semiannually (July and January)
					Establish a formal GRM, and offer sufficient resources (manpower and	Kaicheng	January

			monitoring reports timely.		finance) to ensure its proper operation.		
					Establish a formal GRM, and offer sufficient resources (manpower and finance) to ensure its proper operation.	Kaicheng	Operation stage
2	ESS2	OHS	Drivers may fail to observe the operating regulations (e.g., over-speed).	Moderate	Improve the LMP to strengthen the management of primary suppliers (drivers mainly), especially work safety and driving.	Kaicheng	July 2022
					Strengthen traffic safety training for drivers, including traffic rules, speed and route requirements, etc.	Kaicheng and district sanitation offices	At least quarterly
4. Associated Facility 3 of WWTP — Shouchuang Kitchen Waste Plant							
1	ESS4 and ESS10	Community health and safety, communication mechanism	There is no settlement within 1km around the facility, but nearby residents can still smell odor sometimes; no relevant environmental monitoring report is disclosed timely.	Moderate	Disclose environmental monitoring results to nearby residents timely, strengthen communication with them, and keep records properly.	Shouchuang	At least semiannually (July and January)
					Disclose annual environmental reports to nearby communities timely, including basic corporate information, environmental	Shouchuang	January

					management, pollutants generated, management and discharge, etc.		
					Establish a formal GRM, and offer sufficient resources (manpower and finance) to ensure its proper operation.	Shouchuang	Operation stage
2	ESS2	OHS	Drivers may fail to observe the operating regulations (e.g., over-speed).	Moderate	Improve the LMP to strengthen the management of primary suppliers (drivers mainly), especially work safety and driving.	Shouchuang	July 2022
					Strengthen traffic safety training for drivers, including traffic rules, speed and route requirements, etc.	Shouchuang and district sanitation offices	At least quarterly
5. Bulky and decoration waste disposal plant							
1	ESS5	Site clearing	Collective house demolition and staff resettlement	Low	Strengthen coordination with the village committee, and complete house demolition and staff resettlement 3 months before the beginning of construction.	Ningbo PMO and Meijing	Jun. 2022
2	ESS5	Site clearing	Worker dormitory	Low	Notify the agency and staff concerned to move 3 months before the beginning of construction.	Ningbo PMO and Meijing	Jun. 2022

3	ESS5	Site clearing	Abandoned workshop and equipment	Low	Complete ownership negotiation with New CWI (Ningbo) Environmental Technology Co., Ltd. in coordination with the Haishu District Urban Administration Bureau, and complete equipment relocation by the end of December 2021.	Ningbo PMO and Meijing	Dec. 2022
4	ESS5	Land approval	The PIU has not obtained the right to use state-owned land.	Low	Strengthen communication and coordination with the competent authorities, and complete land allocation or transfer before the beginning of construction.	Ningbo PMO and Meijing	Once monthly until a certificate of the right to use state-owned land is obtained
6. Recyclables sorting centers							
1	ESS2	Contract workers	Some temporary workers have not signed a labor contract.	Moderate	Improve the management of contracted workers according to the LMP.	Dabashou	Upon recruitment
2	ESS2	OHS	Some workers do not use PPE as required during operation, which may lead to OHS risks.	Moderate	Strengthen internal management to ensure that workers wear PPE properly, and train workers regularly.	Dabashou	Working days; at least quarterly
3	ESS4	Community health and safety	There is no formal community	Moderate	Establish a formal community communication mechanism,	Dabashou	As per the SEP

			communication mechanism.		strengthen community communication, and respond to community concerns timely.		
4	ESS5	Site and planning adjustment	The selected sites, environmental sanitation facility plan, and land use plan have not been approved by the government.	Moderate	Secure land, and complete land adjustment in coordination with the competent authorities.	Ningbo PMO, district urban administration bureaus, Dabashou	October 2022
5	ESS5	Acquisition of the right to use state-owned land	No right to use state-owned land has been obtained formally for the 4 recyclables sorting centers.	Moderate	The land will be leased for construction for 30 years. The rental is about 50,000 yuan/mu. All land use costs will be borne by the PIU.	Dabashou	Land for the sorting centers in Zhenhai and Jiangbei Districts obtained by the end of 2022, and that for those in Yinzhou and Haishu District to be obtained by the end of 2023

Appendix 4 Stakeholder Engagement Records

Education on terminal waste disposal for students	Education on terminal waste disposal for students
FGD at NMII	FGD at the WWTP
FGD in Xuanpei Village	FGD at the Dongqiao Town Government

Fieldwork at the resettlement site	Seminar at the SIA agency
FGD in Jiangbei District	FGD in Yinzhou District
Bank training	Project survey plan seminar

Training of district heads	Meeting registration form